



Office of the Associate Provost in collaboration with the Creative Arts Council

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MISSION STATEMENT

The arts at MIT connect creative minds across disciplines and encourage a lifetime of exploration and self-discovery. They are rooted in experimentation, risk-taking and imaginative problem-solving. The arts strengthen MIT's commitment to the aesthetic, human, and social dimensions of research and innovation. Artistic knowledge and creation exemplify our motto — **mens et manus**, mind and hand. The arts are essential to MIT's mission to build a better society and meet the challenges of the 21st century.

EXECUTIVE SUMMARY

I. The arts have been a core component of the educational mission of MIT and will play an even more significant role in the future.

Leaders of MIT, beginning with its founder William Barton Rogers, have understood the profound significance of embedding the arts in a scientific and technical institution.

- Artistic endeavors nurture creativity, innovation and leadership. They encourage students to work at the edge and make intuitive leaps into the unknown that lead to crucial discoveries.
- An unprecedented number of incoming students 79% actively participated in the arts in high school. These students possess an unusual combination of artistic aptitude and technical proficiency. MIT must support a curriculum that encourages cross-disciplinary creativity as well as the new HASS distribution requirement in the arts with state-of-the-art equipment, labs, and practice rooms.
- More than ever, MIT students want to create useful things that make a difference in the world, but many of them want to make things that are beautiful, provocative and arresting, too; such things also make a difference in the world.

II. Research at the intersections of art, science and engineering — where MIT has a competitive advantage — will determine the artistic and performative languages of the 21st century.

At MIT, artists have embraced the challenge of inventing new methods, media, and technologies for artistic production alongside the goal of creating the most expressive artifacts, performances, and buildings.

- Graduate students in art, media, and design choose MIT because it encourages creative experimentation among the arts, engineering and sciences, which typical art and design schools cannot offer. MIT should increase support for these students, who will animate the creative industries of the future.
- MIT must create exhibition, performance and research facilities that do justice to the media-rich art forms of the future.
- The arts today are embedded in new media and innovative technologies. As the nation's leading research university focused on science and technology, MIT should be at the forefront of developing ambitious, technically advanced and socially significant art, design, and performance.

III. MIT faces a strategic decision about investment in the arts and should seize the opportunity to support the creative energy that sustains the Institute's leadership in innovation.

MIT has an outstanding public art collection and significant buildings by internationally acclaimed architects. They are emblematic of its reputation for innovation and excellence.

- Peer institutions have completed major capital projects for the arts in recent years.
 MIT has deferred action and must make a serious investment to remain competitive.
- MIT should strategically design and coordinate arts programming throughout the Institute to more effectively communicate its excellence in the arts.
- The performance and display of innovative and cutting-edge art increases the Institute's visibility and reputation and should be one of the most prominent elements of its outreach to the public.

The ARTS at MIT*

I. THE PRACTICE OF ART AT MIT

Experimentation, risk-taking, and imaginative problem-solving have long characterized MIT culture. In an institution that values mastery of technical skills, novel conceptual approaches, ingenious practical solutions, open-ended questions, and multiple paths towards discovery in all disciplines, the arts thrive. The strengths of MIT's artistic community over the years have emerged through creative adaptation to the Institute's distinctive culture as a center of innovation in science and engineering. At MIT, artists have embraced the challenge of inventing new methods, media, and technologies for artistic production alongside the goal of creating the most expressive artifacts, performances, and buildings. They approach students as co-creators in their artistic endeavors. They are comfortable with the collective creativity of ensembles, labs and studios. The professional practice, exhibition, and performance of art is rooted in MIT's past and indispensable to its future.

THE ARTS AT MIT TODAY

Academic programs in the arts at MIT are located in two schools, the School of Architecture and Planning (SA+P) and the School of Humanities, Arts, and Social Sciences (SHASS). Two principal institutions present exhibitions and foster experiential learning – the List Visual Arts Center (LVAC) and The MIT Museum. There are nine other exhibition spaces, including two that opened recently – galleries in the Media Lab expansion and the Koch Institute for Integrative Cancer Research. MIT hosts one of the outstanding campus public art collections, thanks to its unusual Percent for Art policy, which was created in 1968. In addition, MIT has a remarkable set of buildings designed by internationally acclaimed architects, not surprising for an institution that established the first architecture program in the United States.²

The arts matter in MIT culture now more than ever before. A world-renowned arts faculty offers students the opportunity to experience excellence in architecture, visual arts, media arts, music, theatre, dance and writing. The arts faculty and instructional staff, through their celebrated professional work and dedication to MIT's model of integrating research and teaching, enable students to understand the often non-quantitative standards of excellence in the arts, in which design, creativity and subjective reasoning are critical. "Research" in this context involves the complex and subtle mechanics of making something – a play, a poem, a film, a musical composition – that is abstract, sensory, or philosophical and directly engages fundamental human responses and experiences. Or it

^{*}Research and documentation for this report was conducted during the 2008-09 academic year and updated through 2009-10.

¹ The others are: The Compton Gallery, The Dean's Gallery (Sloan), The Hart Nautical Gallery, The Maihaugen Gallery, The Jerome B. Wiesner Student Art Gallery, Rotch Library Exhibits, and the Elliot K. Wolk Gallery.

² William Ware, An Outline of the Course of Instruction in Building and Architecture proposed for the School of the Massachusetts Institute of Technology, 1865. The first students were admitted in 1868.

may involve the technical and design challenges that must be resolved and translated into aesthetic form to create buildings and environments that transform daily life and endeavors.

In an institution devoted to "inventing the future," the unusual temporal nature of art (what is called its after-image or after-life) is especially valuable. In their teaching, the arts faculty strive to balance the complementary demands of a rigorous, historically-rooted tradition with innovation and experimentation. Scripts, scores, and even mute artifacts or buildings are material embodiments of past human thought and emotion. As repositories of relationships that invite reinterpretation, the arts transmit culture from generation to generation. Artists are experts at navigating a simultaneous engagement with past, present, and future.



Figure 1: Fumihiko Maki, E14 Media Lab Expansion, Amherst Street Photo: Andy Ryan

Recently, Fumihiko Maki's major expansion of the 1985 Media Lab building by I.M. Pei ('40) — each is a Pritzker Architecture Prize winner — allowed the Program in Art, Culture and Technology (ACT)³ and the Comparative Media Studies Program (CMS) to join the List Visual Arts Center, the Media, Arts and Sciences research groups and the Office of the Arts in the eastern sector of campus. Clustering these programs in the Media Lab building has renewed the intellectual and creative agenda for the arts at MIT and the history of breakthrough accomplishments in "arts and media technology" (the original description of the Media Lab). In addition to the academic and research programs, the proximity of several gallery spaces—LVAC, Media Lab, and Koch—has created the nucleus of an "exhibition zone" that will showcase MIT's distinctive mix of arts, media and sciences.

 $^{^3}$ The Center for Advanced Visual Studies (CAVS) and the Visual Arts Program (VAP) merged on July 1, 2009, under the name "Program in Art, Culture and Technology" (ACT) in the Department of Architecture.

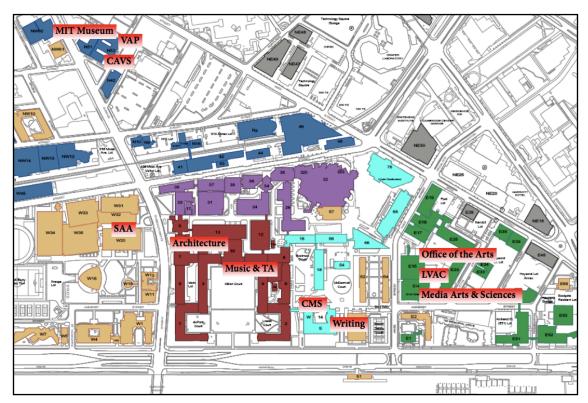


Figure 2: Previous Locations of Arts Programs

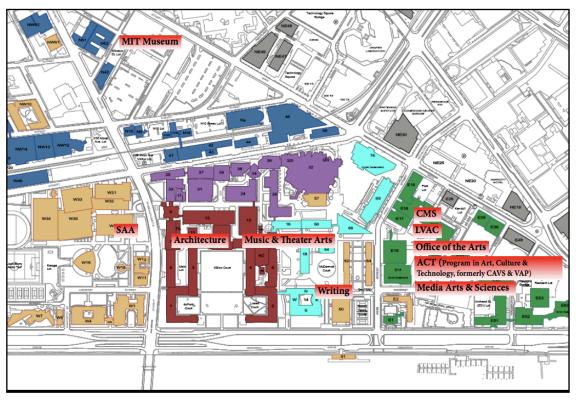


Figure 3: Current Locations of Arts Programs

At a time of escalating interest nationally and internationally in creative work at the intersections of art, engineering, science and technology—among prospective and current students, our peer institutions, the creative industries and society at large—MIT must restate and reassert its preeminence in this area.

Pioneering research conducted here has reshaped perception in the twentieth century, particularly in the visual and auditory realms. One need only think of strobe photography (1930s), the instant camera (1948), high-fidelity loudspeakers (1950s), the first interactive video game, "Spacewar" (1961), the first television image transmitted by communications satellite – the letters "MIT" (1962), sound synchronization for portable video cameras (1970s), and the alcove hologram (1986).⁵ The spirit of improvisation and urgency at the "Rad Lab" (MIT Radiation Laboratory) during World War II and later incarnations of the "Magical Incubator" spread to many explorations of art, engineering, science and computation at MIT, notably in Berenice Abbott's scientific photographs for the Physical Science Study Committee beginning in 1958; Minor White's refinement of the Zone System for black-and-white photographic processing from 1965 on; the Film section (later Film and Video) formed by Richard ("Ricky") Leacock and Edward Pincus in the late 1960s; The Center for Advanced Visual Studies (CAVS), established by György Kepes in 1967; the Architecture Machine group founded by Nicholas Negroponte in 1967; The Studio for Experimental Music, set up by Barry Vercoe in 1973; the Visible Language Workshop created by Muriel Cooper and Ron MacNeil in 1975; and of course the merging of many of these investigative streams in the Media Lab, opened in 1985. There the exploration of interactive systems for computational graphics, film, music, narrative, and performance flourished.

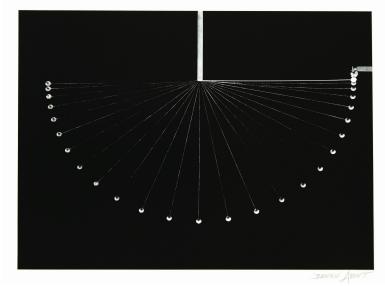


Figure 4: Berenice Abbott, *Transformation of Energy, MIT*, 1959–61 List Visual Arts Center Student Loan Art Collection

⁴ Erica Naone, "Game Theory." Technology Review, March/April 2009, http://www.technologyreview.com/article/22157/.

⁵ Jane Farver, "Forward," in *Sensorium: Embodied Experience, Technology, and Contemporary Art*, exhibition catalogue, List Visual Arts Center, Cambridge, Mass: MIT Press, 2006, i.



Figure 5: Höweler+Yoon Architects

Windscreen, 2011, MIT 150 FAST Festival⁶

Photo: Andy Ryan

Who would have predicted that algorithms would have aesthetic consequences? More predictable perhaps is that artists would push the limits of current technical devices and thereby engender a rethinking of how they can be used and their potential social consequences.

Today, a critical mass of faculty is exploring new technologies and combinations of media for cross-disciplinary, interactive art and digitally fabricated design of all kinds, from computational music and multi-media science theater to transformative video projections and environmentally responsive building skins. The search for better expressive and technical tools for visualization, storytelling, photography, film, video, computer graphics, musical composition and theatrical production takes place not only in sections exclusively concerned with the creative arts — ACT, Music and Theater Arts — but throughout the Institute — from Brain and Cognitive Sciences to the Computer Science and Artificial Intelligence Laboratory (CSAIL), and from the Program in Writing and Humanistic Studies (WHS) to the Edgerton Center. The research has led to the discovery of conceptual approaches and equipment to speed the route between thinking and making, navigate among different media modalities, and incorporate multiple voices and points of view. We are in the midst of further, rapid transformation of the computation, design and media landscapes, which is accelerating the combination of materials and forms in unexpected ways and generating an unprecedented distribution of simplified and accessible tools for making art, architecture and music.

Given MIT's history of experimentation and the distinctive mix of creativity and technical proficiency that drives innovation at the Institute, our faculty and alumni will play leading roles in inventing the new media of the 21st century, an array of expressive languages that will transform our current creative outlets and sensory habits. It is important that the Institute support and promote these pursuits.

⁶ J. Meejin Yoon, M.A.U.D., Associate Professor of Architecture, School of Architecture and Planning.



Figure 6: Jay Scheib, Director, *Bellona, Destroyer of Cities, 2011*⁷
Photo: Julieta Cervantes

THE CREATIVE TECHIE

Creativity, innovation, and leadership have always been the hallmarks of MIT. This is the moment to reiterate the significance of the arts to the Institute's core mission and values.

As it is understood today, creativity involves a particular combination of talents and dispositions fostered in specific environments and clusters of people. It is not solely a matter of individual temperament or character traits. Mastery of technique, medium, or craft is fundamental but insufficient. The cognitive style demonstrated by artists working at the highest level involves a way of thinking that is transformative in the domain of the arts and beyond.

Leadership itself has come to be characterized by qualities long associated with artistic culture – difference and originality, tolerance for productively disrupting norms, and vision along with an ability to communicate in a compelling manner. As a result, students engaged with the arts are sought after, particularly by entrepreneurial firms, where unconventional thinking and a willingness to pursue uncharted avenues are highly valued. To a degree not found even a decade ago, current MIT undergraduates have artistic and musical aptitudes that, when combined with a technological bent — fluency in programming, simulation, social media, and innovative design — are invaluable for the game-changing inventions that will propel the creative economy in the future.

Computerized music and the electronic image have become vernacular art forms on a global scale, and it is no surprise that current middle and high school students — a generation dubbed "digital youth"— have a very high level of engagement with new technologies. They not only consume but also create and "publish" (make public) their music, photographs, videos, games, or web sites, often in their leisure time.⁸ The cohort

⁷ Jay Scheib, MFA, Associate Professor of Theater Arts, School of Humanities, Arts, and Social Sciences.

⁸ Mizuko (Mimi) Ito, Michael Carter, and Barrie Thorne, "Digital Youth Research: Kids' Informal Learning with Digital Media," http://digitalyouth.ischool.berkeley.edu/.

that aspires to MIT, furthermore, is more likely than not to have formal training in the traditional arts during high school (79% of the class of 2014), especially in music.⁹

In other words, incoming students have a whole new outlook on creativity and innovation. As in the past, students come to MIT interested in creating useful things that make a difference in the world; but for many of them, making just anything will not do; they want to make things that are beautiful or provocative or arresting, too; such things also make a difference in the world. A majority of the undergraduate population enrolls in an arts class each year. ¹⁰

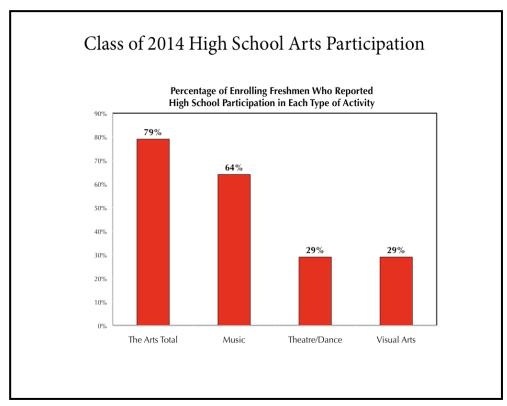


Figure 7: Class of 2014 High School Participation in the Arts*
*students can report more than one arts category

⁹ Stuart Schmill, Dean of Admissions, presented equivalent data on the Class of 2013 to the Creative Arts Council on September 16, 2009. 95% participated in community service, 75% in the arts (music, theater, dance, visual arts), and 55% in varsity athletics. 78% of identified art "stars" – applicants who received a 4 or a 5 from faculty evaluators – enrolled.

¹⁰ Appendix 1.1: Arts Subjects 2009-10.

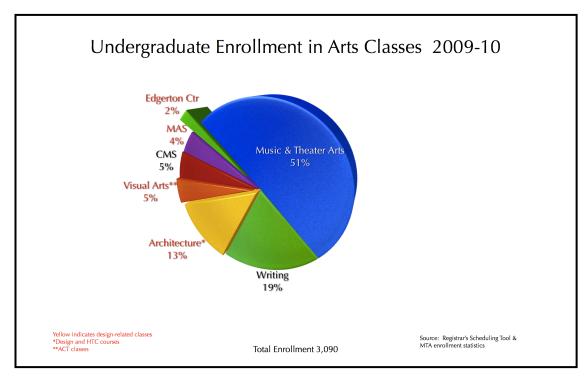


Figure 8: Undergraduate Students per Subject 2009-10

Some of the students who encounter arts at MIT, a select few, go on to distinguished artistic careers; others integrate art and engineering and become entrepreneurs in new media; 11 still more find the practice or appreciation of art a passion vital to a full and balanced life. MIT's best and brightest undergraduates are often musician-engineers, photographer-physicists, or performer-scientists. 12 And even the majority of undergraduates who come to MIT primarily to study engineering and science have broader and more creative backgrounds than in the past, which they are intent upon carrying into their future endeavors. Indeed, they may envision more hybrid careers than the ones the Institute's current curriculum prescribes for them, a circumstance that the 2006 *Task Force Report on the Undergraduate Educational Commons* sought to address when it observed that "first-year students increasingly seek to explore professional paths that do not neatly map onto the traditional disciplines and major programs that we have long offered." 13 Accommodating these students and their inclination to value learning the arts, both in the formal curriculum and through practice, exhibition, and performance, is an imperative incorporated in the recent change in the general institute requirements (GIRs).

Reforms to the HASS curriculum introduced a separate category for arts in 1985 and initiated the joint administration of arts subjects in the GIRs across the School of Architecture and Planning and the School of Humanities, Arts, and Social Sciences ("Arts"

¹¹ Consider Alex Rigopulos '92 (21M), SM '94 (MAS) and Eran Egozy, '95 (6), '95 (MEng 6P), co-founders of Harmonix, which has created *Guitar Hero, Rock Band, Rock Band 2* and *Rock Band: The Beatles.* http://www.harmonixmusic.com/

¹² See the students profiled in the <u>Campaign for Students</u>, "The Human Factor" http://thehumanfactor.mit.edu/.

¹³ <u>Report of the Task Force on the Undergraduate Educational Commons</u>, [2006 Report Task Force Undergrad Commons.pdf] p. 30.

was added to the name of the school in 2000). Following the May 2009 vote by the faculty, three HASS categories (arts, humanities, social sciences) replaced the previous five, and students will be required to take a least one subject in each category. Thus every undergraduate will take a subject in the arts; for the first time, the arts are "mainstreamed" in the core curriculum, and all undergraduates will be exposed to MIT's distinguished teaching and practice of art. ¹⁴

Graduate programs in architecture, history of art and architecture, media arts and sciences, and visual arts also are thriving. Why do graduate students in these fields select MIT? The Institute's educational and research culture encourages cross-pollination among the arts, humanities, engineering and sciences in ways that typical schools of art or design cannot. MIT offers engineering and technical support for artistic creativity, fosters dynamic investigations of real-world problems, and gives intellectual and financial support to unique projects. In short, its entrepreneurial environment encourages students to be daring and adventurous, a posture that suits artists well. Propelled by the founding of CAVS in 1967 and the opening of the Media Lab in 1985, universities, museums, and cultural organizations worldwide have sought to bring together the culture of the studio and the scientific research lab in various experimental settings. MIT is uniquely positioned to exercise leadership and sustain innovation in this area.

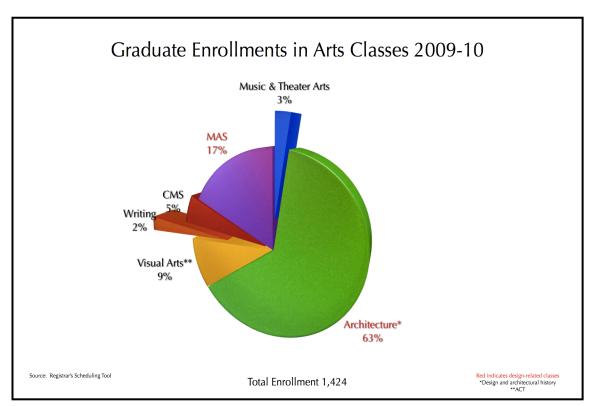


Figure 9: Graduate Students per Subject 2009-10

¹⁴ The Registrar reports that only a small number (less than 20) of seniors in the Class of 2009 did not enroll in an arts or design class during their four years at MIT; in effect, the students were ahead of the faculty in defining the new arts GIR.

¹⁵ See Appendix 1.2: Academic Programs in the Arts.

^{16 &}quot;SA+P Student Profiles," http://sap.mit.edu/people/students/profile/.

In several significant ways, MIT's arts initiatives predate and differ from those of our peer institutions. The early emphasis upon contemporary art and architecture has generated a concentration of notable buildings and public artworks, which have made the campus a cultural destination for visitors to the Boston area. MIT pioneered collaborative relationships that now are considered normal — between artists and scientists (CAVS), artists and architects (the Wiesner building by I. M. Pei), and among artists, architects and technologists (Media Lab). The wisdom of encouraging this kind of flow among disciplines is increasingly obvious in our current intellectual and culturally diverse environment. Today the Institute is building on its strengths in collaborative research to tackle problems greater than any single discipline can resolve and find solutions unimaginable without transdisciplinary morphing.

Artists, like scientists, accept paradox, error, and uncertainty as necessary elements in the process of discovery. Scientists and engineers conceptualize through visual metaphors and evaluate their work in aesthetic terms. Increasingly, they recognize the common ground that underlies their endeavors and the artistic enterprise. A deep knowledge of art, notes Nobel Laureate in physics and Institute Professor Jerome I. Friedman, encourages one to work at the edge, break the rules, and make intuitive leaps into the unknown that may lead to crucial discoveries. Describing the computational origami on which he and his father Martin (a visiting artist in CSAIL) collaborate, computer scientist Erik Demaine has remarked, "Over the years, we have a harder and harder time distinguishing art from mathematics; the math we do inspires the artistic work we do and then the artistic work feeds back into the mathematics, and it all sort of lives together, trying to relive the Renaissance and capture those two things together." 19

"Leonardo"— shorthand for the interconnectedness of art, engineering, science, and invention — is encountered everywhere at MIT: on the frieze of Building 1 in Killian court; as the title of the leading journal for artists engaged with science and developing technology published by MIT Press; as the "Stradivarius of expressive robots"; 20 and as an embodiment of the ideals of MIT culture in President Susan Hockfield's address to the Freshman Convocation, Class of 2012: "His multidisciplinary curiosity, his admiration for nature's economy of design and his irrepressible passion for solving problems" are still vibrant lessons for MIT today. 21

 $^{^{17}}$ The Hayden Gallery opened in 1950 with a mission to display contemporary art, highly unusual at the time, let alone for Boston.

¹⁸ Professor Jerry Friedman, Lecture, May 19, 2009.

¹⁹ Erik Demaine, "Computational Origami," video, http://seedmagazine.com/designseries/erik-demaine.html.

²⁰ Cynthia Brezeal, Director, Personal Robots Group, MIT Media Lab, http://robotic.media.mit.edu/projects/robots/leonardo/overview/overview.html.

²¹ Susan Hockfield, "The Urgency of Doing: MIT and the Spirit of Leonardo da Vinci, 24 August 2008, Freshman Convocation 2008, http://web.mit.edu/hockfield/speeches/2008-convocation.html.

The arts at MIT are poised for a new era, which must build upon the distinctive contributions they make to the school's culture.

- emphasis on the creativity that permeates the Institute's educational and research agendas;
- belief in designing things that make a difference in the world;
- dynamic interactions among art, engineering and science;
- outstanding contemporary art and architecture as part and parcel of the physical environment of the campus;
- commitment to the exhibition, performance, demonstration and dissemination of innovative artistic work;
- understanding of the arts as a multi-sensory mode of inquiry, transmission of values and exploration of human experience.

SUMMARY OF GOALS*

- 1. Extend MIT's legacy of inventing future artistic and performative languages and the technical innovations that enable them.
- 2. Seize the opportunity of the core-curriculum requirement in the arts to meet student demand for exposure to the practice of ambitious, technically advanced and socially significant art, design and performance.
- 3. Create exhibition, performance and research facilities that do justice to the mediarich art forms of the future.
- 4. Develop MIT's reputation as a center of excellence in the arts that nurtures cross-disciplinary creativity and innovation, most prominently at the intersections of art, science, engineering and technology.

^{*}Section 3 explains new goals for the arts in greater depth. Appendix 1.7 includes more detail about priorities, arranged by category, unit, and timetable.

II. THE ARTS IN THE CORE EDUCATIONAL MISSION OF THE INSTITUTE

FOUNDING PRINCIPLES

MIT leaders, beginning with its founder, William Barton Rogers, have understood the profound effect of embedding the arts in a scientific and technical institution. The arts were crucial to the plan that Rogers proposed in 1861 for the institution that would become MIT. The Institute he imagined would have "the triple organization of a Society of Arts, a Museum or Conservatory of Arts, and a School of Industrial Science and Art." The official charter retains this structure and states the Institute's goal as the development and practical application of science *in connection with* arts, agriculture, manufactures, and commerce [emphasis added]." ²³

The Institute was conceived along the lines of the Conservatoire des Arts in Paris and the South Kensington — now the Victoria & Albert Museum — in London. The "arts" in this context meant primarily the products and techniques of applied science, but the "fine arts" would become part of the collections insofar as they served the practical instruction that guided the Institute's principal activity.²⁴ Rogers' vision thus incorporated both practical training and a culture of learning by exemplar, the assemblage of great works of art and manufacture that would demonstrate excellence.

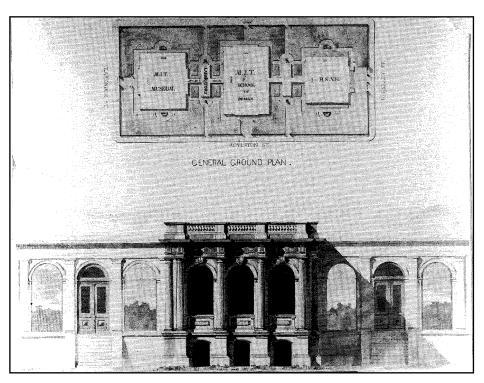


Figure 10: Plan for the MIT Museum, MIT School of Design and Boston Society of Natural History, William G. Preston, ca. 1861, from Mark Jarzombek, Designing MIT: Bosworth's New Tech, fig 1.

²² William Barton Rogers, *Object and Plan of an Institute of Technology; including a Society of Arts, a Museum of Arts, and a School of Industrial Science,* second edition, 1861, 4.

²³ Charter of the Massachusetts Institute of Technology, 1861, http://libraries.mit.edu/archives/mithistory/charter.html

²⁴ See Rogers, section 12, devoted to the Committee on the Graphic and Fine Arts.

William G. Preston's design for the Institute in Back Bay included a teaching museum, which was not realized when "Boston Tech" opened on Boylston Street in 1865; instead, several years later, in 1871, construction began nearby on what would become the Museum of Fine Arts.²⁵

• Beaux-Arts and Polytech

When William Ware proposed a course in architecture for MIT in 1865, the first in the country, he invoked Roger's threefold organization and argued that architecture, as distinct from its useful component, building, was analogous to literature. He advocated a teaching model based on the École des Beaux-Arts, incorporating art, history, literature, and science, as a "liberal variation" on the Institute's "Course of General Culture," which at the time was limited to science. In effect, architecture first introduced what is now called the humanities to MIT.²⁶ It is striking how durable the founding ideas have remained. Principles of both *beaux-arts* and polytech structured MIT's educational philosophy, which remains steeped in science and technology and the integration of a liberal education with practical and theoretical training.

Learning by Exemplar/Learning by Doing

A nineteenth-century belief in the exemplary power of representation, learning through direct apprehension, and the civic responsibility of institutions inspired Rogers' vision of incorporating a museum into his technical institute, for he shared a belief widely held at the time that many people "learn from observation and experience and not by abstract study." Rogers' brilliance was to expand this notion into an educational system that has remained vital and open to creative reinterpretation for more than 150 years. The "laboratory method" quickly became established in professional schools, but Rogers' system had broader implications in its construction of an "active learner," as the Lewis Report recognized in 1949:

But "learning by doing" means more than the laboratory method. It means a general method of learning applicable in all fields; the method of learning by inquiry rather than learning from authority. It implies the theory that an active participation of the learner in genuine problems is necessary for full understanding. It breaks down the artificial barrier between the academic and the non-academic world; it gives the school an atmosphere of relevance to the outside world.²⁸

As Lewis stated: "For undergraduates, particularly, we feel very strongly that the scientific spirit of inquiry and a liberal approach to life can best be acquired by living within a

²⁵ Mark Jarzombek, *Designing MIT: Bosworth's New Tech*, Boston: Northeastern University Press, 2004, 5.

²⁶ Ware, An Outline of a Course of Architectural Instruction, 30.

²⁷ Conservatory of Art and Science, Legislative Document, House No. 260. 1859.

²⁸ Warren K. Lewis, *Report of the Committee on Educational Survey to the Faculty of the Massachusetts Institute of Technology*, Cambridge [Massachusetts]: The Technology Press, 1949, 22.

genuinely creative atmosphere."²⁹ The benefits surpass the obvious one of immersing engineers, inventors, and scientists in an inspiring environment. The Lewis report recognized the continued relevance of Rogers' vision and argued for the elevation of the humanities as a corrective to over-emphasizing technical training, which had tipped the balance of an MIT education too heavily towards the professional, or worse, vocational.

ARTS IN THE CURRICULUM

The argument for the arts at MIT of course has evolved over the years. At various times the arts have been cast as exemplars of excellence within an object-centered approach to teaching, a revelation of order, harmony and simplicity in design, a set of highly developed protocols of observation, a corrective to overspecialization, an intuitive path to problemsolving, or a window into the future. Beginning with Rogers, one constant has been the attempt to overcome the supposed conflict between the sciences and what he called "classical culture," a conflict alive in late-nineteenth-century debates between Matthew Arnold and T. H. Huxley and reignited by C. P. Snow and F. R. Leavis in the "Two Cultures" controversy.³⁰

• Architectural Design³¹

Drawing instruction, fine arts, and French were taught continuously in MIT's architectural program, in a curriculum modeled on the dominant *École des Beaux-Arts* paradigm.



Figure 11: Office dA (Nader Tehrani), Voromuro, installation, ICA *vita brevis*, Boston Harbor Islands, 2007³²

²⁹ Lewis, 132.

³⁰ Massachusetts Institute of Technology, Commission on MIT Education, *Creative Renewal in a Time of Crisis, November, 1970*, Cambridge, Mass: The Commission, 4, citing *Life and Letters of William Barton* Rogers, 1896, II: 271. On the two cultures, see C. P. [Charles Percy] Snow, *The Two Cultures and the Scientific Revolution*, Cambridge [England], Cambridge University Press 1959, expanded edition 1964.

 $^{^{31}}$ See Appendix 2.1: Architectural Design and History, Theory and Criticism of Art and Architecture.

³² Nader Tehrani, M.A.U.D., Professor of Architecture, School of Architecture and Planning.

Eventually the school embraced modernism and gave particular attention to problems of housing. Adventurous experiments with light, water, and wind as design elements in civic environments, beginning in the late 1960s in CAVS, have greatly expanded into a major focus today on sustainability, environmentally responsive surfaces, and buildings modeled upon biological tissues. Digital fabrication is expanding the boundaries of design in unprecedented and exhilarating ways.

The Department of Architecture of course trains students for accredited professional degrees in design. But in the last few decades the school also has created new graduate degrees in media, arts and sciences, computational design, and art practice as a form of interrogative and transdisciplinary research. Today there is an increasing awareness that design, visualization and digital fabrication may span the MIT curriculum in arts, engineering and the sciences to serve the precise needs of professionally oriented degrees while at the same time developing new informational or structural languages.

Recently this recognition has coalesced around an agreement for an MIT-Singapore International Design Center (IDC), which has established the goal of becoming the world's most respected center for research in technologically-intensive design within ten years. Located on the MIT campus and in Singapore, the IDC will collaborate on research and shape the curriculum in design studies at a new Singapore University of Technology and Design (SUTD). An initiative of the Schools of Engineering and Architecture and Planning, the IDC initially will be organized around "grand challenges" and research themes; faculty in architectural design and urban planning will contribute to the challenge of designing sustainable cities and the research focused upon visualization and fostering creativity.

Traditionally the School of Architecture and Planning has emphasized graduate and professional education; however it now looks for growth in undergraduate teaching through the recently established Program in Art, Culture and Technology (ACT), which has merged the academic and research arms of the two visual arts programs the school has hosted for years (see Visual Arts, below).

• Music and Theater Arts³³

Students were engaged in musical activities during the earliest decades of the Institute, with the founding of the MIT Tech Orchestra in 1884 and the Banjo and Glee Clubs shortly thereafter. The first Dramashop production, Eugene O'Neill's *The Hairy Ape*, dates to 1927 (more than 150 performances have since been staged), but the Theater Arts were not formally established until Fall 1988, within the music section, which became Music and Theater Arts.

Music appreciation was one of the first two humanities courses taught at the Institute (the other was democracy), and by 1947, music and fine arts co-habited in a one-year course offered to seniors as a part of a four-year humanities sequence. Music and theater were ingrained into MIT life by the time Klaus Liepmann was appointed the first professor of music in 1948 and began to professionalize the leadership of performing groups and develop the history and theory curriculum. Liepmann conducted the MIT symphony's first musical performances in Walker Auditorium's Morss Hall. He recognized that the typical

³³ Appendix 2.2: Music and Theater Arts.

MIT student's "mental curiosity and searching mind" often included an affinity for music.³⁴ Today professionally-led music groups, including the symphony orchestra, a wind ensemble, a jazz ensemble, two choirs, a Senegalese drumming ensemble, a Balinese gamelan and dozens of chamber music groups, feature a broad array of musical talent. The Music and Theater Arts section excels in undergraduate education and teaches at the conservatory level for advanced students. The section awards competitive scholarships and fellowships for private instruction — the Emerson Program — to approximately 60 qualified students annually, who give more than 70 performances each academic year.

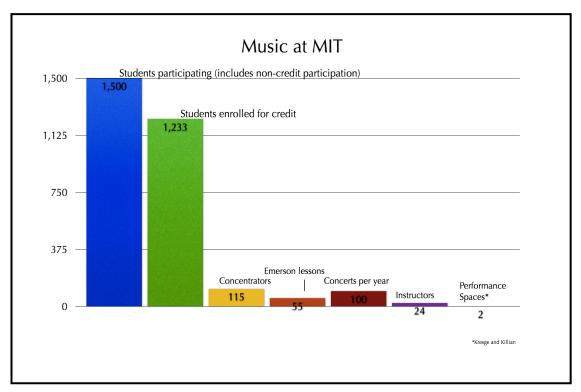


Figure 12: Music Enrollments, 2009-10

Rather than replicate itself, the music faculty has expanded into new territory over the years, successfully incorporating experimental and world music. Music was, in fact, a trendsetter in exposing students to global culture; it first offered "Non-Western Music" in 1971-72 and introduced world music into its performance offerings in the 1990s. The section's composers, musicologists, performers and directors now are pushing the envelope of technologically-driven experimentation with robotic instruments, computer visioning of musical scores, sensor-based amplifications of dance, and multi-media expansions of theatrical performance. The faculty is looking for new ways to reach the growing numbers of students with interests in computational music, a wide variety of global musical cultures, and digital media for theater performance. For example, student demand for the class Composing with Computers (21M.261) routinely exceeds capacity by more than 100%; in Fall 2008, demand outstripped capacity by 300%. Although education in traditional modes will remain fundamental for musicians and theater students of any

³⁴ Bartlett H. Hayes, Jr., *Art Education for Scientist and Engineer,* ("The Hayes Report"), 1952-54, published 1957, 26.

orientation, the challenge for the faculty is to meet the needs of increasing numbers of students interested in electronic music, rock, hip-hop, digital media, "intelligent" acoustics, advanced lighting design, and the like.

A faculty line in digital arts technology is a pressing need. There is a potential to formalize relationships with the Media Lab and the School of Engineering by identifying streams in existing majors or creating joint majors in Art Engineering, Entertainment Engineering, Audio Engineering, and Music Technology. These areas will continue to grow in academic importance and are of particular interest to MIT students. They lend urgency to the well-documented need for rehearsal and performance space for Music and Theater Arts, as well as equipment and lab space for technically advanced instruction in musical composition, theatre and dance. The creative industries are a potential source of support for such facilities and equipment, given their need to recruit students who combine a strong technical base, a creative temperament, and an entrepreneurial spirit—a rare mix of attributes but often found in MIT students.

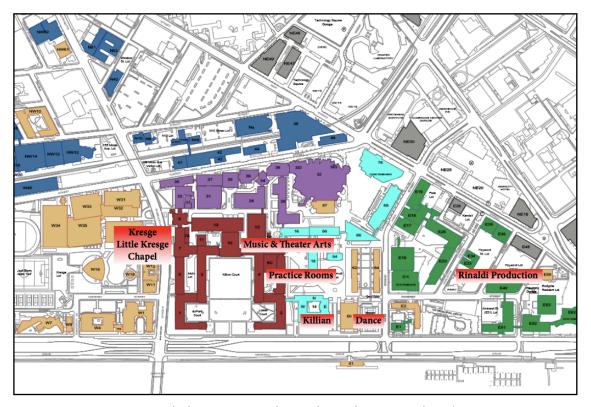


Figure 13: Music and Theater Arts Rehearsal, Production and Performance Spaces

• Visual Arts³⁵

In 1952, John Burchard, Dean of the School of Humanities and Social Sciences, commissioned *Art Education for Scientist and Engineer*, a document comparable to the Lewis Report in its ambition to broaden MIT education, but focused specifically on the visual arts; it was written between 1952 and 1954 by directors of museums and

 $^{^{35}}$ See CAVS, pp. 22-23 below and Appendix 2.3: Art, Culture Technology (formerly CAVS & VAP).

departments of art at other universities.³⁶ The Report recommended a sequence of courses that integrated history and studio exercises and an emphasis on artistic work that illustrated the connections between art and engineering. Their suggestions included the work Leonardo, to be sure, but also "controversial and experimental" work by contemporary designers such as Moholy-Nagy and Buckminster Fuller.³⁷ The Hayes Report recommended that these courses be based in the School of Humanities and Social Sciences, in order to contribute to general education and not be subsumed into the School of Architecture's professional curriculum; this did not happen. The report stressed "the practical value of the trained eye" and the commonalities between art and science, "both products of analysis and synthesis, of intuition and a judicious perception of order."³⁸

In 1970 President Howard W. Johnson again commissioned Hayes to survey the arts and imagine their future. Again Hayes solicited the advice of national leaders, among them the designer Charles Eames, John B. Hightower, Director of the Museum of Modern Art, and David S. Rockfeller, Jr., then with the Boston Symphony Orchestra. Opinions differed on whether MIT should establish an art school, but a consensus emerged about the role of the arts in promoting a sense of discovery, fostering an educational mode that poses questions rather than only delivering answers, and encouraging engineers to address the "total culture" rather than a narrow technical audience.³⁹

By the time the Lyndon Committee Report was published in 1976, the scope of the visual arts at MIT had broadened considerably. The Report recognized a national and international purview for the arts, an accomplished MIT faculty, an established place for the arts in the curricular structure, and burgeoning explorations in music, media and performance. An appendix to the Report, the "M.I.T. Arts Environments Study," provided a comprehensive rationale for arts facilities on campus.⁴⁰

In the years between these two reports, a PhD program in the History, Theory, and Criticism of Art and Architecture (HTC) was ratified by the Institute (1974-75). Founded by architectural historians Hank Millon and Stanford Anderson and art historians Wayne Andersen and Rosalind Krauss, the program was situated in the School of Architecture. In keeping with MIT's commitment to bridging the theoretical and the applied, this program tied art and architectural scholarship closely to the concerns of professional training and contemporary practice.

The 1987 Joskow Report noted the decline in teaching visual arts in the illustrious tradition of faculty such as György Kepes, Minor White, and Ricky Leacock. The Report recommended that the Master of Science in Visual Studies degree be resurrected and that a

³⁶ Art Education for Scientist and Engineer, The Report of the Committee for the Study of the Visual Arts at the Massachusetts Institute of Technology, 1952-54, 1957. The Committee was chaired by Barlett H. Hayes, Jr., Director of the Addison Gallery of American Art, Phillips Academy, Andover, and became known as "The Hayes Report."

³⁷ *Ibid.*, 39.

³⁸ *Ibid.*, 11.

³⁹ Bartlett H. Haves, Jr. Commission for the Survey of the Arts, M.I.T., 1969-70, 8-10.

⁴⁰ Donlyn Lyndon and the Arts Advisory Group, Council for the Arts, Planning and Facilities Committee, *M.I.T. Arts Environments Study*, 1976.

new section oversee undergraduate teaching in the visual arts.⁴¹ The Visual Arts Program (VAP) was created in the Department of Architecture in 1989. Like their predecessors, the current faculty has never emphasized traditional media; rather, the faculty is immersed in contemporary and time-based art and its ambitions.

The July, 2009 merger of the Center for Advanced Visual Studies (CAVS) and VAP joined the research and academic units, reflecting the faculty's desire to reconnect to a wellestablished MIT tradition in which the arts play a crucial role in technological development and transdisciplinary exploration. It is also critical to incorporate artistic and humanistic intelligence into contemporary discussions about technology, for which the two visual studies programs offer a platform, as seen in the themes of their lecture series over the last several years. Plans to develop the program, led by the Dean of the School of Architecture and Planning, anticipate growth in faculty, undergraduate offerings, and graduate students. This new entity, ACT, if bolstered with additional faculty, may fill a gap in media, arts and sciences in the undergraduate curriculum. VAP already teaches a popular "Foundations" HASS course to approximately 75 undergraduates per term. 42 ACT hopes to become a high-level research program focusing on multi-disciplinary collaboration among artists, scientists, and engineers. Fundraising is underway to support an international program of visiting fellows for academic year appointments and participation in research projects directed by creative arts faculty. Residence in the Wiesner and Maki buildings will offer new possibilities for creative tension between the critical, experimental, and interrogative inquiries of this arts program and the related but more instrumental or design-oriented goals of Media Lab research projects.



Figure 14: Gediminas Urbonas, *TRANSACTION*, 2000, Women interviews, scenario video stills, DVD⁴³

⁴¹ Paul L. Joskow, Chair, *Ad Hoc Committee to Review the Creative Arts at MIT, Report to the Provost,* 1987.

⁴² Recent budget cuts have reduced the offerings by one section and therefore the enrollments by a third.

⁴³ Gediminas Urbonas, MFA, Associate Professor of Visual Arts

• Writing and Humanistic Studies⁴⁴

The evolution of creative writing at MIT, like that of the visual arts, illustrates intelligent adaptation to the changing needs of the curriculum and the very definition of the medium. Initially, writing was taught as a core curriculum subject in English composition by the Department of English and History, which became the Department of Humanities in the 1950s. In the early 1960s, the Department of Humanities was divided into separate units, and writing became part of the Literature section. Writing separated from the Literature section in the mid-1970s and became more autonomous over the course of the following decade.

Established as the "Pilot Writing Program" in 1974, the new section addressed a general need at MIT for technical instruction in writing tailored to individual departmental interests; however, as articulated in "The Sivin Report" of 1976, ⁴⁵ the section also sought to integrate a humanistic perspective throughout the curriculum. And from its inception, the unit taught poetry, fiction, and writing for television. Eventually, the Writing Program began to specialize in technical and scientific writing adapted to undergraduate and graduate curricula, creating a new undergraduate major in science and technical writing (1984-85) and a graduate program in science writing (2002). Gradually, the section adopted a more expansive understanding of the role of writing in technical communication. It hosted inaugural conferences on writing for the computer industry (1987-88) and "The Social Creation of Knowledge: Multi-media and Information Technologies" (1990-91).

Today the Program in Writing and Humanistic Studies (renamed in 1991-92) includes among its faculty celebrated novelists and poets, whose teaching and creative output range from traditional genres to documentary filmmaking, computationally-generated poetry, and interactive fiction. Like the Music and Theater Arts section, the Writing Program emphasizes traditional modes of composition and expression while remaining hospitable to new modes of expression, which has enabled the section to reshape itself over time and avoid rigid disciplinary boundaries. The challenge is to bring together its resources with those of other programs in the humanities to create a less random mutation in the teaching and production of creative writing, computational art, and digital media.

The Literature section remains home to dramaturges and acclaimed poets, although most literature subjects are classified in the humanities and not the arts category of the new HASS requirement. In addition, Literature faculty have pioneered the study of film and digital media projects, notably through creation of the Program in Comparative Media Studies and the Shakespeare Electronic Archive.

Comparative Media Studies⁴⁶

Comparative Media Studies (CMS) emerged from Film and Media Studies, as an undergraduate program in the Literature section in 1982, and as a cross-disciplinary master's program in 1999 under the wing of three humanities sections — Literature, Foreign Languages and Literatures, and Writing. The goal was to enable students to think

⁴⁴ See Appendix 2.4: Writing and Humanistic Studies (WHS).

⁴⁵ Nathan Sivin, Chair, Report of the Committee to Evaluate the Pilot Writing Program, Submitted to the dean of the School of Humanities and Social Science, MIT, 17 June 1976.

⁴⁶ See Appendix 2.5: Program in Comparative Media Studies.

beyond traditional, medium-specific approaches to audio, literary, performance and visual forms and to prepare for careers in the creative industries involving multiple media platforms. The program's undergraduate major continues to grow and is a testament to student interest in humanities subjects that bridge theory and practice and address the historical, social and cross-cultural dimensions of media. The possibilities for cognate approaches in music and theater arts, discussed above, are obvious and beg further development. Although the growing number of CMS graduate and undergraduate students in recent years became disproportionate to the number of faculty dedicated full-time to teaching and advising them, various reconfigurations of the program are under consideration; new possibilities may emerge now that CMS has relocated to space contiguous with ACT and Media Lab research projects.

Cross-School and Transdisciplinary Majors

The 2006 Task Force Report encouraged cross-school collaboration and teaching transdisciplinary issues, including a suggestion to design a First-Year Focus subject that addresses "creativity" as one of the "big ideas" concerning cultures and society that have endured over time."⁴⁷ The theater course "Learning from the Past: Drama, Science, Performance" offers one example; it also has shown the power of MIT's "make it, do it, send it out into the world" approach. In this instance, the Royal Shakespeare Company presented "The Tragedy of Thomas Hobbes," a science play developed in a performing arts classroom, the first co-commission between MIT and a major theater company.⁴⁸

The structure of CMS revealed the difficulty of sustaining cross-disciplinary majors with volunteer faculty from different sections. However, the faculty vote to make double majors an undergraduate option (a 2006 Task Force recommendation) — in place of the previous double degree system and a step up from minors and concentrations — will go a long way towards accommodating the many students who wish to delve into music, theater, writing, or visual arts along with science and engineering. Joint majors in Humanities and Engineering or Science (21E and 21S) remain on the books and are another way to address student demand for a cross-disciplinary focus and the Task Force's recommendation that the Institute create "more flexible versions of existing majors."

⁴⁷<u>Report of the Task Force on the Undergraduate Educational Commons</u>, [2006 Report Task Force Undergrad Commons.pdf],78.

⁴⁸See "Are Experiments Good Science?" http://shass.mit.edu/research/theater.

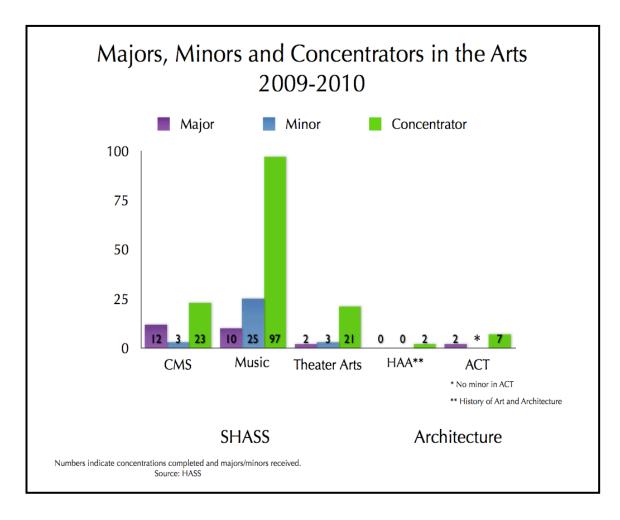


Figure 15: Majors, Minors, Concentrators in the Arts

ARTS IN THE RESEARCH CULTURE OF MIT

MIT culture has never been animated solely in the classroom. Equally important are the seminars, centers, and research labs led by faculty and populated by outstanding students. The "Seminar on Technology and Culture at M.I.T." convened in 1964 by the Episcopalian chaplain, for example, became a model of cross-disciplinary reflection; its premise was that since society's problems are not generated in any single intellectual discipline, therefore one should not expect their resolution to lie in any one discipline, either. 49

Center for Advanced Visual Studies

These discussions promoting interdisciplinary approaches undoubtedly informed György Kepes' proposal, submitted in 1965 to President Julius Stratton, to establish a center for collaboration between artists and scientists. This vision of artistic production in harmony with the distinctive environment at MIT remains compelling today. Kepes asserted that "major creative achievement comes from the confluence of many types of creative

⁴⁹ Harvey Cox, Hudson Hoagland, Walter Ong, György Kepes and the members of the Seminar on Technology and Culture at M.I.T. *Technology and Culture in Perspective*, Cambridge, Mass: Church Society for College Work, 1967, 2.

personalities" and "inter-thinking" — a term borrowed from the paleontologist George Gaylord Simpson and known today as "lateral thinking." ⁵⁰

Kepes arrived at MIT in 1946, bringing a Bauhaus tradition to the Institute; he created a distinguished body of work in graphic design, photography and painting throughout his long career. He is the subject of revitalized interest today, however, for establishing at CAVS a setting where artists, scientists and engineers could collaborate on experiments with new media. Kepes saw art and science as complementary "ordering activities of the human mind" and looked for resonant categories to connect them. "Contemporary scientists recognize that visual models of their new concepts cannot be provided by a portrayal of things; it is a model of relatedness that is called for."⁵¹ Kepes proposed that new technologies could be expanded, adapted, and productively distorted for artistic purposes, that art could appeal to and cultivate multiple sensory channels, and that large-scale, environmental art forms, especially "the fluid power of light in action," could effectively intervene in urban landscapes.

Under the directorships of Otto Piene, a member of the ZERO group in post-War Germany, and Steve Benton, many CAVS fellows continued Kepes' lines of investigation and developed lasers, plasma sculptures, and holography for artistic purposes. Krzyzstof Wodiczko's directorship (from 1994 to 1996 and again from 2004 to 2009) re-infused overlooked social and cultural issues into art, design, and technology. He and his Interrogative Design Group created public art staged in national and international venues, often through nocturnal projections that are visually arresting, technically intriguing and exceptionally thought-provoking.

Scholarly interest in the history of CAVS as an early manifestation of creative exchange between art and science is increasing, making urgent the need to conserve and organize the archive to meet the demand for access. The vision for future development of the archive is equally important: to continue the repository's legacy as a "living archive" devoted to the research and artistic production of faculty and visiting fellows at ACT; define best practices for preserving ephemeral, time-based, and performance art forms; and document the process of collaboration itself, considered so crucial to breakthrough innovation today.⁵²

• The MIT Media Lab⁵³

Collaboration was at the heart of CAVS' artistic variant of the research lab and later of the Media Lab; each center has generated numerous spin-offs around the world. Established in 1985, The Media Lab's intense focus on inventing new technologies that expand expressive horizons and sensory capabilities has had a profound impact on many art forms, particularly computer-aided design and graphics (Visible Language Workshop), film and video (Interactive Cinema, later called Media Fabrics), and music and performance (Hyperinstruments/Opera of the Future). Even mentioning discrete media misses the point

⁵⁰ *Ibid.*, 122.

⁵¹ György Kepes, *The New Landscape in Art and Science*, Chicago: Paul Thiebald and Co., 1956, 26.

 $^{^{52}}$ See the memorandum "The Future Archive Project: Next Steps for the CAVS Archive," ACT internal document, 2009.

⁵³ See Appendix 2.6: MIT Media Lab.

of much of the research, however. The projects of greatest significance for the arts operate at the intersection of different technical domains; they do not simply combine media, but use them to unsettle, inflect and interpret one another. Separations between animate and inanimate, visual and auditory, or professional and amateur are acknowledged only to meet the challenge of overcoming them.

Exploiting the feedback loop between computers and musicians, for example, The Opera of the Future group developed hyperinstruments, which read the inflections of the body while being played; they can extend virtuoso capabilities and offer sophisticated musical experiences to non-professionals. In the opera "Death and the Powers," elaborate sensor systems and theatrically intelligent robots vastly expand the range of musical and vocal possibilities, in an elegiac story about the protagonist's post-human, cyborgian afterlife.

The Media Lab initially was a "salon des refusés" composed of researchers brought together by Nicholas Negroponte who did not fit any mainstream disciplinary model. The Lab flourished by refusing to erect barriers to sharing intellectual property and by encouraging a radical form of crossing disciplinary boundaries. Neither the typical art or music school nor the traditional research lab could have inspired the Media Lab's innovation; it was broadly driven by an inquiry into creativity and making tools for inventive expression accessible to everyone. Under the direction of Frank Moss (2006-2011), the Media Lab shifted emphasis. In its early years, the Lab focused on enhancing the interactivity and personalization of the ultimate machine of that moment, the computer, which was sensory-deprived. In the current research landscape, microtechnologies are deployed to enhance creativity and improve everyday life; wearable



Figure 16: Tod Machover, *Death and the Powers*, premiered in Monaco September 2010⁵⁴

computing, affective objects, responsive environments, intelligent agents and tangible interfaces are subjects of research and design. Social media and simplified technologies

⁵⁴ Tod Machover, MM, Professor of Music and Media, MIT Media Lab, School of Architecture and Planning.

are transforming consumers into creators on a scale inconceivable in the past, and the Media Lab no doubt will continue to lead this paradigm shift.

In these cauldrons of creativity undergraduate research flourishes; more than 1600 students have been UROPs in arts and media departments in the last five years, 200 per year in the Media Lab alone.⁵⁵

• Comparative Media Studies

Comparative Media Studies (CMS) also created an influential model of involvement with emergent technology, in this case from a base in the humanities. The program has focused historical and scholarly investigation on the organizational logic and social uses of technology in a rapidly changing media landscape and established a vibrant sponsored research program that generated external funding unprecedented for the humanities.

CMS research projects have addressed an array of issues: K-12 education in media literacy (New Media Literacies), emergent practices in civic journalism and social networking (The Center for Future Civic Media, a joint project with the Media Lab), video game design with innovative interfaces created for problem-solving and educational use (The Singapore-MIT GAMBIT Game Lab and Education Arcade, a joint project with the Scheller Teacher Education Program), and media policies in the creative industries (Convergence Culture Consortium). CMS graduate students have research assistantships in the Hyperstudio, which deploys digital media to enhance humanities education and research. CMS has proved that humanities research is applicable to fields across the Institute and has successfully collaborated with units from CSAIL to Sloan.

• Centers, Cross-School and Multi-Disciplinary Collaborations

Cross-school centers, programs and research labs have provided momentum to MIT's effort to solve complex problems in flexible settings that cut through departmental or school boundaries. There are 58 such units at the Institute, and approximately 36 have "Center" in their title. Diverse sections of the arts faculty are interested in creating Centers, an indication of new opportunities for significant collaborations and the need for research agendas incorporating multiple disciplinary approaches. CAVS and VAP have merged, Music and Theater Arts has a vision for a Center for Art, Science and Engineering that would connect faculty in many sectors of the Institute, and the Center for Future Storytelling, recently established in the Media Lab, offers wide-ranging opportunities for faculty in arts and humanities to contribute to more intelligent technologies for the media industries.

The projects commissioned by the Steering Committee chaired by Professor Tod Machover to showcase arts and technology for *FAST* the Festival of Art, Science and Technology in celebration of MIT's 150th anniversary in 2011 testify to the depth and breadth of collaborative activity throughout the Institute. Over the past several years, the Committee fostered conversations with more than 60 faculty from across the Institute, seeding 10

⁵⁵ See Appendix 1.3: Arts-Related UROP Participation: Five Years (2003-08).

⁵⁶CMS research groups are dynamic and evolving: for a current list, see http://cms.mit.edu/research/groups.php

initial project proposals — including several cross-disciplinary collaborations — from 9 departments and programs, and held a competition for student participation.⁵⁷

MIT artists think, compose, construct and create in more than one medium at a time, and the resulting aesthetic and technical permutations are extraordinary. Consider just one of the dramatic architectural interventions that will transform the MIT campus. Windscreen (Figure 5), by curator of installations Meejin Yoon, beautifully underscores the relationship between form and technology while engaging issues of energy consumption and production, as tiny turbines attached to the Green Building generate changing light patterns on the façade according to the velocity of the wind. Performing arts run a wide gamut, too. "Music | Machines," a day of discussions, demonstrations and performances organized by Tod Machover and Joseph Paradiso, reveals the astounding variety of experimental music created at MIT, from audio innovations to synthetic performers, from sensors and interfaces to theories of musical mind and emotion, from hypercellos for Yo-Yo Ma to Guitar Hero. A multi-cultural New Music Marathon, curated by Evan Ziporyn, demonstrates the relationship between traditional and 21st century music cultures and brings world-renowned new music powerhouses Kronos Quartet, Bang on a Can All-Stars and Chinese pipa virtuoso Wu Man to team up with MIT's own Gamelan Galak Tika and Chamber Chorus for a 5-hour concert featuring works by MIT's Evan Ziporyn, Tod Machover, alumna Christine Southworth, as well as Brian Eno and minimalist gurus Steve Reich & Terry Riley. Jay Scehib's Bellona, Destroyer of Cities, based on Samuel R. Delany's epic science fiction novel, *Dhalgren*, (Figure 6), is part two a trilogy of multimedia performances, entitled Simulated Cities/Simulated Systems. In the first of this series, Untitled Mars (This Title May Change), presented in Budapest and New York (where it received an Obie award for Best Scenic Design), Scheib "crash lands" seven performers into a simulated Martian environment "that merges speculative science and avant-garde theatrics."58 FAST Light, the culminating event on MIT's campus and the Charles River, features more than twenty installations that showcase innovative digital fabrication, energy efficient lighting and MIT's leadership in producing art on a civic scale.

ARTS BEYOND THE CLASSROOM

The two premier exhibition spaces on campus — the List Visual Arts Center and The MIT Museum — continue a longstanding tradition of engaging the active learner in object-centered or experiential education. As one would expect, the List and the MIT Museum focus respectively on cutting-edge contemporary art and the most advanced developments in engineering, science and technology "made at MIT." The high concentration of outstanding public art and architecture in a school primarily known for science and engineering and the art treasures found in a museum principally known for science and engineering collections often are treated as an oddity by outsiders, but they have a natural presence in the ecology of an institution where design permeates innovation.

⁵⁷ FAST http://arts.mit.edu/fast took place from February through May, 2011, after this report was completed. It was a remarkably successful series of events, which included 22 commissioned installations throughout campus, 10 performances, 4 exhibitions, and 4 festival weekends with numerous panel discussions, concerts, and demonstrations. Approximately 32,688 people attended festival events; more than 17,000 were on campus for the culminating weekend, *FAST* Light.

⁵⁸ Helen Shaw, "Martian to a Different Drummer," *Time Out*, 655, April 16-22, 2008.

Architecture on the MIT Campus

President James R. Killian first established what he called "environmental" goals for the campus, which incorporated distinguished art and architecture as "an essential and natural



Figure 17: Alvar Aalto, Baker House, 1947, renovated Perry Dean Rogers, 2002

part of the process or education and growth."⁵⁹ Killian oversaw the completion in 1955 of the fluid plastic shape of Eero Saarinen's Kresge auditorium, an eighth of a sphere set on three points, and its cylindrical counterpart, the chapel. I. M. Pei further expanded this idea, saying he wanted "to make of the total M.I.T. a museum," not limited to buildings but including "open spaces utilizing paintings, sculpture, scientific exhibits, etc., as part of the total architecture and learning process."⁶⁰ President Johnson strongly asserted the idea that "utility is not in conflict with beauty" and called for a campus master plan. "The task is to make this urban setting as rich and meaningful for those who live within it as we believe urban settings everywhere should be in our cities of the future. Unless we can create such an environment at M.I.T, how can we develop leaders who will help to transform our cities of the future? These objectives are not modest."⁶¹

This articulation of purpose continued a tradition of enlightened patronage of modern architecture that began with Alvar Aalto's Baker House dormitory (1947, renovated by Perry Dean Rogers in 2002). The transformation of the campus in the last decade to accommodate the changing needs of students and faculty has produced a series of celebrated buildings: Kevin Roche's Zesiger Sports and Fitness Center (2002), Stephen Holl's Simmons Hall (2002), Frank Gehry's Stata Center (2004) and Charles Corea's Brain and Cognitive Sciences Complex (2005).⁶² Capped by the Media Lab expansion by Maki

⁵⁹ James R. Killian, "The Visual Arts at M.I.T." n.d.

 $^{^{60}}$ Unpublished Letter from Carroll L. Wilson to Ida Rubin, October 13, 1966. Council for the Arts files.

^{61&}lt;sub>Ibid</sub>.

⁶²See William J. Mitchell, *Imagining MIT: Designing a Campus for the Twenty-First Century*, Cambridge and London: The MIT Press, 2007.

(2009), these buildings have increased MIT's stature as a cultural destination and secured its reputation as a patron of great architecture and contemporary art.

■ List Visual Arts Center⁶³

The Hayden Gallery, predecessor to the List, opened in 1950 with a specific mandate to exhibit contemporary art, highly unusual in Boston at the time. The Gallery was intended to supplement the core visual arts curriculum but remain accessible to the public at large. The List opened in 1985 and today oversees MIT's public, permanent and student loan art collections as well as ambitious exhibitions of contemporary art that receive national and international attention.

The List's permanent collection was established in 1951 with a donation of 26 paintings and drawings from the Standard Oil Company of New Jersey. Since there was no museum to house the works — a shortcoming that still exits — the art is exhibited around campus. Thus began MIT's unique tradition of "distributed art." Today the permanent collection of around 2000 works hangs in offices, laboratories, and living spaces around campus. This unusual display policy was expanded in 1966 with the creation of the Student Loan Art Program, which now includes more than 400 original artworks, primarily prints and photographs by leading contemporary artists, each with an insurance value under \$3000. Only one third of students entering the lottery held each Fall can be accommodated. Expanding this program and enhancing the educational apparatus surrounding it — so that "geeks get art," as the saying goes — is an ongoing priority.

The dispersal of the permanent collection is a different matter. Although distributing art around campus is a distinctive aspect of MIT's creative landscape, this policy creates problems for conservation, increases the need to steward the many far-flung works, and ultimately, may be more expensive than displaying the art in a permanent exhibition space.

The M.I.T. Committee on the Visual Arts spearheaded numerous acquisitions for what is now known as the public art collection. The Committee was formed in 1960 during Julius Stratton's presidency (his wife Catherine was an active member) and received its first gift in 1963 for the outdoor sculpture, *Elmo (MIT)*, by Dimitri Hadzi. Under the chairmanship of art historian, conservator and consultant Ida Ely Rubin, the Committee succeeded in bringing major works of art to campus; its *coup* was the donation of Alexander Calder's *The Great Sail*, a gift made in 1996 by Mr. and Mrs. Eugene McDermott, which became the central feature what was called the "outdoor sculpture garden." In 1968, a Percent for Art policy (originally 2%, now capped at \$250,000) was established; it was modeled upon the Kennedy administration's program of setting aside a percentage of the cost of each new federal building for a work of art. MIT appears to be unique among private educational institutions nationally in the extent of its commitment to integrating contemporary art into its campus development. This commitment should be supported and continued.

⁶³ See Appendix 2.7: List Visual Arts Center



Figure 18: Sol LeWitt, Bars of Color Within Squares (MIT), 2007

Today the List oversees the Percent for Art policy, working through committees of faculty, staff, students, architects, and contractors to commission outstanding site-specific art for the campus. Among recent works is the extraordinary terrazzo floor by Sol LeWitt commissioned for the Green Center for Physics, *Bars of Color Within Squares (MIT)* and installed in 2007 (Figure 18). Conservation of the collection is an ongoing concern, and an endowment for its preservation recently has been established.⁶⁴

In 2006, *Public Art Review* recognized the public art collection on MIT's campus as one of the top 10 in the country. The redesign of the List's web site, which contains an <u>interactive map</u> of the collection, has further enhanced its reputation. The Curator of Public Art give 120 tours during the academic year and receives at least one request per week from other universities inquiring about MIT's collection as a model for forming their own.

Another major goal for the List is to support the Institute's academic and research priorities. One example is the annual Max Wasserman Forum on Contemporary Art, established to address timely and controversial topics. Collaborations between the List and Professor Caroline Jones and HTC graduate students are another example. List curators and Jones worked together on two major exhibitions, *Sensorium* (2006) and *Sounding the Subject/Video Trajectories* (2007).

⁶⁴ Anish Kapoor's *Non-Object (Plane)* in Stata and Cia Guo-Qiang's *Ring Stone* in the Sloan Building were installed in 2010, and Martin Boyce's *Through Layers and Leaves (Closer and Closer)* in the Koch Center for Integrated Cancer research in 2011.



Figure 19: Sounding the Subject, exhibition, List Visual Arts Center, 2007

HTC and the List jointly created a research assistantship for the latter exhibition, which allowed a doctoral candidate to work with notable guest curator Daniel Birnbaum. Flexible allocation of graduate fellowships from the Dean of Graduate Education would allow this successful experiment to continue and incorporate other disciplines.

Jones curated the *Video Trajectories* complement to the *Sounding the Subject* exhibition, which was organized for teaching purposes in conjunction with a class on the history of video art. The works she selected became part of the List's permanent collection and are periodically shown on the Media Test Wall in building 56. They demonstrate the type of acquisition that the List hopes to pursue more aggressively. An acquisitions policy focused on film, video, and performance (all time-based art forms) would complement the tradition of technical innovation in film and video pioneered at MIT and the considerable holdings elsewhere in the Institute of this kind of work (for example, in the CAVS archive), much of it in need of preservation and proper archival treatment. An integrated and cohesive educational, exhibition, and acquisitions policy would create a positive multiplier effect.

The national and international recognition of List exhibitions, as well as their importance to the community, has continued to grow. The gallery space, however, is literally boxed in, and as a result, its programming is curtailed. The severely constrained footprint requires the List to close between shows to reinstall new exhibitions, thus limiting the number of exhibitions to no more than three a year, given the need to accommodate the Student Loan Art collection lottery at the beginning of each Fall semester. Attendance suffers. Acquiring additional exhibition or "swing" space is vital to maintaining the List's value to the Institute's academic program and the Center's stature among peer academic institutions.

■ The MIT Museum⁶⁵

The MIT Museum began as an exhibition of technical and scientific achievements assembled to celebrate the inauguration of President Jerome Wiesner in 1971. Established

⁶⁵See Appendix 2.8: The MIT Museum.

through the advocacy of President Emeritus Johnson, the Museum quickly adopted the goal of making MIT's research and innovation "accessible to all." The breadth and significance of its collections, however, go well beyond the MIT community; its architectural, nautical and hologram holdings rank among the most important in the country. Many of the works in the museum demonstrating notable scientific discoveries or technical achievements are at the same time works of great artistic merit, as exemplified by the photographs of Berenice Abbot, Minor White, and "Doc" Edgerton. Edgerton's well known 1937 Coronet (milk drop) was the first photograph collected by the Museum of Modern Art; his 1964 Shooting the Apple was shown in the opening exhibition of the Institute for Contemporary Art in Boston.

Creative educational programming is a major priority. One stellar example of engaging the public is the Museum's Cambridge Science Festival (the first science festival in North America), held annually beginning in 2007, it is a multifaceted event modeled on art, music and movie festivals. The National Science Foundation has given funding to the Museum to replicate the model in other US cities. The PERMIT (Public Engagement with Research at MIT) initiative also exemplifies the Museum's mission to engage the wider community with MIT research and innovation. "Sampling MIT," a series of linked exhibitions and educational public programs, highlights MIT research in the Museum's ground floor gallery.

The Museum has been similarly inventive in its exhibition and display policies, as demonstrated by an annual *Luminous Windows* exhibition, initiated in February 2009, an installation of holograms commissioned by a competitive process and visible only at night in the Museum's windows on Massachusetts Avenue. Accompanied by an international symposium of holography arts, the exhibition spawned a significant holography and spatial imaging initiative at MIT that will include annual exhibitions, a biannual Holography Forum, and a "crowd-sourced" web site intended to become a repository of technical information about the creation and preservation of these singular works of art and technology that seem to be sculpted with light.⁶⁶ A comparable venture is the "wikibition" conceived for MIT's 150th anniversary, comprised of 150 objects nominated by the community for their significance to Institute history.

The surge in interest in the MIT Museum since 2007, when the Mark Epstein Innovation Gallery opened and the Cambridge Science Festival began, calls for continued improvement in gallery spaces and an expansion of public outreach, both within MIT and beyond. The Museum's space in N51 and N52 needs substantial upgrade: storage space in the basement is plagued by water leaks (undesirable for insurance purposes, never mind the collections); the second floor galleries are badly in need of renovation and renewal; and there is unfinished space on the second floor that nonetheless is dedicated to educational programming. Plans are underway to develop the Massachusetts Avenue facility to house the upcoming "150 objects" exhibition and upgrade the education and outreach study center.

⁶⁶For a review of the winter (2009-2010) exhibition, see Cate McQuaid, "<u>Illuminating the Winter Nights</u>," *Boston Globe*, January 17, 2010.

 $http://www.boston.com/ae/theater_arts/articles/2010/01/17/two_local_projects_illuminate_the_winter_nights/$

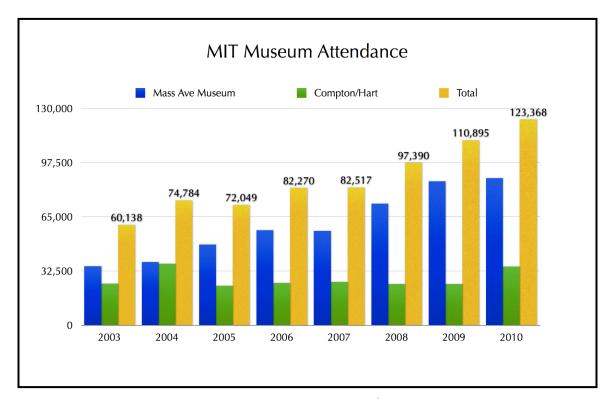


Figure 20: MIT Museum Attendance

Although the missions of the Museum and the List are different, an opportunity now arises for the two institutions to collaborate around the growing phenomenon of "artscience," which encompasses collaboration between artists and scientists, artists who choose the life sciences as their theme, and scientists who visualize and animate their discoveries with art.

Catalyst Collaborative (CC@MIT)

The Catalyst Collaborative@MIT represents yet another form of public engagement with science and art (in this case theater). CC@MIT began in 2004 as a series of *salon* conversations initiated by writer and physicist Alan Lightman and playwright and then Associate Provost for the Arts Alan Brody. They soon began to collaborate with the artistic director of The Underground Railway Theater (URT), a non-profit company founded in 1979 that had built a reputation for community partnerships. A collaborative that creates plays about science and its cultural impact, CC@MIT commissions new works written jointly by scientists and playwrights and holds pre- and post-performance discussions about the scientific and ethical issues raised by the plays, featuring distinguished scientists from MIT and other local universities. CC@MIT also conducts workshops about teaching science through theater for local K-12 teachers and students.

Originally a nationally touring company, URT now is housed with the Nora Theater Company at the Central Square Theater in a building owned and leased on favorable terms by MIT. Thus CC@MIT is able to present plays on campus as well as in a new theater just blocks from MIT. The formal opening of the Central Square Theater in November, 2008, was a milestone in MIT's imaginative dissemination of scientific knowledge and simultaneous improvement of the community's cultural life.

Initially given seed funds by the Associate Provost and deans in three schools, CC@MIT currently is working with Music and Theater Arts and the Kavli Institute for Astrophysics and Space Research to write joint grant proposals that would connect the theater more closely to research at MIT.

• Fellows, Residencies and Visiting Artists⁶⁷

An international circuit of exhibitions and performance makes artistic practice today a mobile and global project. A deep-seated belief in connecting teaching and research to the outside world has long been part of MIT's educational philosophy, and it is no surprise that for decades a stream of visiting artists has flowed through the Institute's classrooms, studios, and exhibitions spaces.

In 1990, Ellen Harris, the first Associate Provost for the Arts, created an Artist-in-Residence Program (AIR), with four goals: 1) "to maintain and expand the wealth of programs that already exist; 2) to increase the integration of visiting artists with the entire MIT community; 3) to encourage ties between departments and sections; and 4) to assist in logistics and in publicity and funding efforts."⁶⁸ She added residencies to the Abramowitz Memorial Lecture series, established in 1961 to bring eminent performing artists to campus, and the Eugene McDermott Award, established in 1974, augmented in 1990, and now one of the most generous arts prizes in the country. A second residency was donated in 1998 by Mrs. Eugene McDermott, named in honor of her friend Ida Ely Rubin, who had done so much to build MIT's art collection.

However, there are visiting artists and residencies beyond those organized by the Office of the Arts. Residencies sustained the Dance and Theater programs in their early stages and are a significant factor in Music and Theater Arts' programming today. In its early years, CAVS provided long-term appointments to Fellows, including Maryanne Amacher, Stan van der Beek, Peter Campus, Nam June Paik, Yvonne Rainer, and others. Fellows or visiting artists have been important to The Experimental Music Studio and its successor the Music and Cognition Group and to the Opera of the Future in the Media Lab. The List Visual Arts Center has sponsored residencies built around its exhibition program and Percent for Art projects, and kinetic sculptor Arthur Ganson's 1998 residency at the MIT Museum generated works of "gestural engineering" that are continuously on display in the galleries. Artists also have been invited to engineering and science departments and research labs: in the 1960s sculptor Al Duca worked with the Department of Materials Science and Engineering; the Glass Lab sponsors the The Page Hazlegrove Lectureship and Residency; and the Broad Institute recently hosted the artist Daniel Kohn, who experimented with scientists to find data mapping techniques and other visual analogs for complex experimental results.⁶⁹

Essentially MIT sponsors four types of residencies, plus a myriad of shorter stints by visiting artists that may be inspiring and valuable but do not necessarily allow for sustained engagement with faculty or students: 1) appointments for a semester or longer that are attached to a research or academic program and are comparable in many ways to Visiting

⁶⁷ See Appendix 2.9: Office of the Arts and 1.4: Artists-in-Residence.

⁶⁸ Ellen T. Harris, "A Plan for the Arts," December 1991, 38.

⁶⁹Daniel Kohn, "<u>Research News: Spotlight: Genomics through the Eyes of an Artist</u>," January 30, 2008), http://www.broadinstitute.org/news/95.

Scholar or Postdoctoral Fellow positions (CAVS – now ACT – and CSAIL); 2) one-to-two week residencies funded by endowments and arranged through the Office of the Arts (McDermott, Abramowitz, Rubin, Katzenstein); 3) residencies in the List or the MIT Museum that are determined by the extended period of planning required for an exhibition or a Percent for Art commission and allow for repeated visits; 4) opportunities to engage with students arranged by faculty in conjunction with their courses, research, or special events.

The residencies work best when they can be planned with the lead-time and timetable that governs the academic calendar and when they extend from or foster collaborations with faculty and students. Repeated or follow-up visits, where possible, often seem to work well for the artists and can build relationships that are lasting and beneficial to the Institute over time. Cai Guo-Qiang and Matthew Ritchie are examples. The Chinese artist, whose retrospective at the Guggenheim and spectacular fireworks for the opening of the Beijing Olympics garnered so much attention in 2008, first visited MIT in 2002 as a Rubin Artist-in-Residence and recently has completed a work for the new Sloan School building. Ritchie's experience at MIT creating *Games of Chance and Skill* (2002) for the "Z" Center was, he said during his recent return to campus, very important for the development of his artistic thinking. In a two-evening, multi-media performance co-sponsored by the List and Music and Theater Arts in January, 2009, Ritchie presented "Darkness Visible," a sound installation conceived for an exhibition in Seville on which he had collaborated with MIT composer Evan Ziporyn, among others, and about which MIT art historian Caroline Jones wrote an essay published in the exhibition catalogue.

The various residency and visiting programs in the arts have waxed and waned over the years and would benefit now from strategic aggregation, higher visibility both internally and externally, closer relationship to course offerings where possible, and greater coordination among the various entities that sponsor them. Renewed faculty involvement in the selection and planning process will ensure that many of these goals are met. The ability to plan well in advance and to provide housing and studio space are essential to making residencies a sustainable, stable element of the educational experience for students and faculty alike.

Student Art Association and the Glass Lab

MIT has recognized that learning the arts, understanding their significance, and perfecting technique take place outside the curriculum as well as within, and it has institutionalized this situation since the late 1960s, when the Student Loan Art Collection was established and a Committee on the Visual Arts was formed to coordinate extra-academic (non-curricular) arts activities. The Student Art Association (SAA) was founded in 1967 in a climate of agitation, during the Vietnam War, over governance and control of Institute policies, when MIT was looking for ways to empower students. It is a non-credit, handson art space open 24 hours a day, serving more than 550 people annually. Today its classes, offered in a suite of studios dedicated to ceramics, drawing, painting, and analog,

⁷⁰ The approximately 70 arts groups and clubs under the governance of the Dean of Student Life are not discussed in this paper. In a presentation to the Creative Arts Council on December 9, 2009, Dean Christopher Colombo stated that his office is in the process of reviewing all student groups to see which are active and which defunct.

⁷¹Massachusetts Institute of Technology. Commission on MIT Education. *Creative Renewal in a Time of Crisis*, Report, November 1970.

wet-lab photography, represent a departure from the regular curriculum, where there is no focus on traditional media other than photography.

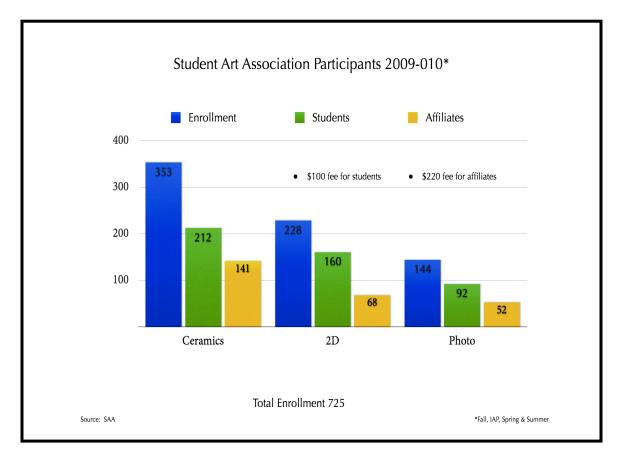


Figure 21: Student Art Association Participation

The origins of the Glass Lab date to this era as well. Originally offered during IAP in a metal processing lab, glass blowing then became the basis of "Materials Processing: An Historical and Engineering Approach," a class offered for three semesters. These students made frequent trips to the MFA in order to study Egyptian ceramics and medieval stained glass. Today the Lab is non-curricular and enormously popular and must turn away many more students than it can accommodate (typically 100 to 120 students enter a lottery, vying for 16 places per class).

This kind of purposeful pleasure, serious play, and "fooling around" with materials, a venerable tradition at MIT, on occasion morphs into something significant: the Tech Model Railroad Club's creation of "Spacewar" in 1961, for example, is considered by many experts to be the first interactive video game. Making things in an open-ended, exploratory way is part of the expanded field of the "laboratory method." That is probably why so many students at MIT today are artists of one kind or another.

Making room for students' individual initiative to pursue learning in informal and noncurricular settings is a time-tested and empowering element of MIT culture. Students are "voting with their feet" for the Glass Lab, the Student Loan Art Collection, and the Student Art Association, and more of them should be granted the franchise.⁷² In addition to the non-credit bearing activities (Art Scholars, Grad Arts Forum) and informal academic seminars (Freshman Arts Seminar Advising Program — FASAP — and Promoting the Arts through Design — PATD) targeted at selected groups of students committed to the arts, there is a need for greater student input in setting priorities. Something as simple to implement as town hall meetings or community lunches (such as those organized by Columbia Arts Initiatives) may be as effective as the establishment of a formal student advisory board for the arts, which also should be considered.

LEADERSHIP OF THE ARTS

Presidential leadership, outstanding individual faculty, and a coalition of supporters who evolved into the Council for the Arts in 1971 have sustained a vision of the arts as an integral part of MIT's mission. This legacy of commitment provides a strong foundation for the future, now that a larger creative arts faculty has achieved greater recognition and the arts have greater prominence in the curriculum.

• Presidential Leadership

In the decades following World War II, MIT Presidents – Killian, Stratton, Johnson and Wiesner — elevated the arts in Institute policy, promoting their physical presence on campus, their importance to undergraduate education, their role in MIT's research culture, and their importance to the lives of students. The arts were called upon to counterbalance science and technology in more fractious times and to complement them in more conciliatory ones; in both cases, the arts were promoted as a visible and demonstrative part of the culture of excellence that characterizes MIT.

Killian inherited what he called "a university polarized around science, engineering, and social technology."⁷³ Later he was appointed by Wiesner to chair the first Visiting Committee in the Arts. Stratton and Wiesner both served on the Lewis Committee, which was pivotal to rebalancing MIT's educational focus and placing greater emphasis on the humanities and the arts. Stratton established the M.I.T. Art Committee, which initiated the public, permanent, and student loan art collections, all of which grew under Johnson. His administration articulated the significance of transforming the overall environment at MIT through the arts and accelerated campus "beautification." Wiesner established the Council for the Arts, which had been a decade in gestation, and guided the construction of I. M. Pei's arts and media building, which consolidated MIT's focus on the intersection of art and technology. During Paul Gray's term, the Joskow report was commissioned, which advanced the theater and visual arts programs and led to the appointment of the first Associate Provost for the Arts, who created the Office of the Arts. Charles M. Vest began the rejuvenation of the physical campus and grasped its significant role in integrating the intellectual, research, and learning communities at MIT, especially the art of building spaces that do more than accommodate but instead actually enhance student life and collaborative, interdisciplinary research.

⁷²The three programs were included in the Campaign for Students.

⁷³ Walter A. Rosenblith, ed., *Jerry Wiesner; Scientist, Statesman, Humanist: Memories and Memoirs*, Cambridge, MA: MIT Press, 2003, 13, 92.

Council for the Arts

- "There are many disciplines, but only one imagination."
- --Poet Stanley Kunitz, Council motto selected by its first Chairman, Paul Tishman ('24)

In these years, the arts were encouraged and promoted by a committed group of volunteers, which evolved in 1971 into the Council for the Arts at MIT (CAMIT). There are few volunteer arts organizations that can claim to have been so instrumental to significant arts initiatives on a university campus.

A Council "for" not "of" the arts was created; advocacy, in other words, was at the heart of the matter." In a nation facing the agonies of a war in Southeast Asia, facing times of economic stress and problems of pollution, poverty, and disintegrating ghettos, it may seem idle to place support of the arts into a category of top priority," wrote Professor Roy Lamson, Special Assistant to the President for the Arts. Nonetheless, the Institute was constantly in need of the arts, he asserted, as "communications of human experience and critical guides to human aspirations."74 Wiesner, a self-described "enthusiasm amplifier," thought the Council needed a broader mandate than acquisition of visual arts or procurement of exhibition space. ⁷⁵ He urged the Council's support for a wider range of arts, from writing and drama to film and computer graphics. Promoting the visibility of the arts both internally and in the outside world became a major preoccupation of the Council (its first major effort sent the MIT Symphony to Carnegie Hall and on national tour), as were fundraising and facilities (culminating in the Media Lab building and the LVAC opening in 1985). In the following decade CAMIT supported music and theater facilities, a suite of music practice rooms, a costume and set construction shop for Theater Arts, and renovation of the music library. Completed in 1996, the Lewis Music Library commissioned 19 glass panels etched with a score composed for the occasion by John Harbison, "a graphic event" that also can be played or sung.

The Council confronted a problem typical for the arts in society at large — "rising interest and burgeoning activity on the one hand, low priority and under-funding on the other." Farly on, the Council created a self-supported grants program configured as a kind of internal subsidy system for faculty projects, disciplinary interaction, and experimentation. Its first grant in the 1970s sponsored a planning study for arts facilities, the "M.I.T. Arts Environment Study," led by Professor Donlyn Lyndon, Head of the Department of Architecture. Although many of the Council's original functions eventually were distributed to other entities – acquisitions and public art to the List when it opened in 1985, programming and communications to the Office of the Arts, and advisory to the Creative Arts Council — the grants program remains a thriving enterprise. CAMIT has distributed more than \$2 million to more than 2,300 projects since it was established.

The Council's support of student cultural life has become a major focus; in addition to grants for student artists and student-led artists groups, it sponsors free admission for MIT

⁷⁴ Roy Lamson, The Council for the Arts at M.I.T.: A Statement of Purpose and Need, 1.

⁷⁵ JBW [pamphlet], Council for the Arts, October 1989.

⁷⁶ Gregory Smith, Memo on Grant Program proposal, 1980, 4.

students to the Museum of Fine Arts and the Boston Symphony Orchestra, offers free tickets to off-campus cultural events, and administers several prizes for student artists, The Laya and Jerome B. Wiesner Student Awards, the Louis Sudler Prize, and the Harold and Arlene Schnitzer Prize.

Now it must secure its future by recruiting the next generation of members who will enthusiastically support the Institute's goals and ambitions for the arts.

Academic and Administrative Leadership

Unlike other discipline groups or professional programs, creative arts faculty and instructional staff are spread across two schools. Faculty report to their respective deans; the List, the MIT Museum and the Office of the Arts report to the Associate Provost; and student-led arts groups are under the wing of the Dean for Student Life. In other words, the arts are practiced in various pockets of activity throughout the Institute; getting a clear picture of these dispersed and varied units can sometimes seem like trying to piece together a shattered mosaic. Decentralization always has been valued at MIT and understood as a guarantee of sustainability. Yet it may now be time for a cultural shift toward greater coordination or aggregation of MIT's artistic communities, to call attention to their numbers and do justice to their achievements.

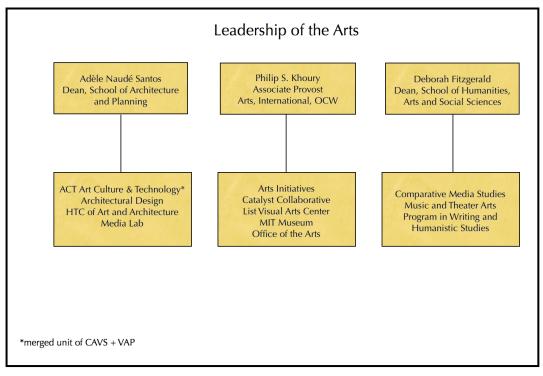


Figure 22: Leadership of the Arts

Currently three active arts committees, each with members from arts entities across the Institute, work to foster communication and bridge existing school and administrative boundaries.

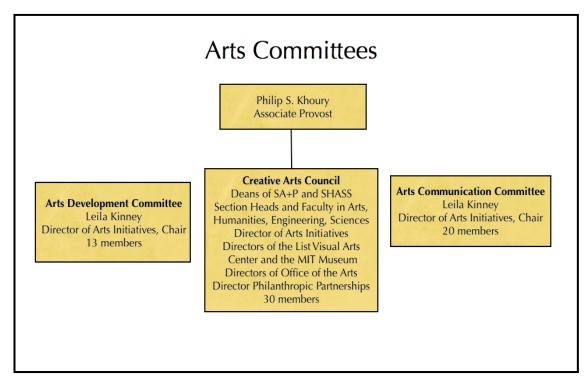


Figure 23: Arts Committees

• Faculty in the Arts⁷⁷

Professional artists and architects at MIT have achieved prominence in numbers previously unseen at the Institute. MIT today boasts a distinguished arts faculty, among them an Institute Professor and winners of Guggenheim (Lifetime Achievement Award, Joan Jonas), Humboldt (William Uricchio), MacArthur (John Harbison, John Ochsendorf), Pulitzer (Junot Diaz, John Harbison), Rome (Keeril Makan, Michael Cuthbert, John Ochsendorf, J. Meejin Yoon, Junot Diaz), and Rockefeller (Joan Jonas, Jay Scheib, Stephen Tapscott) awards as well as the Chevalier de l'Ordre des Arts et des Lettres (Tod Machover). The faculty perform and exhibit in internationally recognized venues — Bali International Arts Festival, Carnegie Hall, the Deutsches Symphonie Orchester Berlin, and The Royal Shakespeare Company; Biennales in Venice, Paris, Sydney, Sao Paulo, Helsinki, Kyoto and New York; the Institutes of Contemporary Art (ICA) in Boston, Philadelphia and London; the Museum of Modern Art (MoMA) and the Centre Pompidou, to name only a selection. The opening of the spectacular new experimental performance facility (Experimental Media & Performing Arts Center, EMPAC) at Rensselaer Polytechnic Institute (RPI) in Fall 2008 featured the MIT musical groups Gamelan Galek Tika and Rambax. MIT composers have received countless prestigious commissions, and MIT architects have designed buildings for every continent on earth (possibly with the exception of Antarctica).

In 2008 alone, innovative work ranging from nanotechnology and computational origami to visualizations of social networks and pre-fabricated housing was shown in two groundbreaking MoMA exhibitions, *Design and the Elastic Mind* (2008) and *Home Delivery: Fabricating the Modern Dwelling* (2008). Krzysztof Wodiczko was selected by Poland's Minister of Culture to represent his country at the 53rd Venice Biennale in June 2009 (four other MIT faculty have been prominently featured in Venice: architect Yung Ho

⁷⁷ See Appendix 1.5: Faculty and Instructors in the Arts and 1.6: Faculty Awards

Chang and artists Gediminas Urbonas, Antonio Muntadas and Joan Jonas, not to mention alumni). It is characteristic of MIT's varied and deep culture of creativity that not all the participants in these acclaimed venues are known exclusively or in some cases even primarily as creative artists; in keeping with today's cultural climate, things that used to be seen as engineering are viewed as art or design, and acute visual intelligence is critical to much innovative fabrication.

III. VISION AND RECOMMENDATIONS⁷⁸

To capitalize upon MIT's distinctive assets in the arts requires institutional leadership, commitment from the creative arts faculty, engagement of our students' extraordinary talents, and investment in arts facilities, programs and initiatives. New directions for the arts can be clustered into four areas and characterized by four goals.

ADVANCING RESEARCH THROUGH ART AND DESIGN

Extend MIT's legacy of inventing the artistic and performative languages of the future and the technical innovations that enable them.

The culture of research labs and think tanks is well known for fostering "outside the box" ideas that lead to discovery and innovation. Embedding the arts in a basic research culture, an idea that in one way or another has been around the Institute since its beginnings, often yields unpredictable and exciting results. Sharing space promotes multidisciplinary collaborations and solutions, allowing faculty from diverse fields to find common ground, form intellectual networks, and create experimental projects. MIT should support different kinds of activities in multiple places, guided by collective goals that build existing strengths.

Action Plan:

- Support centers or provisional research groups in art, media, music and design now in early stages of discussion or development.
- Encourage research into a wide array of participatory and interactive technologies for making and producing art.
- Position MIT as a leading center in the surging international field of activity at the intersections of art, science and technology.

EDUCATIONAL INITIATIVES IN THE ARTS

Seize the opportunity of the core-curriculum requirement in the arts to meet student demand for exposure to the practice of ambitious, technically-advanced and socially significant art, design and performance.

The arts at MIT did not emerge from and do not live within a traditional liberal arts context. This circumstance has enlivened the ongoing conversation about their role in fostering the creativity essential to educating scientists and engineers. Today the curriculum is catching up to the hybrid talents of incoming undergraduate students, and the Institute has solidified arts in the core curriculum. However, preparing students to enter the creative industries of the future also will require new cross-disciplinary undergraduate majors and graduate programs, which need thoughtful and flexible design and the Institute's full backing even during proof of concept phases.

Action Plan:

- Develop a First-Year Focus (freshman) subject in creativity, visualization, and avant-garde artistic production, which draws on faculty talents from all schools and multiple research labs.
- Support teaching the GIR in the arts with state-of-the-art equipment, practice
 rooms, and labs, including facilities for digital music, video production, and other
 forms of new media.

⁷⁸ See Appendix 1.7: Arts Priorities Timeline

• Establish endowed chairs in the arts.

FACILITIES FOR THE ARTISTIC FORMS OF THE FUTURE

Create exhibition, performance and research facilities that do justice to the mediarich art forms of the future.

State-of-the-art facilities will:

- raise MIT's competitive edge in faculty recruitment and retention;
- promote the faculty's ability to collaborate and present their work;
- increase the Institute's public outreach and reputation through cutting-edge exhibition and performance.

The mismatch between current facilities and the faculty's international reputations in the creative arts is growing liability to MIT's competitive position. With the completion of the Media Lab expansion, which will increase the visibility and potential for collaboration among visual arts and media groups, the critical and longstanding need for performing arts studio and lab space as well as a large capacity concert hall becomes all the more pressing. Kresge, the Saarinen building, was completed in 1955. It is not a concert hall, yet it is the only place for the professional music groups to rehearse and present. With the largest seating capacity on campus, Kresge hosts all major events; the resulting competition and negotiations over scheduling are notorious.

The ability to accommodate technologically sophisticated and innovative work is crucial to attracting and retaining outstanding faculty and students. The increasingly digitized nature of the music industry, even classical music, in all aspects of performance, composition, and recording, leads incoming students to expect state-of-the art electronic studios, of course, at MIT. Providing space for faculty to workshop musical and theatrical productions here on campus, rather than out of town — not to mention premiere them here — is crucial to nurturing collaboration at MIT and seeding research into innovative, new performance possibilities. The inabilities of crucial to the practice of art at MIT, cannot happen when faculty are forced to produce works in progress for the most part away from home; opportunities for student participation are seriously diminished. The inability to open or present major work by our creative arts faculty here in Cambridge deprives local and regional audiences of many opportunities to experience quality artistic productions and deprives the Institute of gaining a reputation as an important generator and presenter of excellent art.

The need for teaching, workshop, performance, and exhibition spaces is well known. The argument for a music and performance study center, a theater for experimentation with media and performance technologies, and video workshop emerged in the 1976 "Arts Environment Study" sponsored by the Council for Arts Planning and Facilities Committee, known as "The Lyndon Report." The 1987 Joskow Report reasserted the priority, arguing

⁷⁹In the month of September, 2009, alone, Tod Machover's (Media Lab) workshop of a new opera, <u>Death and the Powers</u> was held at Harvard, and Evan Ziporyn's (Music) new opera <u>A House in Bali</u>, directed by Jay Scheib (Theater Arts) premiered at Berkeley. They are both scheduled to appear at Emerson College's Majestic Theater in Boston.

⁸⁰ Lyndon, Arts Environment Study, 1976, 11.

that MIT should "provide spaces and facilities for academic and co-curricular activities in the creative arts of the quality that we expect for other activities at MIT."81

Yet the "serious inadequacies" that Joskow identified in teaching, study, and performance facilities for the performing arts remain unaddressed. Attendance at the MIT Museum has increased significantly since the opening of the ground floor Mark Epstein Innovation Gallery in 2007, a telling example of the value of investing in space visible to the street and easily accessible to the public (see Figure 20). In the current financial climate, it is perhaps best simply to restate a principle articulated in 1976: "Short-term, immediate changes that relieve current pressures on the arts should be coupled with more ambitious funding efforts that open new opportunities for creative developments in the arts." 82

Compared to many other activities at the Institute, exhibitions and performances are easily translated for a general public — witness the success of the CC@MIT science plays at the Central Square Theater — and thus an important component of community relations and educational outreach. That is why leading universities have reassessed the role of the arts in the academic and social fabric of their communities in recent years and invested in major capital projects for the arts.⁸³

Yale's work began more than a decade ago, with the 1995 completion of an Arts Area Planning Study that in turn built upon a preliminary study from 1991. Their vision was motivated by a need for major renovations of existing buildings and is large in scope, given the concentration of professional schools in art, architecture, drama, and music, two major museums, a leading history of art department and a Digital Media Center for the Arts. A significant portion of the new arts complex recently has opened, which includes a renovation of the School of Architecture's 1963 building by Paul Rudolph, a new Jeffrey H. Loria Center for the History of Art, and the Robert B. Haas Family Arts Library.

With a \$101 million gift from Peter B. Lewis, Princeton has created the <u>Lewis Center</u>, chaired by Paul Muldoon, which provides a hub for art departments and programs around the university. Its Atelier program brings distinguished visiting artists to campus, many from New York, for collaborative ventures with students. Stephen Holl architects recently unveiled concepts for a new "<u>arts and transit neighborhood</u>" for Princeton, part of a ten-year campus plan. The complex will create a home for the Lewis Center for the Arts and the Society of Fellows in the Creative and Performing Arts as well as teaching and performance spaces for the Program in Theater and Dance and the Department of Music.

In 2006, Stanford's Arts Initiative established an institutional arm known as <u>SICA</u>, the Stanford Institute for Creativity & the Arts, which in turn houses multiple Centers—The Center for Art, Science + Technology, The Center for Global Arts, and The Center for Humanities and the Arts. Stanford has created a master plan projecting 15 to 20 years of capital improvements in arts facilities and the creation of an arts "zone" on campus.

Drew Faust's first major initiative after becoming President of Harvard was to establish a faculty, staff and student Task Force on the Arts. Their <u>report</u>, issued in December, 2008, sought to make the practice and study of the arts a more integral and prominent part of the university's "cognitive life," to introduce arts practice into the undergraduate curriculum, and to design an innovative MFA program.

 $^{^{81}}$ Paul Joskow, Chair, *Ad Hoc Committee to Review the Creative Arts at MIT, Report to the Provost*, July 1987, released September 1987, 17.

⁸²Lyndon, Arts Environment Study, 1976, 7.

⁸³See Appendix 1.8: University Arts Facilities

Action Plan:

- Find interim solutions for performing arts facilities and exhibition "swing space" for the LVAC.
- Continue incremental improvements to the MIT Museum facility.
- Commit to construction of a performing arts teaching lab.
- Begin planning for a performing arts center and the LVAC's permanent collection.
- Incorporate long-term solutions into the "Space 2030" vision, in conjunction with MIT planners.

MIT AS A CENTER OF EXCELLENCE IN THE ARTS

Develop MIT's reputation as a center of excellence in the arts and a place that nurtures cross-disciplinary creativity and innovation, most prominently at the intersections of art, science, engineering and technology.

Programs in the arts at MIT have developed through decentralized entrepreneurial endeavors and by creatively adapting to the Institute's innovative scientific and engineering culture. It may now be time for a cultural shift toward greater coordination and aggregation of the artistic communities at MIT, to enable them to flourish in this cultural moment — a moment of unprecedented growth in technologies for producing art, composing music, making moving pictures, and developing other art forms as yet unimagined. With its unique strengths, MIT can position itself as a leader of creative experimentation among the fields of art, science, engineering and technology.

MIT has a significant story to tell about its history of innovation in the arts and related technology and the faculty's creative work. Its roster of alumni with impressive careers in the arts and creative industries has international reach; its student artists are transforming the culture of MIT. But in spite of such an illustrious history, there has been no place to see, understand or show all this to the world. Addressing the situation requires a cohesive and unified message about the arts that goes beyond disciplinary and departmental boundaries, deploys innovative communications technologies that reflect MIT's leadership in this realm, and features academic and public programs that accordingly present MIT's unique artistic culture and creations.

MIT has traditionally reached beyond the university for inspiration and support and shared its creations in the theater of the wider world. Strategic collaborations and collective intelligence will advance the cause. The Council for the Arts, for example, has been a stalwart source of support and will no doubt be far-sighted as it recruits a new generation of members. Likewise, many of MIT's alumni and most significant donors, who give generously to the arts elsewhere, can be inspired to support MIT's distinctive arts enterprise.

Action Plan:

- Develop a strategic plan for arts communication.
- Consult with CAMIT about a future vision for their support of the arts at MIT.
- Build a broad coalition of alumni who support the arts.
- Refine the arts leadership's funding priorities, in collaboration with Resource Development.

Conclusion

A deep capacity to combine functionality, innovation and aesthetics alongside a drive to expand, improve, investigate, and enliven the human condition sets MIT's creative culture apart from those of its peers. Artistic production and technological advances always have been inseparable. MIT faculty and the students who contribute so significantly to their endeavors will continue to play a decisive role in the provocative combination of art and technology. Adept at translating technical and scientific inquiry into tangible artifacts, approachable experiences, and affective objects, MIT researchers will continue to discover ways to make new kinds of creativity possible; the artists among them will push those discoveries in unexpected directions, often with a critical perspective that might otherwise remain unseen or unknown. As the technologies for producing art become simpler, more accessible, and more widely available, more and more people — including those with relatively little technical aptitude — will have the opportunity to become artists, performers, or innovators in these areas.

Nurturing this creative efflorescence is one of the great challenges and opportunities for educational institutions today. Networked culture has transformed patterns of creativity and knowledge-formation in recent years, but the implications of these changes for the growth of institutions like MIT are only beginning to be apprehended, much less translated into concrete policies that would enhance the governance and success of our community. Accomplishments in the arts at MIT have been extraordinary, despite the fact that they have been the result of *ad hoc* collaborations; the next step is to design programmatic change. How much more MIT could accomplish, more effectively and more cost-effectively, if it strategically designed programmatic change.

Twenty-first century art forms will not be constrained by discrete disciplines, autonomous media, or singular material processes. State-of-the art studios, labs, performance, and presentation spaces will enhance the extraordinary productivity already demonstrated by faculty, students, and staff in the wider MIT community. But the Institute also can encourage artistic exploration, innovation, and risk-taking by creating conditions that promote collaboration, experimentation, and the flow of ideas — in short, the conditions that allow collective intelligence to flourish. This is and always has been at MIT's core. In some sense, it is simply a matter of recognizing and supporting the artistic culture that abounds in our midst.

⁸⁴ See Artists Beyond the Desk, http://web.mit.edu/abd/about.html.

MIT Presidents on the Arts

The great universities have long sought to achieve an environment where distinguished art, architecture, and landscaping are not just embellishments or luxuries, but are an essential and natural part of the process of education and growth Just as students seek out the foremost in science and engineering, they should have the opportunity to engage and come to understand the best in the arts. — James R. Killian , President of MIT 1949-1959, from "The Visual Arts at M.I.T."

The highest goal to which a university may aspire is that its sons and daughters shall be leaders in art and science and that their influence shall be brought powerfully to bear for the welfare of mankind. With this affirmation of purpose, I think we must strive to develop more effectively the creative, imaginative, and constructive powers of our students.

-Julius A. ("Jay") Stratton, President of MIT 1959-66, from his inaugural address

At M.I.T. we have long disagreed with those who think that the culture of the arts and the culture of the sciences are separate and immiscible. We find positive value in an educational program that seeks to give the student an opportunity to understand, appreciate, and, in fact, perform something substantial in the arts as well as the sciences.

—Howard W. Johnson, President of MIT 1966-1971, from "A Visit to the Arts at M.I.T.," May 25, 1971

Taken together, the arts, sciences, and technology form a triple anvil on which to forge a new kind of apprenticeship for a complex world – an education in which the search for beauty is made real enough to take its place beside the university's ancient mission, the search for truth.

— Jerome B. Wiesner, President of MIT 1971-1980, from Council for the Arts pamphlet, 1980

We must preserve and continue to build strong programs in the humanities, the arts, and the social sciences. These dimensions of intellectual and creative experience are necessary to the definition of MIT as a university devoted to the broad reach of human inquiry. And they are essential to our providing a full and balanced education for our students.

- Paul Gray, President of MIT 1980-1990, from his inaugural address

The arts spring from and concentrate on the human condition—our history, values, and cultures; the ways we find inspiration; the ways in which we identify and communicate ideas and emotions. As such, they offer perspective on the broad sweep of human experience. And they offer opportunities for individuals to find their own voice—whether that is expressed through writing, music, theater, or the visual arts. Put simply, they are essential to the complete education of our students.

— Charles M. Vest, President of MIT 1990-2004, President Emeritus, speech to MIT Council for the Arts annual meeting, October 26, 2001

Many of the qualities that drive artistic achievement – curiosity, creativity, technical virtuosity, and fearless experimentation – drive advances in science and technology, as well.

— Susan Hockfield, President of MIT, 2004 - present, remarks on the occasion of the presentation of the Eugene McDermott Award in the Arts at MIT, April 16, 2010

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APPENDICES

ADDITIONAL DATA ON THE ARTS

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- 1.2: Academic Programs in the Arts
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- 2.8: The MIT Museum
- 2.9: Office of the Arts

Appendix 1.1: Arts Subjects 2009-10*

2009-2010	Undergraduate	2009-2010	Graduate	
Subject	Title	Subject	Title	
Architecture				
4.102	Drawing for Architects	4.103	Freehand Drawing	
4.108	BSAD Portfolio Workshop	4.105	Geom Discplns & Arch Skills I	
4.111	Experiencing Arch Studio	4.106	Geom Discplns & Arch Skills II	
4.112	Integrated Arch Design Studio	4.123	Architectural Design: Level I	
4.113	Applied Arch Design Studio I	4.124	Architectural Design: Level I	
4.114	Applied Arch Design Studio II	4.143	Architectural Design: Level II	
4.115	Applied Arch Design Studio III	4.144	Architectural Design: Level II	
4.116	Adv Architecture Design Studio	4.155	Architectural Design:Level III	
4.119	UG Arch Design Thesis Prep	4.163	Urban Design Studio	
4.12A	Arch Design Studio 2	4.171	Dsgn Wkshp: The Space Between	
4.170	International Design Workshop	4.175	Case Studies in City Form	
4.180	Arch Design Wkshp	4.181	Architectural Design Workshops	
4.192	Spec Prob in Arch Design	4.182	Architectural Design Workshops	
4.280	Ugrad Architecture Internship	4.183	Architectural Design Workshops	
4.301	Introduction to Visual Arts	4.184	Architectural Design Workshops	
4.302	Found in Visual Arts-Majors	4.185	Architectural Design Workshops	
4.314	Adv Wkshp Artistic Practice	4.189	Prep: MArch Thesis	
4.330	Intro to Participatory Media	4.190	Practical Experience Arch	
4.341	Intro to Photo & Related Media	4.195	Spec Prob in Arch Design	
4.343	Photography and Related Media	4.196	Spec Prob in Arch Design	
4.351	Introduction to Video	4.199	Spec Prob in Arch Design	
4.352	Advanced Video	4.298	Spec Prob: Arch Studies	
4.367/8	Studio Seminar in Public Art	4.299	Spec Prob: Arch Studies	
4.495	Spec Problems: Building Tech	4.310	Contemp Curatorial Practice	
4.500	Intro to Design Computing	4.312	Adv Studio Production Space	
4.501	Arch Comp & Construction	4.314/5	·	
4.502	Design Scripting	4.330/1	Intro to Participatory Media	
4.503	Advanced Visualization	4.332	Adv Participatory Media	

^{*}Source: Registrar [Only selected subjects in SA+P, Literature, Writing, and Special Topics from the Edgerton Center are included.]

2009-2010	Undergraduate	2009-2010	Graduate
Subject	Title	Subject	Title
4.520	Computational Design I	4.343	Photography and Related Media
4.601	Introduction to Art History	4.352	Advanced Video
4.602	Modern Art & Mass Culture	4.360	Performance Workshop
4.605	Intro to Hist & Theory of Arch	4.367	Studio Seminar in Public Art
4.611	Civic Arch in Islamic History	4.371	Interrogative Design Wkshp
4.614	Religious Arch & Islam Cultres	4.388	Preparation for SMVisS Thesis
4.635	Renaissance Architecture	4.389	SMVisS Thesis Tutorial
4.S10	Delhi & Jaisalmer	4.390	Vis Arts Independent Studio
4.THU	Undergraduate Thesis	4.395	Spec Problems: Visual Arts
4.UR	Undergraduate Research	4.396	Spec Problems: Visual Arts
4.URG	Undergraduate Research	4.397	Spec Problems: Visual Arts
		4.408	Spec Prob: Bldg Construction
		4.430	Daylighting
		4.502/564	Design Scripting
		4.510	Materializing Design
		4.513	Sp Prob in Digital Fabrication
		4.520/1	Computational Design I
		4.540	Intro to Shape Grammars I
		4.541	Intro to Shape Grammars II
		4.552	Workshop in Computation
		4.553	Workshop in Computation
		4.562	Advanced Visualization
		4.566	Adv Proj in Digital Media
	4.580	4.580	Inquiry into Comp & Design
		4.581	Proseminar in Computation
		4.583	Forum in Computation
		4.589	Prep: (AS) PhD Comp Thesis
		4.592	Special Problems: Computation
		4.593	Sp Prob in Computation
		4.598	Sp Prob in Computation
		4.599	Sp Prob in Computation
		4.607	Thinking About Architecture
		4.611	Civic Arch in Islamic History
		4.617	Issues in Islamic Urbanism
		4.621	Orientalism and Representation

2009-2010	Undergraduate	2009-2010	Graduate	
Subject	Title	Subject	Title	
,		4.623	Mughal Landscapes	
		4.625	Water Reading Group	
		4.628	Spec Prob:Islam & Nonwest Arch	
		4.635	Renaissance Architecture	
		4.640	Adv Study: Crit Theory Arch	
		4.645	Sel Top in Arch 1750-Present	
		4.655	Adv Study in Modern Arch	
		4.661	Theory & Method:Study Arch&Art	
		4.662	Adv Study: Hist of Urban Form	
		4.665	Contemp Arch & Critical Debate	
		4.668	Architecture & Urban Form	
		4.669	Architecture & Urban Form	
		4.680	Adv Stud: HTC Art & Arch	
		4.682	Adv Stud: HTC Art & Arch	
		4.689	Prep: (HTC) PhD Thesis Spec Stud:Art Hist,Theory,Crit	
		4.692		
		4.693	Spec Stud:Art Hist,Theory,Crit	
		4.696	Spec Stud:Art Hist,Theory,Crit	
		4.NIV	Visiting Student Research	
		4.THG	Thesis	
Comparative Med	ia Studies			
CMS.100	Introduction to Media Studies	CMS.300	Intro to Videogame Studies	
CMS.300	Intro to Videogame Studies	CMS.604	Topics in Comparative Media	
CMS.400	Media Systems	CMS.801	Media in Transition	
CMS.407	Media & Methods: Sound	CMS.864	Game Design	
CMS.600	Topics in Comparative Media	CMS.922	Media Industries and Systems	
CMS.602	Topics in Comparative Media	CMS.980	Master's Thesis	
CMS.603	Topics in Comparative Media	CMS.990	Colloquium Comparative Media	
CMS.604	Topics in Comparative Media	CMS.993	Teaching in Comparative Media	
CMS.612	Writing for Videogames	CMS.994	Topics in Comparative Media	
CMS.614	Identity and the Internet	CMS.995	Research in Comparative Media	
CMS.616	Soc & Culture of Digital Games	CMS.996	Topics in Comparative Media	
CMS.864	Game Design	CMS.998	Topics in Comparative Media	
CMS.922	Media Industries and Systems	CMS.THG	Masters Thesis	
CMS.994	Topics in Comparative Media			

2009-2010	Undergraduate	2009-2010	Graduate
Subject	Title	Subject	Title
CMS.THT	CMS Pre-Thesis Tutorial		
CMS.URG	Res Comparative Media Studies		
Edgerton Center	·		
SP.757	Digital and Darkroom Imaging	SP.779	Advanced Toy Product Design
SP.779	Advanced Toy Product Design	SP.722	D-Lab: Design
SP.782	Dig Video Prod: Documentary		
SP.788	Intro to Digital Electronics		
SP.790	Engineering, Art, Science		
SP.722	D-Lab: Design		
SP.747	Creative Imaging		
SP.785	Digital Video Post-Production		
SP.791	Promoting the Arts/ Design		
Literature			
21L.435 (CMS)	Literature and Film		
21L.430 (CMS)	Popular Narrative		
21L.432 (CMS)	Understanding Television		
21L.706 (CMS)	Studies in Film		
21L.715 (CMS)	Media in Cultural Context		
Media Arts and Scie	ences		
MAS.110	Fundamtl of Computal Media Des	MAS.531	Comp Camera and Photography
MAS.531	Comp Camera and Photography	MAS.551	Design Without Boundaries
MAS.552	Mobility-on-Demand	MAS.552	Mobility-on-Demand
MAS.714	Techs for Creative Learning	MAS.714	Techs for Creative Learning
MAS.834	Tangible Interfaces	MAS.825	Music Aesthetics & Media Tech
MAS.A12	Games & Puzzlers	MAS.834	Tangible Interfaces
MAS.A19	Designing Consumer Electronics	MAS.863	How to Make Almost Anything
MAS.UR	Undergraduate Research	MAS.532	Camera Culture
MAS.URG	Undergraduate Research	MAS.910	Research in Media Technology
MAS.111	Intro to Resea Media Art & Sci		<u> </u>
MAS.532	Camera Culture		
MAS.552	Mobility-on-Demand		
MAS.URG	Undergraduate Research		

2009-2010	Undergraduate	2009-2010	Graduate
Subject	Title	Subject	Title
Music and Theater			
21M.011	Intro to Western Music	21M.051	Fundamentals of Music
21M.013	Superntrl in Mus Lit& Culture	21M.052	Vivaldi, Bach, & Handel
21M.030	Intro to World Music	21M.053	Schubert to Debussy
21M.051	Fundamentals of Music	21M.226	Jazz
21M.065	Intro to Musical Composition	21M.263	Music Since 1960
21M.220	Early Music	21M.291	Music of India
21M.223	Folk Music: Britain & N Amer	21M.302	Harmony and Counterpoint II
21M.226	Jazz	21M.303	Writing in Tonal Forms I
21M.230	Vivaldi, Bach, & Handel	21M.340	Jazz Harmony & Arranging
21M.240	Haydn, Mozart, and Beethoven	21M.351	Music Composition
21M.250	Schubert to Debussy	21M.355	Musical Improvisation
21M.252	Song	21M.361	Electronic Music I
21M.283	Musicals of Stage & Screen	21M.362	Electronic Music Comp II
21M.291	Music of India	21M.380	Music and Technology
21M.293	Music of Africa	21M.423	Conducting Score-Reading
21M.294	Popular Musics of the World	21M.426	MIT Wind Ensemble
21M.295	American Popular Music	21M.445	Chamber Music Society
21M.301	Harmony and Counterpoint I	21M.480	Adv Music Performance
21M.302	Harmony and Counterpoint II	21M.539	Advanced Topics in Music
21M.303	Writing in Tonal Forms I	21M.542	IAP Music Topics
21M.304	Writing in Tonal Forms II	21M.600	Introduction to Acting
21M.310	Techniques: 20th Century Comp	21M.603	Design for the Theater
21M.340	Jazz Harmony & Arranging	21M.605	Voice and Speech for the Actor
21M.341	Jazz Composition		
21M.350	Musical Analysis		
21M.351	Music Composition		
21M.355	Musical Improvisation		
21M.361	Electronic Music I		
21M.362	Electronic Music Comp II		
21M.380	Music and Technology		
21M.401	MIT Concert Choir		
21M.401	MIT Concert Choir		
21M.405	MIT Chamber Chorus		

2009-2010	Undergraduate	2009-2010	Graduate	
Subject	Title	Subject	Title	
21M.421	MIT Symphony			
21M.423	Conducting Score-Reading			
21M.426	MIT Wind Ensemble			
21M.442	Festival Jazz Ensemble			
21M.445	Chamber Music Society			
21M.451	Studio Accompanying: Pianists			
21M.460	MIT Senegalese Drum Ensemble			
21M.480	Adv Music Performance			
21M.490	Emerson Scholars Solo Recital			
21M.500	Senior Seminar in Music			
21M.539	Advanced Topics in Music			
21M.540	Selected Topics in Music			
21M.542	IAP Music Topics			
21M.600	Introduction to Acting			
21M.603	Design for the Theater			
21M.604	Playwriting I			
21M.605	Voice and Speech for the Actor			
21M.606	Intro to Stagecraft			
21M.611	Foundations: Theater Practice			
21M.630	Intro to Black Studies			
21M.645	Comp for Performance			
21M.675	Dance Theory & Composition			
21M.705	The Actor and the Text			
21M.710	Script Analysis			
21M.715	Technical Theater Exploration			
21M.734	Lighting Design Theater			
21M.735	Design for the Theater			
21M.785	Playwrights' Workshop			
21M.805	Theater Practicum			
21M.815	Technical Theater Practicum			
21M.820	Technical Theater Spec Topics			
21M.830	Acting: Techniques & Style			
21M.840	Performance Media			
21M.851	Special Topics in Drama			
21M.852	Special Topics in Drama			

2009-2010	Undergraduate	2009-2010	Graduate
Subject	Title	Subject	Title
21M.863	Adv Topics in Theater Arts	Í	
21M.873	IAP Theater Arts Topics		
21M.A12	Arts at MIT and Boston		
21M.UR	Research in Music		
21M.URG	Research in Music		
Writing			
21W.730	Writing on Contemporary Issues	21W.730	Writing on Contemporary Issues
21W.731	Writing & Experience	21W.745	Advanced Essay Workshop
21W.735	Writing & Reading the Essay	21W.746	Humanistic Persp on Medicine
21W.736	News Writing	21W.749	Doc Photography & Journalism
21W.742	Writing about Race	21W.752	Making Documentary
21W.745	Advanced Essay Workshop	21W.755	Writng & Reading Short Stories
21W.747	Rhetoric	21W.758	Genre Fiction Workshop
21W.749	Doc Photography & Journalism	21W.762	Poetry Workshop
21W.750	Experimental Writing	21W.763	Modern Science Fiction
21W.752	Making Documentary	21W.765	Interactive & Non-Linear Narr
21W.755	Writing & Reading Short Stories	21W.770	Advanced Fiction Workshop
21W.756	Writing & Reading Poems	21W.786	The Social Documentary
21W.757	Fiction Workshop	21W.789	Communicating with Mobile Tech
21W.758	Genre Fiction Workshop	21W.799	Special Topics: Writing
21W.759	Writing Science Fiction		
21W.762	Poetry Workshop		
21W.763	Modern Science Fiction		
21W.764	The Word Made Digital		
21W.765	Interactive & Non-Linear Narr		
21W.770	Advanced Fiction Workshop		
21W.771	Advanced Poetry Workshop		
21W.772	Digital Poetry		
21W.773	Longer fiction		
21W.774	Invention and Ingenuity		
21W.784	Becoming Digital		
21W.785	Communicating: Web-Based Media		
21W.786	The Social Documentary		
21W.789	Communicating with Mobile Tech		
21W.797	CME Communication Workshop		
21W.798	Special Topics: Writing		

Appendix 1.2: Academic Programs in the Arts

	SA+P	SHASS	Associate Provost
	BSAD, Course 4 ("streams") 1) Architectural Design 2) Building Technology 3) Computation 4) HTC (History Theory and Criticism of Art and Architecture) 5) Visual Arts	SB CMS (21L-CMS)	FASAP (Freshman Arts Seminar Advising Program, 6 units)
	SB, Course 4-B (interdisciplinary)	Minor: CMS	PATD (Promoting the Arts Through Design, 6 units)
	Minor: HAA (History of Art and Architecture)	Concentration: CMS	V
	Concentration: HAA	SM CMS	
	Minor: Visual Arts	SB Writing (21W)	
		Minor: Writing	
	Concentration: Visual Arts	Concentration: Writing	
	MArch (Master of Architecture)	SB Joint Degree in Humanities and Engineering (21 E): can designate any humanities section	
	SM in Architecture Studies (SMArchS)	SB Joint Degree in Humanities and Science (21S): can designate any humanities section	
	SM in Building Technology		
	SM in Visual Studies	SB Music (21M)	
	PhD in Building Technology	Minor: Music	
	PhD in Design and Computation	Concentration: Music	
	PhD in HTC	SB Theater Arts (21M)	
	Dual Degrees	Minor: Theater Arts	
Media Lab	SM in Media Technology	Concentration: Theater Arts	
	SM in Media Arts and Sciences		
	PhD in Media Arts and Sciences		

Appendix 1.3: Arts-Related UROP Participation: Five Years (2003-2008)

Department	Year	Approved Projects	Approved Students
Architecture (4)	2003-2004	46	33
Ctr for Adv Visual Studies (CAVS)	2003-2004	10	6
Comparative Media Studies (CMS)	2003-2004	35	20
Media Arts and Sciences (MAS)	2003-2004	362	246
Music and Theater Arts (21M)	2003-2004	5	3
Writing & Humanistic Studies (21W)	2003-2004	1	2
2003-2004 TOTAL		459	310
Architecture (4)	2004-2005	41	32
Ctr for Adv Visual Studies (CAVS)	2004-2005	5	4
Comparative Media Studies (CMS)	2004-2005	18	14
Media Arts and Sciences (MAS)	2004-2005	325	218
Music and Theater Arts (21M)	2004-2005	5	5
Writing & Humanistic Studies (21W)	2004-2005	4	3
2004-2005 TOTAL		398	276
Architecture (4)	2005-2006	45	37
Ctr for Adv Visual Studies (CAVS)	2005-2006	11	8
Comparative Media Studies (CMS)	2005-2006	13	11
Media Arts and Sciences (MAS)	2005-2006	297	216
Music and Theater Arts (21M)	2005-2006	2	2
Writing & Humanistic Studies (21W)	2005-2006	1	1
2005-2006 TOTAL		369	275
Architecture (4)	2006-2007	59	48
Ctr for Adv Visual Studies (CAVS)	2006-2007	10	8
Comparative Media Studies (CMS)	2006-2007	32	26
Media Arts and Sciences (MAS)	2006-2007	443	314
Music and Theater Arts (21M)	2006-2007	3	2
Writing & Humanistic Studies (21W)	2006-2007	0	0
2006-2007 TOTAL		547	398

Department	Year	Approved Projects	Approved Students
Architecture (4)	2007-2008	58	49
Ctr for Adv Visual Studies (CAVS)	2007-2008	5	4
Comparative Media Studies (CMS)	2007-2008	75	36
Media Arts and Sciences (MAS)	2007-2008	500	331
Music and Theater Arts (21M)	2007-2008	10	8
Writing & Humanistic Studies (21W)	2007-2008	2	2
2007-2008 TOTAL		650	430
FIVE YEAR TOTAL		2,423	1,689

Appendix 1.4: Artists-in-Residence

Sponsor	Name of Residency	Funding	Links to Description and Recipients
Associate Provost			
Office of the Arts			http://web.mit.edu/spair/air_overview/index.html#air_overview
William L. Abramowitz		William L. Abramowitz	http://web.mit.edu/spair/abramowitz/index.html#abramowitz
			2 residencies per year, 2-3 weeks duration
Alan W. Katzenstein		Alan W. Katzenstein	http://web.mit.edu/spair/katz/index.html#katz
			dormant pending growth in fund
Ida Ely Rubin		Ida Ely Rubin	http://web.mit.edu/spair/rubin/index.html#rubin
			1 residency per year, 2-3 weeks duration
Eugene McDermott		Eugene McDermott	http://web.mit.edu/spair/mcdermott/index.html#mcdermott
			http://arts.mit.edu/mcdermott/
			1 residency per year, 1 week duration
LVAC		Leonard Nimoy (ends	varies
		2009-10)	
School of Engineering	A state David	4 11 15	N (
Department of	Artist-in-Residence	Angelika and Barton	Martin L. Demaine (2005-present)
Environmental Engineering		Weller Artist-in-	http://www.eecs.mit.edu/AY04-05/announcements/25.html
and Computer Science	TI D	Residence Fund	
Materials Science and	The Page		http://web.mit.edu/glasslab/hl.html
Engineering	Hazlegrove		annual, lecture, research, and workshops
	Lectureship and		
SA+P	Residency		
	N/: ::: A :: :	A 16 1 ::	
ACT (formerly CAVS)	Visiting Artists Fellows	Annual fundraising	http://cavs.mit.edu/artists.html
	Affiliates	from grants (Warhol	one academic year or more
SHASS	Allillates	Foundation, etc.)	
Music and Theater Arts	Artist-in-Residence		http://theaterarts.mit.edu/courses/artist.html
Music and Theater Arts	Artist-in-Residence		
			from one week to one academic year
			activities: lecture, lead projects, teach master classes, direct full-length productions. Ensembles in residence perform periodically throughout the academic year.
Writing (WHS)	Writers Series	Angus MacDonald	http://humanistic.mit.edu/news/writers-series
O (- /		Fund	From one day to several interactions with students
Literature & Writing	Poetry Series		http://humanistic.mit.edu/news/writers-series
3	,		From one day to several interactions with students

Appendix 1.5: Faculty and Instructors in the Arts*

	SA&P (Design, HTC, Media Lab, ACT only)			SHASS				
	Design	HTC	Media Arts & Sciences Media Lab	ACT	CMS*	Music	Theater Arts/Dance	Writing & Literature
Institute Professor						John Harbison		
Professor	Julian Beinart	Stanford Anderson	Hiroshi Ishii	Joan Jonas (Professor w/o tenure, retired) (fall 2010)	James Buzard (literature)	Peter Child	Alan Brody	Junot Diaz
	Yung Ho Chang	Mark Jarzombek	Tod Machover		Christopher Capozzola (history)	Ellen Harris	Thomas DeFrantz	John Hildebidle (literature)
	Michael Dennis	Caroline Jones	William Mitchell		Thomas DeFrantz (dance)	Lowell Lindgren	Janet Sonenberg	Thomas Levenson
	Philip Freelon (fall)	Nasser Rabbat	Rosalind Picard		Junot Diaz (writing)	Marcus Thompson		James Paradis
	Sheila Kennedy (fall)	James Wescoat	Mitchel Resnick		Peter Donaldson (literature)	Evan Ziporyn		Stephen Tapscott (literature)
	Adele Naude Santos		Barry Vercoe		Diana Henderson (literature)			
	Anne Spirn				Alvin Kibel (literature)			
	Nader Tehrani				Shigeru Miyagawa (FL&L)			
	Jan Wampler				James Paradis (writing)			

^{*} Current for 2009-10 academic year.

	James Wescoat				Irving Singer			
	James Wescoat				(ling./phil.)			
				+	lanet			
					Sonenberg			
				1	(theater)			
					David			
					Thorburn			
					(literature)			
					Edward Baron			
					Turk (FLL)			
					William			
					Uricchio			
					Jing Wang (FLL)			
Assoc. Prof.	Alexander	Arindam Dutta	Cynthia	Ute Meta	Ian Condry	Keeril Makan	Jay Scheib	Helen Elaine Lee
	D'Hooghe		Breazeal	Bauer	(FLL)			
	Mark	David Friedman	Joseph	Gediminas	Mary Fuller		Patricia Tang	Nick Montfort
	Goulthorpe		Paradiso	Urbonas	(literature)			
	Andrew Scott		Ramesh		Stefan			
			Raskar		Helmreich			
					(anthropology)			
	J. Meejin Yoon		David Small		Eric Klopfer			
					(DUSP)			
			Patty Maes		Nick Monfort			
			,		(writing)			
					Jeffrey Ravel			1
					(history)			
					Chris Walley			
					(anthropology)			
					Jay Scheib			
					(theater)			
Adjunct	Bill Hubbard,				(6.100.01)			Joe Haldeman
Professor	Jr.							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	7.1							Alan Lightman
Adjunct								7 Harr Eightman
Assoc. Prof								
Assistant	Ana Miljacki	Kristel Smentek	Leah		Beth Coleman	Michael		Beth Coleman
Prof	, , ,		Buechley		(writing)	Cuthbert		
	William				Hanna Rose			
	O'Brien, Jr.				Shell (STS)			
	O Briefly Jr.				Silen (818)			Vivek Bald
			I			I .		vivek balu

Senior	Shun Kanda			Edward Barrett	David Deveau	Anna Kohler	Edward Barrett
Lecturer				(writing)			
				Ellen Crocker	Martin Marks		
				(FLL)			
				Gilberte	George Ruckert		
				Furstenberg			
				(FLL)			
				Wyn Kelley	Charles Shadle		
				(literature)			
				Martin Marks			
				(music)			
				Douglas	Pamela Wood		
				Morgenstern			
				(FLL)			
Lecturer	Nicholas Gelpi	Kazys Varnelis	Andrea Frank	Andrea Walsh	Adam Boyles	Sara Brown	*40 Lecturers
	(fall)	,		(writing)	,		some of whom
							teach courses in
							creative writing
	Roisin		Oliver Lutz		William Cutter	Keeley Eastley	
	Heneghan (fall)					, ,	
	Joel Lamere		Angel		Frederick Harris	Laura	
			Nevarez			Harrington	
	Cristina Parreno		Nitin		Mark Harvey	Kim Mancuso	
	(fall)		Sawhney		,		
			(fall)				
	Shih-Fu Peng				Theresa Neff		
	(fall)						
	Filip Teichman				Jean Rife		
	Skylar Tibbits				Elena Ruehr		
	Marc				Peter Whincop		
	Tsurumaki				· ·		
	Corinne						
	Ulmann						
Visiting	Rodolphe el-		Antoni	Mia Consalvo			
Professor	Khoury (fall)		Muntadas	(writing)			
	,		(spring)	J.			
	Ashley Schafer						
Instructor	Chistopher						
	Dewart						
Research	Reinhard						

Asst.	Goethert					
Designer/			Dan Van		Leslie Cocuzzo	William Corbett
Technicians/			Roekel		Held	
Directors						
					Michael Katz	Rebecca Blevis
						Faery
				Lamine Toure		Steve Strang
					Karen Perlow	
Principal	Reinhard					
Research	Goethert					
Associate						
Research		Michael Bove				
Scientist						
		Chris				
		Csikszentmiha				
		lyi				
		Henry				
		Lieberman				

^{*}CMS courses include faculty from the following SHASS departments: Foreign Languages and Literatures, Linguistics and Philosophy, Literature, Music and Theater Arts and Science, Technology and Society and Writing

Appendix 1.6: Faculty Awards*

Department	First	Last	Award
Architecture			
	Stanford	Anderson	Distinguished Alumnus Medal, College of Architecture and Landscape Architecture, University of Minnesota, Minneapolis 2005 Felix Candela Annual Lecturer, Museum of Modern Art, New York 2005
			Topaz Medallion, American Institute of Architects and the Association of Collegiate Schools of Architecture 2004
			King Fahd Award for Design and Research in Islamic Architecture 1985-86 American Council of Learned Societies Fellow 1977-78
			Graham Foundation Fellowship 1971
			John Simon Guggenheim Foundation Fellowship 1969-70
	Leah	Buechley	Best Paper – Wearable Computers Symposium 2006
	Cynthia	Breazeal	ONR Young Investigator Award
	Yung Ho	Chang	Academy Award in Architecture, American Academy of Arts and Letters
	Michael	Dennis	Progressive Architecture Urban Design Citation 1988
			AIA Award 1990
			Progressive Architecture Urban Design Citation 1993
	Reinhard	Goethert	American Institute of Architects Education Honors for SIGUS Program 1989
			United Nations Habitat Scroll of Honor 1997
	Hiroshi	Ishii	Computer-Human Interaction Academy 2006
	Caroline	Jones	Institute National d'Histoire de l'Art Paris Bourse 2005-06
			Max Planck Insitute Berlin Fellowship 2002
			Wissenshaftskolleg zu Berlin Fellowship 2001
			Guggenheim Fellowship Award 2000
			Charles Eldredge Prize (Smithsonian Institute) 1996/98
			Institute for Advanced Studies Fellowship 1994-95
	Kent	Larson	AIA Award (for Graduate School of Business @ Columbia University)
			American Institute of Architects Florida Headquarters Design Competition 1980
	Tod	Machover	Chevalier de l'Ordre des Arts et des Lettres 1998
			DigiGlobe Prize (Germany)
			Kurzweil Prize for Music and Technology 2003
			Argosy Foundation Award 2005

^{*} Current for 2009-10 academic year.

			IEEE Steinmetz Medal 2007
	John	Ochsendorf	MacArthur Fellowship "genius" grant 2008
			Rome Prize 2007
	Adèle Naudé	Santos	Topaz Medallion for Excellence in Architectural Education 2009
	Andrew	Scott	1st Prize – "Building Integrated Photovoltaics" – AIA Research and US
			Dept of Energy
			Unbuilt Architecture Award by Boston Society of Architects 1996
	Anne	Whiston Spirn	International Cosmos Prize
	Jan	Wampler	New England Regional Council for Excellence in Architecture for Angela
		·	Westover House
	J. Meejin	Yoon	ACSA Faculty Design Award 2008
1			Athena RISD Target Emerging Designer Award 2008
ı			Architecture Record Design Vanguard 2007
ı			Architecture League of NY Emerging Voices 2007
			PS1 MoMA Young Architect Finalist 2006
			Rome Prize 2005
			Architecture League Young Architects Award 2002
ACT			
	Joan	Jonas	Hans Molfenter Prize, Stuttgart 2009
			Francis J. Greenburger Award 2009
			Hyogo Prefecture Museum of Modern Art Prize @ Tokyo International
			Video Art Festival
			Polaroid Award for Video
			American Film Institute Maya Deren Award for Video
			Anonymous Was a Woman Award 1998
			Deutscher Akademischer Austauschdienst, Germany
			Foundation for Contemporary Performance Art
			The Guggenheim Foundation
			International Video Art Festival
			National Endowment for the Arts
			The Rockefeller Foundation
	Antonio	Muntadas	Velazquez Prize, Spanish Culture Ministry 2009
			Laser d'Or Festival (Switzerland) 1996
			Ars Electronica Prize for The File Room 1995
			Premi Nacional d'Arts Plastiques, Barcelona 1993
			Commande de L'Etat 1990
			National Endowment for the Arts – Visual Arts 1985
			Guggenheim Fellowship Award 1984
	Gediminas	Urbonas	Lithuanian National Prize for achievements in the arts and culture 2007
			Best International Artists, Gwangju Biennale 2006
			Honorable Mention for best pavilion 52nd Venice Biennale 2008

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	Krzysztof	Wodiczko	Gold Gloria Artis Award, Polish Minister of Culture 2009 György Kepes Fellowship Prize, MIT 2004 Hiroshima Prize 1998 Distinguished Body of Work, College Art Association 2004 Katarzyna Kobro Award Venice Biennale 2009
Music			
	Peter	Child	Various Commissions including: Jebediah Foundation Commissions: Boston Modern Orchestra Project, Boston Musica Viva 2008-09 Meet the Composer/American Symphony Orchestra League "Music Alive" Residency, Albany Symphony Orchestra 2005-08 Composer in Residence, New England Philharmonic Orchestra 2005 Composer in Residence, CrossSound Festival, Juneau, Alaska 2005 MacVicar Faculty Fellow, MIT 2003-2013 György Kepes Fellowship Prize, MIT 1994 New England Composers Prize, League-ISCM, Boston 1983 Norlin Fellowship, MacDowell Colony for Artists 1982; other composition fellowships: 1983-84, 1984-85 First Prize, East and West Artists Composition Competition 1979 Margaret Grant Memorial Prize in Composition, Berkshire Music Center 1978
`	Michael	Cuthbert	Villa I Tatti Fellowship Seaver Institute Grant/Digital Humanities Rome Prize 2004
	John	Harbison	Distinguished Composer Award 2002 Harvard Arts Medal 2000 Heinz Award for the Arts and Humanities 1998 MacArthur Fellowship 1989 Pulitzer Prize 1987 Kennedy Center Friedheim First Prize 1980
	Ellen	Harris	Otto Kinkeldey Award, American Musicological Society 2002 Louis Gottschalk Prize, Society for Eighteenth-Century Studies 2002-2003 György Kepes Fellowship Prize, MIT 2005 Westrup Prize, Music & Letters 2005 American Academy of Arts and Sciences 1999 Fellowships at the Mary Ingraham Bunting Institute of Radcliffe College, 1995-1996, and at the Institute for Advanced Study in Princeton, 2004 Grants from the National Endowment for the Humanities and the American Council of Learned Societies

Mark	Harvey	Artist's Foundation, ASCAP
		Independent Music Awards
		Distinguished Artist-Scholar-Teacher Award, Organization of American
		Kodaly Educators National Conference
		National Endowment for the Humanities Fellowship
		Marion and Jasper Whiting Foundation Fellowship
		Massachusetts Council on the Arts and Humanities Fellowship
		Fellow, Society for the Arts, Religion and Contemporary Culture
Keeril	Makan	Aaron Copland Award, 2009
		"First Nights" Fromm Foundation of Music and Harvard University
		Department of Music Commission 2009
		Luciano Berio Rome Prize in Music Composition, American Academy in
		Rome 2008
		Commission from American Composers Orchestra 2008
		Winner, Utah Arts Festival National Composers Commissioning Program
		for Chamber Ensemble 2007
		Commission from Carnegie Hall 2004
		George Ladd Prix de Paris, UC Berkeley 2002-2004
		Charles Ives Scholarship, American Academy of Arts and Letters 2003
		Winner, ASCAP Foundation Grants to Young Composers 1994
Jean	Rife	1st Prize Heldenleben International Horn Competition
Marcus	Thompson	Winner in the National Black Music Competition
		György Kepes Fellowship Prize, MIT 2000
Evan	Ziporyn	György Kepes Fellowship Prize, MIT 2006
		2004 Goddard Lieberson Fellowship, American Academy of Arts/Letters
		USA Walker Fellow
		Musical America Ensemble of the Year Award 2005
		ASCAP Special Awards 1990-92, 1993
		Nicholas DiLorenzo Prize in Composition, UC Berkeley 1984
		National Endowment for the Humanities Youth Grant 1983

Thoston Arts/Dans			
Theater Arts/Dance		D 1	D CI + I D + 1 D + 1 COOK
	Alan	Brody	Reva Shiner Award, Bloomington Playwrights Project 2006
			György Kepes Fellowship Prize, MIT 2002
			Riverside Stage Company, Best Play 1998
			Eisner Award, Streisand Center for Jewish Culture 1990
			Rosenthal Award @ Cincinnati Playhouse in the Park 1989
	Thomas	DeFrantz	De la Torre Bueno Prize for Outstanding Publication in Dance 2005
			CHOICE Award for Outstanding Academic Publication 2002
			Erroll Hill Award (Am. Soc. For Theater Research) 2002
	Laura	Harrington	Kleban Award for Most Promising Librettist in American Musical Theatre 2008
			Mass Cultural Council Individual Award for Playwrights 2005
			Virtual Theatre Project's Playwriting Contest 2005
			Clauder Playwriting Competition 1996, 2001
			Mass Cultural Council Playwriting Fellowship 1998
			Bunting Institute Fellowship @ Radcliffe College 1994-1995
			Whiting Foundation Grant 1994
			Joseph Kesserling Award for Drama
			Quebec Cinemateque Award 1987
			New England Emmy 1986
	Michael	Ouellette	György Kepes Fellowship Prize, MIT 1996
	Jay	Scheib	Named one of the top 25 "Artists who will define the next 25 years of
	,		American Theater." by American Theater Magazine, April 2009
			Ranked Best New York Theater Director by Time Out New York, March 2009
			Rockefeller Foundation's New York City Cultural Initiative Fund 2008
			Fund Recipient, Ensemble Studio Theatre / Alfred P Sloan Foundation 2008
			Fund Recipient, Deutsch-Ungarische Industrie und Handelskammer 2008
			Recipient, Foundation for Contemporary Arts 2007
			Fund Recipient, Trust for Mutual Understanding 2007
			National Endowment for the Arts / Theater Communications Group Career
			2006-2007
			Development Program for Directors
Comparative Media			
Studies			
	William	Uricchio	John Simon Guggenheim Memorial Fellowship 2004
			Alexander von Humboldt Award/Fellowship 1991-1993
			Fulbright Senior Research Fellow 1983-1985

Writing & Literature			
vviiding & Literature	lunot	Diaz	Pulitzer Prize in Fiction 2008
	Junot	Diaz	National Book Critics Circle Award for Best Novel 2007
			Best Novel 2007 – Time Magazine
			Rome Prize in Literature 2007-08
			John Sargent First Novel Prize
			PEN/Malamud Award for Short Fiction 2002
			Eugene McDermott Award in the Arts, MIT 1998
	Joe	Haldeman	Nebula Award, Best Novel 2006
			James Tiptree Award 2005
			Rhyslings Award for Science Fiction Poetry 2001
			Hugo Award, Best Novel 1998
			Nebula Award, Best Novel 1998
			John W. Campbell Memorial Award 1998
			Hugo Award, Best Short Story 1995
			Nebula Award, Best Short Story 1993
			World Fantasy Award, Best Short Story 1993
			Hugo Award, Best Novella 1991
			Nebula Award, Best Novella 1990
			Rhyslings Award for Science Fiction Poetry 1984
			Rhyslings Award for Science Fiction Poetry 1981
			Hugo Award, Best Short Story 1977
			Nebula Award, Best Novel 1976
			Galaxy Award
			Ditmar Award, Australia, Best novel 1976
	Diana	Henderson	MacVicar Fellow for Excellence in Undergraduate Teaching, MIT 2009
	John	Hildebidle	Book Award, Poetry Center, San Francisco State University 1982
			Katherine Anne Porter Prize for Fiction 1984
			John Gardner Short Fiction Prize 1985
	Thomas	Levenson	Peabody Award
			New York Chapter Emmy
			AAAS/Westinghouse Award
			National Academies Comm. Award 2005
			Foundation for the Future Kistler Science Documentary Prize 2007
	Alan	Lightman	Distinguished Arts and Humanities Medal for Literature, Germantown Arts
		0	Alliance of Tennessee 2003
			György Kepes Fellowship Prize, MIT 1998
			American Institute of Physics Andrew Gemat Award 1996
			Association of American Publishers Award for Origins 1990
			Fellow, American Academy of Arts and Sciences

Stephen	Tapscott	National Endowment for the Arts grant recipient
		National Endowment for the Humanities grant recipient
		Karolyi Institute, sponsored guest
		Virginia Center, sponsored guest
		Santa Fe Art Institute, sponsored guest
		Modern Language Association/American Literature Best Essay Award
		Rockefeller Grant
		György Kepes Fellowship Prize, MIT 1990

Appendix 1.7: Timeline of Priorities in the Arts

MIT	Current	Short-Term	Mid-Term	Long-Term
		1 to 3 years	3 to 5 years	5 to 10 years
➤ Facilities	Media Lab expansion	MIT Museum 2nd floor renovation	Performing Arts Lab MIT Museum courtyard infill (2nd floor)	 Space 2030 arts sector planning Performing Arts Center MIT Museum facility expansion
➤ Classroom/Equipment	Music & Theater Arts	Music & Theater Arts	ACT	
			(formerly CAVS & VAP)	
	digital music lab	relocate digital music lab and purchase new equipment	IEL Interform Editing Lab (video & new media production facilities)	
➤ Exhibition/Collection				
	Architecture	Architecture	Architecture	Architecture
	RotchWolk	• E14 gallery	 New Gallery (Keller Gallery, Main Building) Lecture Hall, The Long Room Fab Lab, CAD CAM shop (4- fl) Hi-Bay Fabrication facilities Building Technology Lab Computation Lab 	
	ACT	ACT	ACT	ACT
	• move to E14/15	CAVS Future Archive project		raw space for grad student work and thesis exhibitions

MIT	Current	Short-Term	Mid-Term	Long-Term
		1 to 3 years	3 to 5 years	5 to 10 years
	LVAC	LVAC	LVAC	LVAC
	 E15 Dean's Gallery, Sloan Media Test Wall "distributed art" 	exterior signage	satellite/swing exhibition space	 exhibition space for permanent collection and new media tied to curricular strengths
	MIT Museum	MIT Museum	MIT Museum	MIT Museum
	 PERMIT (ongoing) Compton (ongoing) Hart Nautical (ongoing) 	 MIT 150 Exhibition Koch Institute Public Gallery Holography Initiative Museum façade upgrade Collections Digitization (ongoing) PERMIT (ongoing) Compton (ongoing) 	 Gallery renewal (2ndfloor) Hart Gallery Renovation Collections Digitization (ongoing) PERMIT (ongoing) Compton Gallery closure 	 2 new galleries Collections Digitization completed
	Student Art Association		Student Art Association	
	Student Center studiosWiesner Gallery		• improvements to Wiesner Gallery (security, lighting)	
≻ Performance	Music & Theater Arts		Music & Theater Arts	Music & Theater Arts
	Kresge AuditoriumKresge Little TheaterKillian HallWalker (dance)		Performing Arts Lab	Performing Arts Center

MIT	Current	Short-Term	Mid-Term	Long-Term
		1 to 3 years	3 to 5 years	5 to 10 years
>Public Art	one of top 10 campus collections conservation (3 projects underway)	podcasts and video tours of collection energy efficient lighting	 LVAC double percent for art subsidy increase endowment for conservation 	• percent for art in Space 2030 plans
Educational				
> Undergraduate	Planning for Arts GIR to replace HASS-D PATD (Promoting Arts Through Design, 6 units) Edgerton Center seminars in photo and video (School of Engineering)	Curriculum ACT/MTA performance subject concentration in arts and technology ACT/Harvard Under discussion GIR in design HTC course in visual perception and design literacy Increase offerings in courses of intersection of music, science and engineering	Curriculum	Curriculum
	• FASAP (Freshman Arts Seminar Advising Program, 6 units)	• freshmen • freshman 'big ideas' cross-disciplinary course in creativity, design as inquiry, avant-garde, etc.	Freshmen	Freshmen

MIT	Current	Short-Term	Mid-Term	Long-Term
		1 to 3 years	3 to 5 years	5 to 10 years
	Current Degrees	New Degrees	New Degrees	New Degrees
	BSAD (5 streams), SB CMS, Music, Theater	Under discussion	 joint degrees MTA + engineering and media 	
	Arts, Writing	SB Visual Arts (in place of stream in BSAD)		
	LVAC	LVAC	LVAC	LVAC
	exhibition toursStudent Loan artworksinternships	educational materials for Student Loan collection and public art works	collect in areas to support curriculum	collect in areas to support curriculum
	educational programs for MIT undergrads internships	MIT Museum	MIT Museum	MIT Museum
➤ Graduate	SM CMS (21L), SM Visual Studies, MAS; MArch, Arch Studies (SMArchS), Media Technology, PhD Design & Computation, HTC, MAS	New Degrees For discussion Arch/Engineering/Sloan Industrial Design joint ACT/HTC SMArchS in art theory for artists PhD in CMS, creative industries, or computational art	New Degrees	New Degrees

MIT	Current	Short-Term	Mid-Term	Long-Term
		1 to 3 years	3 to 5 years	5 to 10 years
	Fellowships	Fellowships	Fellowships	Fellowships
	HTC TAships for PhD students	 ACT Fellowships and Postdocs curatorial fellowships for HTC PhD students at LVAC Postdoc in Asian Art HTC (FLAS grant) 	 PhD in CMS curatorial fellowship for STS students at MIT Museum 	
> Faculty	endowed chairs in the Arts	 faculty lines for ACT HTC faculty line in Asian Art endowed Chair(s) in Arts and Media Technology endowed chair in Digital Technologies in the Performing Arts , faculty hire for music performance 	 ongoing: endowed Chairs in the Arts faculty lines in CMS 	
≻ Centers	Center for Future Storytelling (Media Lab)	MIT-Singapore International Design Center (IDC)	MTA Center for Art, Engineering, Science & Technology	

MIT	Current	Short-Term	Mid-Term	Long-Term
		1 to 3 years	3 to 5 years	5 to 10 years
➤ Visiting/Residencies	Eugene McDermott Award in the Arts at MIT William L. Abramowitz Ida Ely Rubin	wiki for sharing information and calendars coordinate residencies in various sections: ACT, LVAC, Media Lab, MTA, Office of the Arts	Artists-in-Residence Increase endowments rental housing	Artists-in-Residence permanent housing and studios endowed Center for Fellows
	 Alan W. Katzenstein LVAC guest curatorships funded by Advisory Board ACT fellows, funded by grants no department-based funding as of 2006 	 restore residencies to academic sections on rotating basis increase external visibility 		
➤ Professionally-led Performance Groups	 Music & Theater Arts Chamber Chorus Chamber Music Society Concert Choir Dramashop Dance Theater Ensemble Emerson Fellowships Festival Jazz Ensemble Gamelan Galak Tika Rambax Symphony Orchestra Wind Ensemble 	Music & Theater Arts Increase support for Emerson Fellowships	Music & Theater Arts	Music & Theater Arts

MIT	Current	Short-Term	Mid-Term	Long-Term
		1 to 3 years	3 to 5 years	5 to 10 years
≻ Public/Educational				
Outreach				
	MIT Museum	MIT Museum	MIT Museum	MIT Museum
	 Cambridge Science Festival PERMIT Numerous 5-12 & family workshops 	replicate science festivals nationally		
	Music & Theater Arts	Music & Theater Arts	Music & Theater Arts	Music & Theater Arts
	CC@MIT NSF grant with Kavli			
➤ Student Arts Activities	Glass Lab	Glass Lab	Glass Lab	Glass Lab
(extra-academic does not include	(School of Engineering)	(School of Engineering)	(School of Engineering)	(School of Engineering)
groups under Dean for Student Life)		increase number of students who can take classes	renovation and expansion	teaching collection
	Office of the Arts	Office of the Arts	Office of the Arts	Office of the Arts
	Student Art AssociationArts ScholarsGrad Arts Forum	SAA expand classes in new media	improvements to Wiesner gallery (security, lighting)	

MIT	Current	Short-Term	Mid-Term	Long-Term
		1 to 3 years	3 to 5 years	5 to 10 years
➤ Communications	 arts wiki for internal planning and information sharing arts videos on Tech TV online arts calendar Month-at-a-Glance calendar arts announce listserv monthly media mailings press releases visual identity for Arts at MIT 	 align arts communications with News Office reorganization and new web site expand video and multimedia capabilities coordinate arts communications with Admissions and Development publish and disseminate white paper findings relaunch arts web site 	 create a unified message about the Arts at MIT for Alumni Association and Resource Development increase external media relations 	 develop community of alumni who support the arts (in addition to CAMIT) raise national and international awareness of Arts at MIT
➤ Grants & Development	CAMIT	CAMIT	CAMIT	CAMIT
	 grants to faculty, students and groups support for AIR, ACT, LVAC, MIT Museum, SAA, Artists Beyond Desk ticket distribution program; MFA passes 	 align goals with Institute funding goals for the arts CAMIT Chair in the Arts online grants application online or html newsletter distribution of tickets 	sustain support for AIR, ACT, LVAC, MIT Museum & SAA	support for long-range projects including facilities
	Alumni Association	Alumni Association	Alumni Association	Alumni Association
	 direct appeal for support for the arts in collaboration with Deans of SA+P and SHASS 	 annual appeal bi-annual newsletter on the arts arts on regional directors agenda 	build community of supporters for the arts in addition to CAMIT	• ongoing

MIT	Current	Short-Term	Mid-Term	Long-Term
		1 to 3 years	3 to 5 years	5 to 10 years
	Resource Development	Resource Development	Resource Development	Resource Development
	 Campaign for Students: Glass Lab, SAA, Student Loan CAMIT Chair in the Arts LVAC Campaign for Public Art Endowment 	 prioritize goals for the Arts work with arts team plan arts component of next Institute campaign work with regional directors on arts messaging 	design major campaign for the arts	support Space 2030 plans for the arts sector

Appendix 1.8: University Arts Facilities

University	Name of Center	Date/cost	General info	Photo
Bard College	Richard B. Fisher Center for the Performing Arts http://fishercenter.bard.edu/	\$62M Frank Gehry 110,000 sf	Sosnoff Theater – 900 seat Theater Two Dance Studios Theater Two (modified black box, 200-400 seats)	
Carnegie Mellon	Purnell Center for the Arts http://www.cmu.edu/vrtour/nodes/purnell. html	Opened Jan. 2000 \$36.2M	500 Seat Chosky Theater; 430 seat proscenium theater 140 seat black box theater Sound stage/studio Acting, dance and voice studios, and other facilities	
Harvard	New College Theater (NCT) – formerly Hasty Pudding Club Building http://ofa.fas.harvard.edu/theater/nct.php http://archrecord.construction.com/projects/ bts/archives/adaptivereuse/08 NewCollegeT heatre/default.asp	Opened Fall 2007 \$31M 25,119 sf 6 stories (3 above, 3 below) Original 1887 façade	New College Theater/Hasty Pudding Club building; 256-284 seat Other theaters: Loeb Drama Ctr. (1960) 500 seat with mainstage/blackbox 35,032 sf http://www.fas.harvard.edu/~loebinfo/loebdata.html Agassiz Theater	New College Theater (Hasty Pudding Theater) – interior/exterior

University	Name of Center	Date/cost	General info	Photo
			336 seat (1904) http://ofa.fas.harvard.edu/the ater/agassiz.php Adams Pool Theater Cap. 80 ppl http://www.hcs.harvard.edu/ adams/drama/	
Princeton	Lewis Center for the Arts http://www.princeton.edu/arts/lewis_center/i ndex.xml McCarter Theater http://www.mccarter.org/AboutUs/AboutDef ault.aspx?page_id=38	\$101M pledge from Peter B. Lewis in 2007 (for all arts) 135,000 sf McCarter Theater Center Opened February 21, 1930 1100 seat Matthews Theatre Berlind Theatre Auditorium – 360 seats http://www.mccarter.org/visitorInfo/VisitorDefault.aspx?page_id=3 1	New center will be part of Arts and Transit District – Plans include a black box theater, large dance studio, an orchestral rehearsal studio, smaller acting studios, music practice rooms, support spaces, as well as café and offices	Current campus

University	Name of Center	Date/cost	General info	Photo
				TO ROUTE 1 DOWNTOWN PRINCETON RT. 206 N RT. 206 N RT. 206 N RASSAU ST. (RT. 27) RICHARDSON AUDITORIUM (IN ALEXANDER HALL) PARKING GARAGE PRINCETON UNIVERSITY PARKIN SPACE RULEGERD. RULEGERD. RULEGERD. RULEGERD. RULEGERD. RULEGERD. PARKIN SPACE RULEGERD. PARKIN SPACE PARKIN SPACE FACULTY RD.
				Proposed Arts District

University	Name of Center	Date/cost	General info	Photo
Rensselaer Polytechnic Institute	Curtis R. Priem EMPAC (Experimental Media and Performing Arts Center) http://www.nytimes.com/2008/09/23/scienc e/23troy.html? r=1 http://empac.rpi.edu/building/	Opened: October 3, 2008 \$200M 220,000 sf	Concert hall (1200 seats), theater (400 seats), 2 studios	EMPAC
Stanford	Stanford Institute for Creativity and the Arts http://arts.stanford.edu/sai.php?section=facilities&page=main		1020 year plan for clustered and distributed spaces in the arts: built around Cantor Arts Center, new concert hall and new Arts district. Recently completed new black box theater for drama. Current facilities include: Memorial Auditorium (seats ~1700); Pigott Theater (main venue) 100 seat; black box 70 seat. Roble studio for dance seats 135. (http://www.stanford.edu/dept/drama/spaces.html) Dinkelspiel Auditorium (716 seats) (http://livelyarts.stanford.edu/Venues/index.php)	Map of proposed district Training Train
Tufts	Ganoff Music Center http://www.tufts.edu/musiccenter/about/overview.html	55,000 sf \$27M	Distler Performance Hall for music (300 seat) Other venues: Cohen Auditorium/	Distler Performance Hall

University	Name of Center	Date/cost	General info	Photo
			Aidekman Arts Center Auditorium/Lecture hall (seats 616) http://ase.tufts.edu/its/classro omCohen.htm Balch Arena Theater (220 seats)	Cohen Auditorium
University of Chicago	The Reva and David Logan Center for Creative and Performing Arts http://arts.uchicago.edu/logan/	Scheduled to open in 2012. Seeking \$100M for Center	Multidisciplinary: creative and performing visual arts, theater and performance, music and cinema and media studies * studio/classrooms, individual studios, and exhibition space for the visual arts; * rehearsal and shop areas as well as black-box theater space for theatrical production and performance-related teaching; * individual music practice and ensemble rehearsal rooms; * multi-purpose performance space;	Future

University	Name of Center	Date/cost	General info	Photo
			* a film vault and a lecture/film screening hall; * computer and editing labs; * state-of-the-art media classrooms Current facilities include Mandel Hall (900), Rockefeller Memorial Chapel (for concerts: 1500)	
Yale	Yale Center for New Theater http://yalearts.yale.edu/map.aspx http://drama.yale.edu/news/robina.html http://drama.yale.edu/	Over \$200M fundraising effort for Center for New Theater	Yale Center for New Theater (in process); Leigh Hall (Abby and Mitch Leigh Hall), renovated, 2005 Sprague Memorial Hall's Morse Recital Hall, renovated , 2003 (680 seat) Yale Digital Media Center for the Arts: Opened 1998 Jeffrey H. Loria Center for the History of Art, and the Robert B. Haas Family Arts Library, phase 1 of Yale University Art Gallery renovation: opened 2008 University Theater (654 seat) http://drama.yale.edu/about_us/facilities.html	2006 ARTS AREA PLAN TOLL LONGSTY ANT GALLEY MISTON ART CORTIA SCHOOL OF MACHINETIE HISTON OF ANT SHIRATHE SCHOOL OF MACHINET SCHOOL OF MACHINET THEATTRITIOS

Appendix 2.1: Architectural Design, History, Theory and Criticism of Art and Architecture (HTC), School of Architecture and Planning

Background

The history of the School of Architecture and Planning stretches back nearly a century and a half, providing current students with a legacy and long tradition of pioneering excellence. The Department of Architecture was the first such department in the nation (1865) and became a leader in introducing Modernism to America. The Center for Advanced Visual Studies (1967) pioneered the use of technologies such as lasers, plasma sculptures, sky art, and holography as tools of expression in public and environmental art. The Media Lab, the birthplace of multimedia computing (1985), has come to be known around the world as a world-class incubator of new design ideas. The School also incorporates the program in city planning, the second of its kind in the country (1932), later evolving into the current Department of Urban Studies and Planning and The Center for Real Estate, the nation's first one-year graduate program in real estate development (1984).

The department offers six degree programs: the Bachelor of Science in Art and Design, Master of Architecture, Master of Science in Architecture Studies, Master of Science in Building Technology, Master of Science in Visual Studies, and the Doctor of Philosophy.

Architectural Design and History of Art and Architecture will be discussed here. Please see separate appendices for the MIT Media Lab and the Center for Advanced Visual Studies and the Visual Arts Program, which merged as of July 1, 2009, under the name Program in Art, Culture and Technology (ACT).

The **Department of Architecture** conceives of architecture as a discipline as well as a profession. Five semi-autonomous, graduate degree–granting "discipline groups" provide an architectural education that is as complex as the field itself. Each discipline group is supported by the other four, and all five contribute to a mutual enterprise. Students learn ways of working that draw upon the whole range of resources that architecture affords in finding and defining the expansive problems of building, as well as in proposing effective critiques, interpretations, and solutions. The groups are Architectural Design; Building Technology; Computation; History, Theory and Criticism of Architecture and Art (HTC); and the Program in Art, Culture and Technology (ACT).

The **History, Theory, and Criticism of Architecture and Art** group teaches subjects dealing with the history of art and architecture. Some study questions internal to the discipline of architecture, while others seek contexts in social, political, and intellectual history. Some are motivated by questions derived from the problems of contemporary practice. Others take their organization from a body of historical material investigated in ways that develop skills of analysis applicable to a wide range of topics. The group teaches subjects from the Renaissance forward in time, focusing on materials that are both abstract and concrete, with scales that range from architectural drawing to the urban environment. There is a special emphasis on topics of modern art and architecture.

In the several disciplines of the department, there is a substantial body of research activity. Moreover, the department's setting within MIT permits greater depth in such technical areas as computation, new modes of design and production, materials, structure, and energy as well as in the arts and humanities. The department builds on, and contributes to, such valuable institutional commitments. With respect to the various discipline groups, the School of Architecture is committed to developing inter-disciplinary platforms to broaden the discussion and critique of conventional architectural practices; discipline

groups are brought together not so much to smooth over differences, but rather to help bring disciplinary particularities into focus and create productive friction between intellectual projects.

Undergraduate Study Bachelor of Architectural Design (BSAD)

The undergraduate Bachelor of Science in Art and Design is a pre-professional degree program. It is useful for those wishing a foundation in the field of architecture as preparation for either continued education in a professional degree program or for employment options in architecturally related fields. Course 4 offers a flexible program for students in five possible discipline streams: visual arts; architectural design; building technology; computation; and history, theory, and criticism of architecture and art. Within a clear framework, students develop individual courses of study best suited to their needs and interests.

The vast majority of BSAD candidates choose the architectural design discipline stream, which includes sequential studios (two students are currently BSAD majors in the Visual Arts stream). The design stream fosters investigation and discussion in the development of sensitivity to the built environment. These sensibilities are linked to values and responsibilities to the community at large. The design studio is a place not only where technical and analytical skills are developed, but a place of synthesis and invention using the elements of architectural form: material, structure, construction, light, sound, memory, and place. This is the process that characterizes the architectural education and what the studio sequence explores.

Students who have fulfilled the requirements for the Architectural Design discipline stream of the Bachelor of Science in Art and Design normally are able to satisfy the requirements for the MArch in two and one half years if they include in their undergraduate program a sufficient number of professional subjects. This requires careful use of a student's unrestricted electives.

Bachelor of Science/ Course 4-B

Course 4-B is offered for students who find that their basic intellectual commitments are to subjects within the Department of Architecture but whose educational objectives cut across departmental boundaries. These students may, with the approval of the department, plan a course of study that meets their individual needs and interests while including the fundamental areas within the department. For example, students might create a coherent program combining subjects in architecture with subjects in urban studies and planning, comparative media studies, systems analysis, acoustics, etc.

Minors

The Minor in the History of Art and Architecture, considered a HASS minor, is designed to enable students to concentrate on the historical, theoretical, and critical issues associated with artistic and architectural production. Introductions to the historical framework and stylistic conventions of art and architectural history are followed by more concentrated study of particular periods and theoretical problems in visual culture and cultural history.

Graduate Study

Master of Architecture (MArch)

The Master of Architecture is awarded to students who complete a program, accredited by the National Architectural Accrediting Board, that is an essential step toward licensure for architectural practice.

Master of Science in Architecture Studies (SMArchS)

The Master of Science in Architecture Studies program stresses research and inquiry in the built environment; the degree is meant both for students who already have their first professional architecture degree and those whose previous education orients them toward nonprofessional graduate study in architecture.

Master of Science in Media Arts and Sciences [see separate appendix, MIT Media Lab]

Master of Science in Visual Studies (SMVisS)
[see separate appendix, ACT, formerly CAVS and VAP]

PhD in History, Theory and Criticism of Architecture and Art

The PhD program is an advanced degree program initiated in the area of History, Theory, and Criticism, and has been expanded to the areas of Building Technology, and Design and Computation.

PhD in Media Arts and Sciences [see separate appendix, MIT Media Lab]

Spring 2009 Class Enrollment

Typically, the BSAD Program serves over 750 students per year. The following is the makeup of Design classes for the Spring 2009 term, excluding independent study students.

Student enrollment in AD classes Spring 2009:

Undergraduates	147	39%
Graduate students	227	61%
Total students	374	100%

Source: Registrar's office

Programs

Exhibitions

The Wolk Gallery in the School of Architecture + Planning mounts several art and design exhibitions a year in its space surrounding Frank Stella's 3-D sculpture, *Loohooloo*. Exhibits are organized by the Curator of Architecture and Design at the MIT Museum. The PLAZmA Digital Gallery features the work of students and faculty presented on 10 large monitors in the school's public areas; some of the content overlaps with the Online Portfolio. The screens can also be used for student reviews and presentations. A new Architecture Gallery will be launched in early 2011, and will be primarily student run with a faculty advisory board; works by students, visiting critics, and all discipline groups and degree programs will be featured in this space.

Lecture Series

The Architecture Department, the HTC Forum, the Aga Khan Program, Building Technology, and Computation all sponsor lecture series, now held in the recently launched Long Room. The Program in Art, Culture and Technology holds its lecture series in the Bartos Theater.

Facilities

Upon completion of the Media Lab expansion in Fall 2009, the School of Architecture and Planning consolidated the locations of its studios, workshops and lab spaces from six locations to two.

Faculty and Teaching Staff

Adèle Naudé Santos, AADipl, MAUD, MArchUD, MArch, MCP, Dean Mark Jarzombek, DiplArch, BA, PhD, Associate Dean, Professor of the History and Theory of Architecture

Architectural Design and History, Theory and Criticism Sections

Stanford Anderson, MArch, PhD, Professor of History and Architecture

Julian Beinart, BArch, MCP, MArch, Professor of Architecture

Yung Ho Chang, MArch, Department of Architecture, Professor of Architecture

Michael Dennis, BArch, Professor of Architecture

Alexander D'Hooghe, MAUD, PhD, Professor of Architectural Design

Arindam Dutta, PhD, Associate Professor of the History of Architecture

Philip Freelon, MArch, Professor of the Practice, Architectural Design

David Hodes Friedman, PhD, Associate Professor of the History of Architecture

Mark Goulthorpe, BArch, Associate Professor of Design

Caroline Jones, PhD, Professor of the History of Art

Sheila Kennedy, MArch, Professor of the Practice, Architectural Design

Terry Knight, PhD, Professor of Design and Computation

Ana Miljacki, MArch, PhD, Assistant Professor of Architecture

Takehiko Nagakura, MArch, PhD, Associate Professor of Design and Computation

William O'Brien, Jr., Assistant Professor of Architecture

Nasser Rabbat, BArch, MArch, PhD, Aga Khan Professor of the History of Architecture Director, Aga Khan Program

Lawrence Sass, PhD, Associate Professor of Computation and Design

Andrew Scott, BArch, Associate Professor of Architecture

Dennis Shelden, PhD, Associate Professor of the Practice of Computation

Kristel Smentek, PhD, Assistant Professor of the History of Art

Anne Whiston Spirn, PhD, Professor of Landscape Architecture and Planning

Nader Tehrani, M.A.U.D., Head, Professor of Architecture

Jan Wampler, MArch, Professor of Architecture

James Wescoat, PhD, Aga Khan Professor

J. Meejin Yoon, M.A.U.D., Associate Professor of Architecture

Lecturers and Instructors

Christopher Dewart, Technical Instructor Nicholas Gelpi, MArch, Lecturer, Architectural Design Reinhard Goethert, PhD, Principal Research Associate Shun Kanda, MArch, Senior Lecturer, Architectural Design Joel Lamere, MArch, Lecturer, Architectural Design Filip Tejchman, MSAA, Lecturer, Architectural Design Skylar Tibbits, SMArchS, Lecturer, Architectural Design Corinne Ulmann, MArch, Lecturer, Architectural Design

Sources:

http://web.mit.edu/catalog/degre.archi.archi.html; http://architecture.mit.edu/people.php?type=faculty http://sap.mit.edu/

Appendix 2.2: Art, Culture and Technology [formerly the Center for Advanced Visual Studies (CAVS) & Visual Arts Program (VAP)], School of Architecture and Planning

Background

The MIT Visual Arts Program (VAP) and the Center for Advanced Visual Studies (CAVS) merged in July 2009 to form the MIT Program in Art, Culture and Technology (ACT). In the spring of 2010, ACT proudly celebrated its inauguration at its new home in the Media Lab Complex (E14) and the Wiesner Building (E15) with a full day of events.

The new ACT program draws on the impressive legacies of the VAP (founded 20 years ago by Professor Emeritus Ed Levine) and the CAVS (founded in 1967 by Institute Professor György Kepes). Focusing on the intersections of art, culture and technology through performance, sound, video/film, photography, interrogative and eco-design, as well as experimental media and new genres, ACT's academic and research initiatives reflect the mission of the new program, which is to operate as a critical studies and production based laboratory, connecting artists and cultural producers with those working at the forefront of technology. ACT's faculty, fellows and students take an experimental and systematic approach to creative production and trans-disciplinary collaboration, with the goal of furthering and disseminating advanced studies and research at the intersection of art, culture and technology. The program emphasizes artistic practice that engages public spheres, the production of space, networked cultures, and participatory media, while addressing such issues as the environment, gender, and social stratification. In the tradition of the founder of MIT's Center for Advanced Visual Studies, Hungarian-born artist György Kepes, a gifted educator and advocate of "art on a civic scale," ACT envisions artistic leadership as initiating change, providing a critically transformative view of the world with a civic responsibility to enrich cultural discourse.

The merger of VAP with CAVS, the creation of ACT, and the relocation to a central location on campus is intended to significantly strengthen the visibility of the new program and to create exciting possibilities for its future. The physical relocation of ACT to the Media Lab Complex (E14) and the Wiesner Building (E15) places the List Visual Arts Center (LVAC), the Office for the Arts at MIT, and the Comparative Media Studies (CMS) under one roof.

The CAVS legacy

The fine arts at MIT have a long history, dating back to the Institute's founding. In 1946 MIT hired the Hungarian-born artist György Kepes⁸⁵ to teach art in the Department of Architecture and in 1950 the Hayden Gallery opened. Kepes is the only professor of visual arts to have served as an Institute Professor. When Kepes founded the Center for Advanced Visual Studies (CAVS) in 1967 within the School of Architecture and Planning, he added a research component to contemporary art at MIT – a practice that was unusual in Boston at the time as well as distinctive for a technical and scientific institution. Its initial mission was twofold: to facilitate "cooperative projects aimed at the creation of monumental scale environmental forms" and to support participating fellows in the

⁸⁵ Hungarian-born Kepes, collaborator of Laszlo Moholy-Nagy, emigrated to the U.S. in 1937. He taught at the New Bauhaus in Chicago and then at Illinois Institute of Design alongside Mies van der Rohe before coming to MIT.

development of "individual creative pursuits."

Since its founding, CAVS has provided long-term appointments to a wide range of important innovators in the visual arts, environmental arts, dance, and new media, such as composer Maryanne Amacher, avant-garde filmmaker Stan VanDerBeek, artist and educator Lowry Burgess, video pioneer Peter Campus, musician and performance artist Charlotte Moorman, multi-media artist Nam June Paik, choreographer and filmmaker Yvonne Rainer, artist Alan Sonfist, and many others including artist Otto Piene, a member of the ZERO group, and CAVS's first fellow. Piene succeeded Kepes as director in 1974. Following Piene's retirement in 1994, the internationally known artist and VAP faculty member Krzysztof Wodiczko, became director of CAVS. Steve Benton, inventor of the white-light "rainbow" hologram and researcher in the Media Lab (also within the School of Architecture and Planning) then directed CAVS from 1996 until his death in 2003.

In 2004, Wodiczko returned as director to CAVS with the goal of emphasizing a critical engagement with the intellectual and ethical questions posed by the social construction of advanced technologies. With the appointment of Associate Director Larissa Harris, and under the leadership of Krzysztof Wodiczko, the Center embarked on a revitalization program that included creating a visiting artist program and developing a strong focus on transdisciplinary production embedded in MIT's scientific and technological community.

CAVS's artist fellowship program created new artworks within the context of MIT. Additionally, the Center hosted events, workshops and projects that involved the MIT community and were open to the general public. Long-term fellowships were awarded to visiting artists based on proposals developed following their visits, with an emphasis on projects that developed over time in response to MIT. Realized over the course of a year or more, artists' projects involved Center staff, MIT students, faculty and resources. These projects employed undergraduates in the UROP program, were premiered at MIT and often toured or traveled to other organizations. In addition, the Center ran a Graduate Affiliate program for MIT students who identified with artmaking; hosted up to six affiliated artists who conducted research and participated in CAVS programming; and provided a studio for undergraduates who participated in CAVS events and produced their own projects. Fellows and affiliates were chosen based on the projects proposed and were awarded a fellowship for one year, renewable for up to three years. The community of artists associated with CAVS rapidly integrated short-term visitors and helped foster relationships lasting many years.

The VAP Legacy

The Visual Arts Program (VAP) was created in 1989 in the Department of Architecture, as a consequence of the Joskow Report on the Arts at MIT (1987). The first director was Professor Ed Levine (American artist, public art / sculpture), followed by Dennis Adams (American artist, public art / urban intervention), followed by an interim of rotating acting directors Krzystof Wodicko, Joan Jonas and Wendy Jacob. The VAP's initial impetus was to provide teaching in the arts to MIT undergraduates as well as to provide courses for graduate students from the Department of Architecture. Although the VAP was technically one of five discipline groups or "sections" in the Department of Architecture (the others are Architectural Design [AD], Computation [Comp], History, Theory and Criticism [HTC], and Building Technology [BT]), it has a slightly different operational structure, running several shops and labs that serve the whole MIT student community.

The internationally known German curator Ute Meta Bauer was appointed director of the Visual Arts Program in the summer of 2005 with the mandate to revamp the Visual Arts Program and lead

its merger with the Center for Advanced Visual Studies. Under her stewardship, the VAP program grew in size, in both its graduate and undergraduate components, and expanded its course offerings. Bauer enlarged the student labs, added a sound studio and performance and lecture space, the Joan Jonas Performance Hall, and organized a highly visible lecture series. In July 2009, she worked with CAVS director Krzysztof Wodiczko to merge the VAP with the CAVS.

The VAP did not offer courses in traditional arts, such as painting or drawing. Instead the program's classes focus on media, technology, public art and public sphere, performance, network culture, contemporary curating, and design. Undergraduate classes offered experience in wood, metal, plaster and three-dimensional thinking, as well as photography, video, and bodywear. The VAP maintained a darkroom, sound and video editing labs, and an open-air yard attached to the VAP shops in N51/N52 for large scale 1:1 models or projects, and other facilities to support a hands-on approach combined with critical reflection in its coursework. Advanced courses encompassed critical studies, with a focus on transdisciplinary studies and experimentation in the arts addressing the future of the body, creative responses to conflict, and reaching out to other disciplines at MIT.

ACT Academic program

Typically, ACT serves around 300 students per year academic year. About half of the students come from outside of the School of Architecture and Planning.

Total student enrollment in ACT/VAP classes:

2010	280
2009	299
2008	267

Percentage of students from outside SA+P enrolled in ACT/VAP classes:

2010	47%
2009	55%
2008	51%

Undergraduate Study

About half of the students in ACT classes are undergraduates. The demand for undergraduate classes currently exceeds ACT's space and equipment resources. The 4.301 Introduction to Visual Arts class is a lottery class, and registration for the spots in the class far exceed openings. Undergraduate enrollment figures have risen in recent years, though cutbacks in 2010 resulted in a slight drop in enrollment for the first time. This is unfortunate as the change in GIRs to include the arts opens the door to even larger student enrollments in ACT classes.

Undergraduates as a percentage of total student enrollment in ACT classes:

2010	55%
2009	60%
2008	45%

BSAD, Visual Arts stream

ACT undergraduate offerings include a course 4 major in visual arts, as one of four discipline streams in the Department of Architecture's Bachelor of Science in Art and Design (BSAD). Currently this is a small program, attracting one or two BSAD majors a year. All BSAD majors, in any discipline stream, take 4.302, Introduction to Visual Arts, as a degree requirement.

HASS classes

ACT also supports the general undergraduate education curriculum of the Institute, offering HASS distribution and elective classes. HASS electives include introductory and advanced level subjects such as Photography, Video, Sculpture, Advanced Visual Arts Studio, Interrogative Design Workshop, Performance, Networked Cultures, Curatorial Studies and others. In addition, ACT offers two Communications Intensive classes, one CI-M and one CI-H.

HASS concentration and a new minor

ACT offers a HASS concentration in visual arts, which requires four classes. Currently there are 15 students in the concentration. A new HASS minor in the visual arts was launched for the 2011 Academic Year.

Graduate Study

Master of Science in Visual Studies

ACT offers a two-year graduate degree, a Science Masters in Visual Studies known as "SMVisS." SMVisS focuses on the development of critical and visionary positions of artistic practice in the context of an advanced technological and scientific community. Central to the curriculum is the potential for creating links with programs in architecture, urbanism, technology, and media studies. Students are challenged to expand their artistic practice by questioning the historical, cultural, social and ethical implications of their work. Discussion in contemporary theory and criticism complements studio production.

The SMVisS emerged out of the efforts in 1976 of the Center for Advanced Visual Studies to create an interdisciplinary master's program in collaboration with the Department of Architecture's Visual Arts Program, Film Section, and the Architecture Machine Group (which became the Media Lab).

Today the SMVisS program is a small and selective one that currently has eleven graduate students. Historically this degree was taught by CAVS and Media Lab faculty. Applications to this program have steadily increased year-by-year. ACT plans to expand the program to as many as 16 students in the near future. ACT has made efforts to include under represented minorities among its graduate student enrollments. Of the eleven graduate students in Academic Year 2011, the were majority female (eight women and three men), and included two Native American women, one African American woman, and two Latina women.

There is a core studio for SMVisS candidates only. Other ACT graduate-level classes serve the SMVisS students and also attract students from a variety of schools (the majority from the School of Architecture and Planning, followed by the School of Engineering). MArchs students take two visual arts electives as part of their requirements for graduation.

Research

Connecting Research with Curriculum

The intention of ACT, as a result of the merger of CAVS and VAP, is to connect research and curriculum. The goal is to formulate thematic clusters headed by individual faculty members on topics that will play a central part in the curriculum as well. Topics include: "Artistic Interventions: Creative Response to Conflict and Crisis," "Art, Culture and Public Sphere," "Interrogative and Eco-design," "The Future of Body." The clusters "Theatricality, Performativity, Process" and the "Future Archive" focus on artistic research, individual and collective practices and transdisciplinary collaboration.

Some examples of recent projects include: Krzysztof Wodiczko, previous CAVS director and VAP faculty, addressed post-traumatic stress syndrome in various projects including his most recent work with war veterans. Jae Rhim Lee's N=0=Infinity Burial suit project is supported by a Creative Capital Grant (a multi-year grant totaling up to \$50,000). Lee is an ACT fellow and SMVisS graduate ('07). Another ACT fellow and SMVisS graduate ('09), Jegan Vincent de Paul, established the "eWheel Project" under the supervision of Ute Meta Bauer, to investigate small-scale production of energy for communities and individuals where there is little or no access to a power grid. Nitin Sawhney, an ACT fellow and lecturer, researches creative response to conflict and has organized exhibitions of artwork by Palestinian youth. Wendy Jacob, an ACT affiliate, led the "Autism Studio," exploring alternate modes of perception. In 2009 and 2010, she presented "Waves and Signs," a performative structure designed to carry low-frequency vibrations played through the floor. The MIT FEMA Trailer Project (2007-2009), was led by Jae Rhim Lee and directed by Ute Meta Bauer. This project conducted a historical/social investigation of the history of surplus FEMA trailers deployed following Hurricane Katrina. MIT students converted a single FEMA Trailer into a mobile composting unit, vertical community garden, and indoor permaculture library. Elizabeth Goldring and MIT UROPs developed an Eye Robot to perform on stage.

Archive

Considerable strides have been made in the past year towards ACT's goal of preserving and developing publicly accessible materials in the archive of the Center for Advanced Visual Studies (CAVS) and the Visual Arts Program (VAP). The CAVS archive contains materials concerning collaborative and time-based productions generated by or related to the tenure of nearly 100 internationally recognized artist-fellows over the past 44 years, including photos, books, posters, documents, films, videos and audio tapes of great historical significance. ACT has initiated collaboration with the Rotch Library. Visual Arts Librarian Jennifer Friedman has played a key role in developing a plan for preservation and cataloging of the materials, and considerable inroads have been made in this project. ACT is also in the process of digitizing selected material. The archives have great interest to museums, schools and institutions, scholars and students at MIT and internationally, and frequent requests are received by researchers and museums. ACT is currently researching questions relating to copyright assessment and the best methods to preserve, catalogue, store, and digitize the materials with an eye toward making them more available. The archive work promises to make more accessible this previously untapped and highly unusual archive of time-based art that explores intersections between art, science, and technology, beginning with the Art and Technology movement of the late 1960s.

Outreach

Public Presentations / Exhibitions

Nearly all ACT courses have a public component in the form of public presentations / exhibitions.

Lecture Series

The ACT Lecture Series, begun as the VAP Lecture Series in the Fall of 2006, has provided an excellent extra-curricular learning opportunity for MIT students, while also serving the community at large. The hallmark of the lecture series is to generate a dialogue between speakers, panelists, and audience members from various disciplines: artists, scientists, and scholars from other disciplines. From its beginning, the ACT lecture series has been very well attended and attracted an audience from on- and off-campus.

ACT Facilities

- 3 classrooms
- "The Cube": Performance / event space, audience capacity of 100+
- Lobby access for exhibitions and pinups in E14 and E15
- Mars Lab for 3-D work and welding
- Mars Mezzanine Plaster/mold making workshop
- 1 computer/video lab
- 1 sound studio
- 1 photo lab/darkroom (wet lab)
- Sewing room
- Access to N51/N52 yard attached to woodshop (shared with Architecture) for large outdoor pieces
- Archive room
- Office/studios for 4 ACT fellows and 1 office for use of non-resident ACT affiliates
- Offices for 4 faculty, 4 lecturers, and 12 graduate students

AY 2011 Faculty and Teaching Staff

Professors

Ute Meta Bauer, MA, Head of program, Associate Professor Joan Jonas, MFA, Professor (retired and teaching part-time) (fall) Antoni Muntadas, MA, Visiting Professor of the Practice (spring) Gediminas Urbonas, MFA, Associate Professor (junior research leave spring 2011) One open junior line faculty member

Professor emeriti

György Kepes Ed Levine Joan Jonas Krzysztof Wodiczko Steve Benton Dennis Adams

Lecturers

Andrea Frank (Photography and related media)
Oliver Lutz (Introduction to Visual Arts)
Nitin Sawhney (Networked Cultures and Participatory Media)
Angel Nevarez (Video and Related media)
John Bell (Performance spring)
Mario Caro (Thesis, spring)

Technical Instructors

Chris Clepper (2-D, IEL, video, photography, sound, networked cultures) Martin Seymour (3-d, welding, mold making, wood, sewing)

Research Fellows and Affiliates Research Fellows

John Bell Nitin Sawney Jae Rhim Lee Jegan Vincent de Paul

Affiliates

Amber Frid-Jimenez Wendy Jacob Armin Linke Lucy Orta

CAVS Legacy Affiliates

Elizabeth Goldring Keiko Prince

Staff

Mary Sherman, part-time Associate Director [through Fall 2010] Lisa Hickler, Administrative Assistant II (Academic, Communications, Special Projects) Ed Halligan, Administrative Assistant II (Finances, Facilities) Laura Pallone, Administrative Assistant I (Programs, Admissions, Archive Support)

Sources:

http://web.mit.edu/catalog/degre.archi.archi.html http://cavs.mit.edu/ http://visualarts.mit.edu/index.html

Appendix 2.3: Music and Theater Arts, School of Humanities, Arts, and Social Sciences

Background

Music

The Music Program offers a broad range of opportunities to experience and explore the field of music. A great variety of subjects are offered, ranging from Fundamentals of Music to Senior Seminar for Music Majors. The subjects are arranged into six categories: introductory, history/literature, theory/composition, performance, special topics/advanced subjects, and music/media. Most students begin with introductory subjects, but anyone with musical training is encouraged to begin with history/literature or theory/composition subjects, which constitute the nucleus of the program. Graduate credit is available for some performance and special topics/advanced subjects.

The symphony orchestra, choral groups, wind and jazz ensembles, chamber music groups, and gamelan and Rambax ensembles are an integral part of MIT's cultural life, and any student is welcome to audition for one or more of them. Auditions are held at the beginning of each term. Academic credit is available for some performance groups and private study.

Theater Arts

The Program in Theater Arts offers the opportunity for an imaginative and rigorous engagement with the arts and disciplines of theater: acting, directing, playwriting, design, technical work, dance, and scholarship. The program combines work in the classroom, in the studio, and on the stage. Performance is the testing ground for what is learned in the classroom, from student-generated workshops to fully-mounted productions by Dramashop and Playwrights-in-Performance. All these activities are guided by a professional faculty and staff, often with the enriching participation of guest artists.

Undergraduate Study Bachelor of Science in Music/Course 21M

The undergraduate program leading to the degree of Bachelor of Science in Music is concerned with a confluence of three basic areas: a thorough grounding in the harmony and counterpoint of Western music; in-depth studies in the history and repertoire of Western and World music; and performing experience in small and/or large ensembles. Six required subjects (one of which consists of two terms of performance) and four electives (which must include subjects from three different areas) form the core of the program, which can be supplemented by eight unrestricted electives (for 96 additional units). This program is analogous to that for music majors at leading liberal arts colleges and universities, and it prepares a student in many ways for graduate study in the field. Students who declare music as their major must ordinarily demonstrate proficiency in instrumental or vocal performance by participating in a performance subject and in harmony/counterpoint by obtaining a grade of B or better in 21M.301.

Minor Program in Music

The Minor Program in Music requires six subjects that will give students experience within the three main branches of musical activity: performance, composition, and history. The four subjects in Tiers I and II are at the introductory or intermediate level. Those in Tier III provide depth in one of the three branches.

Joint Degree Programs

For students interested in combining the study of engineering or science with music, a joint major in the 21E or 21S degree program provides an opportunity to study both fields. The joint major requires four subjects (21M.220, 21M.301, 21M.302, and 21M.500), two terms of performance subjects, electives in two musical fields (usually composition and history), a 12-unit elective in any musical field (composition, history, or two terms of performance), and six elective subjects in an engineering or science curriculum.

NB: Joint as well as full majors may, with faculty approval, substitute three full years of Advanced Musical Performance (21M.480) and a senior recital for the two required terms of performance subjects and two electives.

Theater Arts

Major

The major in Theater Arts at MIT is designed around each student's specific interests in theater. It can be either a full major, called a major departure, a joint major, or part of a double major. Majors are arranged in consultation with the major advisor, Janet Sonenberg, and must be approved by the Dean of the School for Humanities, Arts and Social Sciences. The curriculum for the major, devised with the major advisor, is drawn from appropriate Theater Arts courses supplemented by courses from related disciplines. Loosely based on the minor, the major includes more courses and an area of specialization. A pre-thesis and thesis are required.

Minor

The Minor in Theater Arts is designed to give students the opportunity to experiment imaginatively but constructively in the making of theater. The flexibility of the minor allows students either to explore the basic principles of several theater disciplines or to concentrate more deeply on one.

Concentration

A concentration in Theater Arts is comprised of four 9-to-12-unit courses in the Theater Arts curriculum and is designed as a broad introduction to the discipline. Students may take up to nine units of theater practicum: acting, directing, and design in Theater Arts productions can be counted as part of the concentration.

MIT students can also pursue a Concentration in Physical Imagination (Dance), exploring the creative possibilities for movement in theatrical contexts, and performative expression in alternative contexts. This four-subject concentration gives students exposure to three areas of creative investigation: movement composition; movement theory, history, and literature; and performance.

Programs

Dance Theater Ensemble

(12 students)

Founded in 2002, DTE is a co-curricular performance group that usually performs a fall concert and a spring showing of new material during the academic year. The ensemble embraces a range of movement idioms from modern and postmodern forms, and includes jazz, tap, and popular social dance styles. The challenging repertory for the ensemble is created largely by visiting artists and the Faculty Advisor, Thomas DeFrantz, but students sometimes choreograph for the group. Membership is by audition only. DTE may be taken for credit by registering for 21M.880 or 21M.281.

Dramashop

(40 Students)

Dramashop is a co-curricular student theater group open to all members of the MIT community, offering opportunities in acting, directing, stage managing, writing, and designing or building sets, lights, sound, and costumes. Dramashop presents three main stage productions each year, one during the Independent Activities Period (IAP) and one during the spring. In the fall term, Dramashop produces a set of student-written, student-directed and student-designed one-act plays. They also run and organize a small Pickup Theater, as well as the One Week Wonder, where students mount a production of a full-length play in just one week.

Playwrights in Performance

Each spring, Professor Alan Brody selects a small number of student-written one-act plays to develop in a workshop setting. Priority goes to students who are or who have been members of the Playwrights' Workshop 21M.785, but anyone can submit scripts. Playwrights in Performance gives young playwrights the opportunity to follow their scripts through the production process and work closely with actors and directors on revisions. It gives actors the opportunity to work on the creation of new roles and technicians the chance to work as part of an ensemble.

AY 2009 Class Enrollment

In AY 2009-2010 1,233 students were enrolled in music classes and 339 students enrolled in theater arts. Typically, Music and Theater Arts (MTA) serves over 1,400 students per year. The following is the makeup of MTA classes for the 2009-2010 term, excluding independent study students.

Student enrollment in MTA classes 2009-2010:

	Music	Theater Arts	Total MTA
Undergraduates	1233 78%	339 22%	1572 100%
Graduate students*	N/A	N/A	35

Source: Registrar's office

Programs

Chamber Chorus

(30 students)

The MIT Chamber Chorus (21M.405) is a small, all-student group that performs two concerts each year under the direction of Dr. William Cutter. Designed for the more vocally and musically advanced singer, this select ensemble is challenged with a wide variety of repertoire including music for a cappella chorus as well as choral works accompanied by chamber orchestra and other small instrumental ensembles, or with piano accompaniment. Chamber Chorus has collaborated with the MIT Symphony,

^{*10} subjects include graduate level option (source: John Lyons)

the MIT Wind Ensemble, the Aardvark Jazz Ensemble and with Theater faculty mounting chamber opera productions and opera scene programs.

Chamber Music Society

(120 students)

The Chamber Music Society, coordinated by Professor Marcus Thompson, is comprised of students selected by audition to study and perform classical chamber music and jazz combo literature. All groups rehearse independently and are coached one hour per week by MIT faculty and perform a recital at the end of each semester in Killian Hall.

Concert Choir

(90 students)

The MIT Concert Choir (21M.401), a large choral group, is open by audition to both graduate and undergraduate students, and to members of the MIT community. The Concert Choir is a social, academic and musical ensemble in which students learn and perform large, major works from the standard repertoire, as well as selected shorter and lesser-known pieces.

The Concert Choir has appeared with the Boston Pops under Keith Lockhart. In recent years, the Concert Choir has toured in Switzerland, Budapest, and Vienna and looks forward to taking advantage of similar opportunities in the future. This ensemble frequently collaborates with the MIT Symphony and the MIT Wind Ensemble. Concert Choir (21M.401) may be taken for credit.

Emerson Scholarship and Fellowship Program

(47 scholarships and 7 fellows)

Each year the MIT Music Section awards scholarships and fellowships to approximately 60 qualified students on a competitive audition basis. Scholarship students receive half support of lessons and fellowship students receive full support of instrumental or vocal lesson with members of the performance faculty or Boston area teachers . The Music Performance Program is generously funded by Mr. Cherry L. Emerson, Jr. (SM, 1941) who was a strong supporter of the arts at MIT for many years. Scholarships and fellowships are awarded based on skill and potential exhibited during live auditions, not on financial need.

Festival Jazz Ensemble

(20 students)

The MIT Festival Jazz Ensemble, founded in 1963 by Boston jazz icon Herb Pomeroy, is comprised of undergraduate and graduate MIT students from many fields of study. The ensemble performs original and standard jazz compositions spanning the gamut of jazz history. The FJE performs four concerts per year and frequently features major jazz artists at its concerts. Artists-in-residence with the FJE have included Joe Lovano, Steve Turre, Magali Souriau, Guillermo Klein, Herb Pomeroy, Don Byron, Kenny Werner, and George Schuller.

Since 2000, the FJE has commissioned 15 original works for jazz ensemble by student, local, and nationally known composers. FJE released *The Tale of the Skyswimmer* in 2002. The recording features the music of Charles Mingus, Duke Ellington, and premiere pieces by Magali Souriau and Guillermo Klein. The FJE will soon release a new CD, *FJE Live!* FJE (21M.442) may be taken for credit.

Gamelan Galak Tika

(10 students)

Galak Tika, founded and directed by Evan Ziporyn, Kenan Sahin Professor of Music at MIT, is the Boston area's first Balinese gamelan. This large percussion orchestra consists of gongs, metallophones, hand drums with cymbals, vocals, bamboo lutes and spiked fiddles. A community ensemble in residence at MIT, Galak Tika was founded in September 1993 to study and perform both traditional and modern Balinese music and dance, as well as to develop new works in collaboration with Balinese and American artists. The gamelan has performed throughout New England as well as internationally, and collaborated with artists from across the globe, including Chinese pipa masters, Senegalese drummers, and some of the finest musicians on the American jazz and new music scene. In May 2009, Galak Tika released a CD, *Bronze Age Space Age*. MIT Balinese Gamelan (21M.450) may be taken for credit.

Senegalese Drumming Ensemble (Rambax)

(40 students)

Rambax MIT is an ensemble dedicated to learning the art of sabar, a vibrant drum and dance tradition of the Wolof people of Senegal, West Africa. (The name "rambax" – pronounced "rahm-bach" – is a vocal mnemonic for a signature sabar rhythm.) In Senegal, sabars are played exclusively by griots, a caste of hereditary musicians. Sabar drum troupes perform at a variety of events, from neighborhood dance parties to baptisms, weddings, and wrestling matches.

Symphony Orchestra

(102 students)

Founded in 1884, this full-size orchestra is comprised primarily of MIT and Wellesley College students. MITSO performs four concerts each year and may be taken for credit (21M.421). Membership is by audition. From J.S. Bach to John Harbison, concert programs feature a broad range of challenging repertoire spanning works of the early Baroque era to contemporary compositions, including music for film and theater. Student and professional soloists are periodically featured as are MIT student and faculty compositions. The Orchestra holds an annual Concerto Competition in February and toured Europe in 2000 and England in 2002.

The central mission of the MIT Symphony Orchestra is the cultural enhancement of education at MIT by presenting music performances at the highest level of artistic excellence, nurturing new works and young artists, and developing and sustaining the widest possible audience.

Wind Ensemble

(48 students)

Founded by Dr. Frederick Harris, Jr. in the fall of 1999, the MIT Wind Ensemble (21M.426) is comprised of undergraduate and graduate MIT students from a wide range of disciplines. MITWE performs four concerts per year on the MIT campus and one off-campus.

Wind Ensemble members perform music for large and small wind ensembles from the 16th century to the present day. Literature includes music for full wind ensemble, chamber winds, brass ensemble, percussion ensemble, and woodwind ensembles. Since 2001, the MIT Wind Ensemble has commissioned 20 original works for wind ensemble and has worked with Gunther Schuller, John Harbison, and Michael Colgrass, and many other composers. The MITWE has collaborated with the MIT Concert Choir, MIT Chamber Chorus, MIT Dance Theater Ensemble as well as professional vocalists, and jazz musicians from all over the world. MIT Affiliated Artist and tuba player of the Empire Brass, Kenneth Amis, is the Assistant Conductor of MITWE.

Concert Series

- Affiliated Artist Concerts
- Advanced Music Program (AMP) Emerson Student Recitals
- Chapel Concerts
- Faculty Concerts
- Guest Artist Concerts
- MITHAS (South Asia performing arts)
- Off-Campus Concerts
- String Quartet Series

Facilities

- Killian Hall: 150 seat small recital hall; owned by SHASS but MTA has primary control.
- 4 classrooms owned by the Registrar's office that MTA controls and one classroom owned by the Registrar that MTA controls for evening rehearsals and classes.
- Small dance and theater rehearsal studio in Walker owned by Campus Activities Complex that MTA controls.
- Small computer music lab and classroom and a piano lab space that MTA controls.
- 8 small practice rooms.
- Rinaldi, Building E33, MTA theater production space
- Kresge Auditorium and Kresge Little Theater, the main performance venues, are controlled by Campus Activities Complex and must be reserved in advance.
- Occasional use of the MIT Chapel, Wong Auditorium and La Sala de Puerto Rico, spaces that MTA does not control and must reserve in advance.

Faculty and Teaching Staff

Janet Sonenberg, MFA, Section Head, Professor of Theater Arts, MacVicar Faculty Fellow

Professors

Alan Brody, PhD, Professor of Theater Arts

Peter Child, PhD, Professor of Music, MacVicar Faculty Fellow

Michael Cuthbert, PhD, Assistant Professor of Music

Thomas F. DeFrantz, PhD, Class of 1948 Professor of Theater Arts

John Harbison, MFA, Professor of Music, Institute Professor

Ellen T. Harris, PhD, Section Head (Spring 2010), Class of 1949 Professor of Music

Lowell Edwin Lindgren, PhD, Professor of Music

Keeril Makan, PhD, Associate Professor of Music

Jay Scheib, MFA, Associate Professor of Theater Arts

Patricia J. Tang, PhD, Associate Professor of Music

Marcus Aurelius Thompson, DMA, Robert R. Taylor Professor of Music

Barry Lloyd Vercoe, DMA, Professor of Media Arts and Sciences

Evan Ziporyn, PhD, Kenan Sahin Distinguished Professor of Music

Lecturers

Adam Boyles, DMA, Lecturer in Music, Director, Orchestra

Sara Brown, MFA, Lecturer in Theater Arts, Director of Design

William C. Cutter, DMA, Lecturer in Music, Director, Choral Programs

David Deveau, MM, Senior Lecturer in Music

Frederick Harris, PhD, Lecturer in Music, Director, Wind Ensembles

Mark Harvey, PhD, Lecturer in Music

Anna Kohler, Senior Lecturer in Music
Martin Marks, PhD, Senior Lecturer in Music
Kim Mancuso, MFA, Lecturer in Theater Arts
Theresa Neff, PhD, Lecturer in Music
Jean Rife, BM, Lecturer in Music
George Ruckert, PhD, Senior Lecturer in Music
Elena L. Ruehr, PhD, Lecturer in Music
Charles Shadle, PhD, Senior Lecturer in Music
Pamela Sharon Wood, MM, Senior Lecturer in Music
Peter Whincop, MA, Lecturer in Music

Instructors

Leslie Cocuzzo Held, BA, Technical Instructor in Theater Arts Michael Katz, MFA, Technical Instructor in Theater Arts Karen Perlow, BA, Technical Instructor in Theater Arts

Faculty Emeriti

Jeanne Shapiro Bamberger, MA, Professor of Music, Emerita Stephen Erdely, Professor of Music, Emeritus Michael Ouellette, MFA, Senior Lecturer in Theater Arts, Emeritus Barry Lloyd Vercoe, DMA, Professor of Media Arts and Sciences, Emeritus

Sources:

http://web.mit.edu/catalog/degre.human.music.html http://web.mit.edu/music/index.html http://theaterarts.mit.edu/

Appendix 2.4: Writing and Humanistic Studies (WHS), School of Humanities, Arts, and Social Sciences

Background

Writing was taught in the Department of English and History, later known as the Department of Humanities during the 1950s, when the core curriculum required a subject in English composition. In the early 1960s, writing became part of the Literature section, when the Department of Humanities was divided into separate units. In 1971, the "Report of the Committee to Evaluate the Pilot Writing Program, known as the "Sivin Report," established the need for more extensive and intensive instruction in writing. Writing separated from the Literature section in 1974-75 and became more autonomous during the course of the decade.

The MIT Program in Writing and Humanistic Studies gives students the opportunity to learn the techniques, forms, and traditions of several kinds of writing, from basic expository prose to more advanced forms of non-fictional prose, fiction and poetry, science writing, scientific and technical communication and digital media. The faculty consists of acclaimed novelists, essayists, poets, translators, biographers, historians, engineers, scientists, filmmakers and digital media specialists, all of whom share a dedication to teaching excellence in writing or expression in new media forms.

Program subjects are arranged by three areas: creative writing, science writing and digital media. In each area introductory subjects lead to more specialized advanced subjects. A number of the advanced subjects use writing as a vehicle to explore humanistic and scientific issues in a broad cultural context.

Undergraduate Study

Major

Students may major in writing or develop a joint major with another discipline in the humanities or with the Program in Science, Technology, and Society.

Minor

The Minor in Writing and Humanistic Studies offers students a sustained opportunity to work in one of the program's three options while also exploring offerings in the program's core curriculum.

Concentration

Students pursuing a humanities concentration in writing work mainly within one of the Program's three curricular areas.

Graduate Study

Master of Science in Science Writing

The program also offers a one-year master's degree (SM) in science writing. Students in the graduate program receive intensive training in the craft of turning technically complex ideas and discoveries into compelling writing and productions for broad audiences. Approaches in the graduate curriculum range from daily journalism to long-form prose, documentary audio and video, and digital media; students write a substantial thesis and complete a required internship.

Links to other MIT programs and departments, such as the Knight Science Journalism Fellowships program, Comparative Media Studies (CMS) and the Program in Science, Technology and Society (STS)

provide rich resources for students who come to the Graduate Program in Science Writing from a variety of backgrounds.

Spring 2009 Class Enrollment

Student enrollment in Writing classes Spring 2009:

Undergraduates 312 100%

Graduate students NA

Total students 312 100%

Programs

Writers Series

Since 1978 the Program in Writing and Humanistic Studies has hosted a series of readings and talks by novelists, critics, essayists, poets, and editors. These events are free and open to the public and are sponsored by the Angus N. MacDonald Fund. Their purpose is to present as wide a range as possible of contemporary writers and thinkers. Recent guests have included Arnold Rampersad, John Ashbery, William Corbett, Camille Paglia, David McCullough, Michael Ondaatje, Susan Sontag, Salman Rushdie, Ben Okri, Saul Bellow, Richard Eder and Edward Hoagland.

Poetry@MIT

Jointly with the Literature faculty, the Program in Writing and Humanistic Studies hosts a series of poetry readings throughout the year. These include readings from both local and national poets. Some recent poets include John Ashbery, Sue Standing, Steven Cramer, Stephen Dobyns, Linda McCarriston, Olga Broumas, Gail Mazur, Alan Dugan, Robert Pinsky, W.S. Merwin, and Charles Wright. Poetry@MIT is made possible by the generous support from the Angus N. MacDonald Fund.

Ilona Karmel Writing Prizes

The Ilona Karmel Writing Prizes, awarded in May by MIT's Program in Writing and Humanistic Studies, are named after Ilona Karmel, novelist, poet and Senior Lecturer in the Program for many years. Throughout her teaching career Karmel's outstanding contributions to creative writing at MIT were her inspirational teaching and relationships with students. Karmel's books are the novels *Stefania*, and *An Estate of Memory*, and a book of poems co-written with her sister Henia Karmel *A Wall of Two*.

Faculty and Teaching Staff

Professors

Thomas Levenson, BA, Program Head, Professor of Science Writing

Vivek Bald, PhD, Assistant Professor of Writing and Digital Media

Marcia Bartusiak, MS, Adjunct Professor of Science Writing

Beth Coleman, PhD, Assistant Professor of Writing and New Media

Junot Díaz, MFA, Rudge and Nancy Allen Professor of Writing

Joe Haldeman, MFA, Adjunct Professor of Fiction

Robert Kanigel, BS, Professor of Science Writing

Helen Lee, JD, Associate Professor of Writing

Alan Lightman, PhD, Adjunct Professor of the Humanities

Kenneth Manning, PhD, Thomas Meloy Professor of Rhetoric and the History of Science

Nick Montfort, PhD, Associate Professor

James Paradis, PhD, Robert M. Metcalfe Professor of Writing

James H. Williams, Jr., PhD, SEPTE Professor of Engineering, Charles F. Hopewell Faculty Fellow

Rosalind H. Williams, PhD, Bern Dibner Professor of the History of Science and Technology

Lecturers

Ed Barrett, PhD, Senior Lecturer in Writing + 40 others

Sources:

http://web.mit.edu/catalog/degre.human.writi.html
http://humanistic.mit.edu/

Appendix 2.5: Comparative Media Studies, School of Humanities, Arts, and Social Sciences

Background

The academic study of media at MIT has a long, distinguished and eclectic history populated by the likes of Vannevar Bush (engineering), Ithiel de Sola Pool (social sciences), Norbert Wiener (mathematics), Harold "Doc" Edgerton (physics), Ricky Leacock (filmmaking), Noam Chomsky (linguistics), and Nicholas Negroponte (media arts and sciences). In 1982, the Faculty of Humanities, Arts and Social Sciences formed an interdisciplinary undergraduate program in Film and Media Studies, a move that would culminate in the formation of the two-year MS program in Comparative Media Studies (2000) and the BS program in Comparative Media Studies (2003). Professor David Thorburn was the founding director of the Film and Media Studies Program. Henry Jenkins took over as director of the program in 1993 through Spring 2009. William Uricchio served as the co-director of the Comparative Media Studies Program from 2004 and, beginning in Fall 2009, serves as director; Ian Condry is associate director.

Both the undergraduate and graduate programs manifest CMS¹ commitment to thinking across media forms, theoretical domains, cultural contexts, and historical periods. Both programs encourage the bridging of theory and practice, as much through course work as through participation in faculty and independent research projects.

Undergraduate Study

Bachelor of Science in Comparative Media Studies/Course CMS

The undergraduate program in Comparative Media Studies – established in 1982 under its former name, Film and Media Studies – offers students an opportunity for interdisciplinary study of film, television, game design, virtual worlds, digital artworks, civic media, interactive writing, and other communications media.

Minor

The minor requires six subjects that reflect the comparative study of media, including 21L.011 or CMS.100, one mid-tier subject, one capstone subject, and three electives. Each student designs his or her own plan of study in consultation with a field advisor.

Concentration

The HASS Concentration requirement consists of four subjects that reflect the comparative study of media. Each concentrator designs his or her own plan of study in consultation with a field advisor.

Joint Degree Programs

The joint degree programs (21E or 21S) require eight CMS subjects, plus six subjects in an engineering or science major. Students must obtain approval for their course selection from an advisor in their engineering or science field, and must also file a petition with the Subcommittee on the Communication Requirement.

Graduate Study

Master of Science (21L-CMS)

The graduate program comprises a two-year course of study leading to a Master of Science in Comparative Media Studies. The program aims to prepare students for careers in fields such as

journalism, teaching and research, government or public service, museum work, information science, corporate consulting, media industry marketing and management, and educational technology.

Students may enter the program with a degree from a wide range of undergraduate majors, including the liberal arts, the social sciences, journalism, computer science, and management.

Spring 2009 Class Enrollment

Student enrollment in CMS classes Spring 2009:

Undergraduates 56 57% Graduate students 42 43% Total students 98 100%

Source: Registrar's Office

Programs

Conferences

Futures of Entertainment (Fall)

Futures of Entertainment, now in the fourth year, brings together key industry leaders who are shaping new directions in culture and academic scholars immersed in the investigation of the social, cultural, political, economic, and technological implications of changes in our media landscape.

Media in Transition (bi-annual)

The first Media in Transition conference was held in 1999 and marked the launch of the MIT graduate program in Comparative Media Studies. Since then, four bi-annual conferences have been held, cosponsored by CMS and the MIT Communications Forum, with each new conference generating a more internationally diverse audience than its predecessor.

Lecture Series

CMS colloquia (weekly, academic year)

This series is intended to provide an intimate and informal exchange between a visiting speaker and CMS faculty, students, visiting scholars and friends. Each week during the term features a figure from academia, industry, or the art world to speak about their work and its relation to media studies. Required for graduate students.

Communications Forum (co-sponsored with Literature)

For more than 20 years the MIT Communications Forum has played a unique role at MIT and beyond as the host of important conversations about all aspects of communications, with special emphasis on emerging technologies. Leading academics, journalists, political figures, and corporate managers have appeared at its conferences and panels.

Julius Schwartz Lecture Series

Julius "Julie" Schwartz founded the world's first science fiction fanzine, co-founded the first science fiction literary agency, and organized the first World Science Fiction Convention in 1939. He is best known, however, for his role as editor at DC Comics for over 42 years, where he oversaw the Batman and Superman books among many other titles. This annual lecture in memory of the legendary figure who led the resurgence of the comic book in America honors an individual who has made significant contributions to the culture, creativity and community of comics and popular entertainment.

Centers and Research Projects*

Center for Future Civic Media, Michael Resnick and William Uricchio, Principal Investigators, Chris Csikszentmihalyi, Director (A collaboration between MIT Media Lab and CMS)

The Center for Future Civic Media supports research at MIT to innovate civic media tools and practices and test them in communities. Bridging two established programs at MIT—one known for inventing alternate technical futures, the other for identifying the cultural and social potential of media change—the Center for Future Civic Media is a joint effort between the MIT Media Lab and the MIT Comparative Media Studies Program. It is made possible by a four-year grant from the Knight Foundation.

The Center for Future Civic Media is working to create technical and social systems for sharing, prioritizing, organizing, and acting on information. These include developing new technologies that support and foster civic media and political action; serving as an international resource for the study and analysis of civic media; and coordinating community-based test beds both in the United States and internationally.

These three activities are vitally interconnected. The Center studies the existing uses of civic media to identify best practices and urgent needs; connect those insights to the development of new tools and processes; partner with local groups to put these tools and processes into the hands of community builders; and monitor the results to inform the next phase of development.

The Center uses the term civic media, rather than citizen journalism: civic media is any form of communication that strengthens the social bonds within a community or creates a strong sense of civic engagement among its residents. Civic media goes beyond news gathering and reporting. MIT students are experimenting with a variety of new civic media techniques, from technologies for protests and civil disobedience to phone-texting systems that allow instant, sophisticated votes on everyday activities. The Center amplifies the development of these technologies for community empowerment, while also serving to generate curricula and open-source frameworks for civic action.

Transforming civic knowledge into civic action is an essential part of democracy. As with investigative journalism, the most delicate and important information can often focus on leaders and institutions that abuse the trust of the communities they serve. By helping to provide people with the necessary skills to process, evaluate, and act upon the knowledge in circulation, civic media ensures the diversity of inputs and mutual respect necessary for democratic deliberation. Some of what emerges here looks like traditional journalism, while some moves in radical new directions.

Convergence Culture Consortium, Daniel T. Peirera, Research Director

The Convergence Culture Consortium (C3) explores the ways the business landscape is changing in response to the growing integration of content and brands across media platforms and the increasingly prominent roles that consumers are playing in shaping the flow of media. C3 connects researchers and thinkers from MIT's Comparative Media Studies program with companies looking to understand new strategies for doing business in a converging media environment. The Consortium provides insights into new ways to relate to consumers, manage brands, and develop engaging experiences, strategies to cut through an increasingly cluttered media environment and benefit from emerging cultural and technological trends. The Consortium aims to expand the role of industry leaders by bridging the gap between academic and market research; partners gain access to both broad-perspective thought leadership and focused analysis on events and campaigns.

^{*} Current for 2009-10 academic year. See http://cms.mit.edu/research/groups.php for current groups.

The Education Arcade, Eric Klopfer, Scheller Career Development Professor of Science Education and Educational Technology, Director; Scot Osterweil, Creative Director

The Education Arcade explores games that promote learning through authentic and engaging play. TEA's research and development projects focus both on the learning that naturally occurs in popular commercial games, and on the design of games that more vigorously address the educational needs of players. Our mission is to demonstrate the social, cultural, and educational potentials of videogames by initiating new game development projects, coordinating interdisciplinary research efforts, and informing public conversations about the broader and sometimes unexpected uses of this emerging art form in education.

Education Arcade projects have touched on mathematics, science, history, literacy, and language learning, and have been tailored to a wide range of ages. They have been designed for personal computers, handheld devices and on-line delivery.

The Education Arcade was established by leading scholars of digital games and education. Researchers at MIT explored key issues in the use of a wide variety of media in teaching and learning through the Games-to-Teach Project, a Microsoft-funded initiative with MIT Comparative Media Studies that ran between 2001 and 2003. The project resulted in a suite of conceptual frameworks designed to support learning across math, science, engineering, and humanities curricula. Working with top game designers from industry and with faculty across MIT's five schools, researchers produced 15 game concepts with supporting pedagogy that showed how advanced math, science and humanities content could be uniquely blended with state-of-the-art game play.

Future Focus

Having sponsored several annual conferences with the Entertainment Software Association at its E3Expo in Los Angeles and having now completed a series of landmark research projects in the field, the Education Arcade looks ahead to help drive new innovations by partnering with educational publishers, media companies, and game developers. Several challenges have severely limited broader development and availability of educational games in the market, including the collapse of the CD-ROM software market, the failure of educational media in retail spaces, strict state adoption requirements, expensive production costs, and limited collaboration across the variety of disciplines needed to create compelling and educationally viable interactive media. By working with partners in a variety of media, the Education Arcade aims to help overcome these formidable challenges by focusing on an initial set of strategically targeted, educationally proven, and expertly developed and produced on-line computer games that will be distributed through desktop computers and mobile devices.

Hyperstudio, Kurt Fendt, Director, Principal Research Associate, Foreign Languages and Literatures

The HyperStudio explores the potential of new media technologies for the enhancement of education and research in the humanities. Its work focuses on questions about the integration of technology into humanities curricula within the broader context of scholarly inquiry and educational practice. The HyperStudio conceptualizes, develops, and deploys innovative media applications in close collaboration with scholars, educators, students, and developers. The HyperStudio was co-sponsored by Foreign Languages & Literatures in close collaboration with the Comparative Media Studies Program and the Literature Faculty. In 2009 Hyperstudio became an independent unit within the School of Humanities, Arts, and Social Sciences.

Singapore-MIT GAMBIT Game Lab, Philip Tan, Executive Director

The Singapore-MIT GAMBIT Game Lab is a five-year research initiative that addresses important challenges faced by the global digital game research community and industry, with a core focus on identifying and solving research problems using a multi-disciplinary approach that can be applied by Singapore's digital game industry. The Singapore-MIT GAMBIT Game Lab focuses on building collaborations between Singapore institutions of higher learning and various MIT departments to accomplish both research and development.

In the past, video games have been developed in Asia and then translated for Western audiences, or vice versa. In today's environment, entertainment is developed for a global market from the outset. GAMBIT creates a space for just such conceptual and cultural cross-pollination, enabling students and researchers from Singapore to collaborate with MIT researchers and game industry professionals in international research projects. Beyond technology development, GAMBIT will also conduct research on the artistic, creative, business and social aspects of games. The initiative also provides Singapore game researchers and professionals with access to cutting-edge technologies, the latest conceptual developments and links to international game development and research communities.

Academia and industry have long had a somewhat problematic relationship. Academics shake their heads at the constraints imposed by the limitations and tastes of the popular market, and professionals in the industry consider the academics' view from the ivory tower to be unrealistic. Industry professionals are also too busy keeping their projects financially afloat to read dry academic papers.

GAMBIT aims to serve as an interpreter between academia and industry by creating playable, real-world demonstrations of the concepts and research being conducted in academia. GAMBIT's game lab provides a place for students, academics and industry professionals to work together to develop games that both expand the boundaries of what is done in games while still keeping a close eye on whether the games are financially feasible and, perhaps more importantly, are fun to play.

In the words of GAMBIT Principal Investigator William Uricchio, "[the lab provides a] unique chance to reflect on games and to push them in new and unexpected directions, whether in terms of emerging technologies and interfaces, diverse cultural vocabularies, or important niches that have simply been neglected in the rush to seize the largest market share."

In short, GAMBIT aims to produce real, commercially and artistically viable games that model new directions for both academia and industry to explore.

Facilities

Upon completion of the Media Lab expansion, CMS relocated to that facility. GAMBIT has lab space at 5 Cambridge Center.

Faculty and Teaching Staff

William Uricchio, PhD, Director, Professor of Comparative Media Studies Ian Condry, PhD, Associate Director, Mitsui Career Development Associate Professor of Japanese Cultural Studies

Steering Committee

James Buzard, PhD, Section Head, Literature, Professor of Literature Shigeru Miyagawa, PhD, Kochi Prefecture-John Manjiro Professor of Japanese Language and Culture, Professor of Linguistics, Section Head, Foreign Languages and Literatures James Paradis, PhD, Program Head, Writing and Humanistic Studies, Robert M. Metcalfe Professor of Writing

Janet Sonenberg, MFA, Section Head, Music and Theater Arts, Professor of Theater Arts, MacVicar Faculty Fellow

Professors

Vivek Bald, PhD, Assistant Professor of Writing and Digital Media

Christopher Capozzola, PhD, Associate Professor of History

Beth Coleman, PhD, Assistant Professor of Writing and New Media

Junot Díaz, MFA, Professor of Writing

Thomas F. DeFrantz, PhD, Class of 1948 Professor of Theater Arts

Peter Donaldson, PhD, Professor of Literature

Mary Fuller, PhD, Associate Professor of Literature

Stefan Helmreich, PhD, Associate Professor of Anthropology

Diana Henderson, PhD, Professor of Literature, MacVicar Faculty Fellow

Alvin Kibel, PhD, Professor of Literature

Eric Klopfer, PhD, Associate Professor of Education, Director, Teacher Education Program

Nick Montfort, PhD, Associate Professor of Digital Media

Jeffrey S. Ravel, PhD, Associate Professor of History

Jay Scheib, MFA, Associate Professor of Theater Arts

Hanna Rose Shell, PhD, Assistant Professor of Science, Technology, and Society

Irving Singer, PhD, Professor of Philosophy

David Thorburn, PhD, Professor of Literature, MacVicar Faculty Fellow, Director, MIT Communications Forum

Edward Baron Turk, PhD, Professor of French Studies and Film, John E. Burchard Professor of Humanities

Chris Walley, PhD, Associate Professor of Anthropology

Jing Wang, PhD, S. C. Fang Professor of Chinese Language and Culture

Lecturers

Edward Barrett, PhD, Senior Lecturer in Writing

Ellen Crocker, MA, Senior Lecturer in German

Gilberte Furstenberg, Agrégation, Senior Lecturer in French

Wyn Kelley, PhD, Senior Lecturer in Literature

Martin Marks, PhD, Senior Lecturer in Music

Douglas Morgenstern, MA, Senior Lecturer in Spanish

Andrea Walsh, PhD, Lecturer in Writing and Humanistic Studies

Visiting Lecturers

Jesper Juul, PhD

Chris Weaver, MS

Research Staff

Kurt Fendt, PhD

Scot Osterweil, BA, Research Director, The Education Arcade

Daniel Pereira, BA, Research Director, Convergence Culture Consortium

Philip Tan, MS, Executive Director, Singapore-MIT GAMBIT Game Lab

Postdoctoral Associates

Joshua Green, PhD Doris Rusch, PhD

Sources:

http://web.mit.edu/catalog/degre.human.compa.html http://cms.mit.edu/

Appendix 2.6: MIT Media Lab (Media Arts and Sciences), School of Architecture and Planning

Background

At the Media Lab, the future is lived, not imagined. In a world where radical technology advances are taken for granted, Media Lab researchers design technologies for people to create a better future.

The idea for the Media Lab came into being in 1980 by Professor Nicholas Negroponte and former MIT President and Science Advisor to President John F. Kennedy, Jerome Wiesner. The Lab grew out of the work of MIT's Architecture Machine Group, and remains within MIT's School of Architecture and Planning.

The Media Lab opened the doors to its I.M. Pei-designed Wiesner Building in 1985, and in its first decade was at the vanguard of the technology that enabled the "digital revolution" and enhanced human expression: innovative research ranging from cognition and learning, to electronic music, to holography. In its second decade, the Lab literally took computing out of the box, embedding the bits of the digital realm with the atoms of our physical world. This led to expanded research in wearable computing, wireless "viral" communications, machines with common sense, new forms of artistic expression, and innovative approaches to how children learn.

Celebrating its 25th year in 2010, the MIT Media Laboratory, under the direction of Frank Moss (MIT PhD, 1977) from 2006 to 2011, continues to check traditional disciplines at the door. Future-obsessed product designers, nanotechnologists, data-visualization experts, industry researchers, and pioneers of computer interfaces work side by side to tirelessly invent—and reinvent—how humans experience, and can be aided by, technology. In addition to its focusing on "human adaptability"—work ranging from initiatives to treat conditions such as Alzheimer's disease and depression, to sociable robots that can monitor the health of children or the elderly, the lab continues to develop new technologies for artistic expression and creation, particularly in the research groups identified below. The MIT Media Lab exemplifies the advancement of research through art and design and is internationally renowned for pioneering this practice.

Undergraduate Study

The Program in Media Arts and Sciences is a graduate degree program only. MIT undergraduates may become involved with Media Lab work through a special Freshman-Year Program that emphasizes project-oriented work or through The Undergraduate Research Opportunities Program (UROP).

Students in the freshman program attend mainstream lectures for core freshman subjects but take recitations led by Media Lab researchers and faculty. The MAS alternative freshman-year program enrolled 25 students in 2007–2008 (35 students applied to the program, and a lottery was held). These students participated in weekly Media Lab tutorial/laboratory sessions connected with two core freshman subjects, pursued Media Lab UROP projects, and took two MAS undergraduate subjects on design and research, one of which is an option for satisfying part of the undergraduate Communication Requirement. The program, a first step toward a greater MAS presence in undergraduate education, has also turned out to be a successful "feeder" program for graduate students: the current MAS graduate student body includes three former freshman-year program participants.

UROP represents the largest undergraduate presence at the Media Lab. More than 200 undergraduates

from across the Institute participate in a wide variety of research projects, with many of these students pursuing their undergraduate theses under MAS faculty supervision. In addition, the MAS program offered five undergraduate subjects, and three MAS faculty and/or senior staff members conducted freshman seminars or served as freshman advisors.

Graduate Study Master of Science in Media Arts and Sciences PhD in Media Arts and Sciences

Unlike other laboratories at MIT, the Media Laboratory comprises both a degree-granting graduate Program in Media Arts and Sciences (MAS) and a highly innovative research program focused on inventing a better future through creative applications of innovative digital technologies.

In addition to supervising MAS graduate students, MAS faculty and research staff collectively advised and supported eight graduate students from other MIT departments and programs, including the departments of Architecture, Electrical Engineering and Computer Science, Physics, Mechanical Engineering, and Materials Science and Engineering, as well as the Biological Engineering Division and the Harvard-MIT Division of Health Sciences and Technology.

Source: President's Report and Media Lab website

Programs

Research Groups (related to art and design) Affective Computing, Rosalind Picard, Director

The Affective Computing research group aims to bridge the gap between computational systems and human emotions. Their research addresses machine recognition and modeling of human emotional expression, machine learning of human preferences as communicated by user affect, intelligent computer handling of human emotions, computer communication of affective information between people, affective expression in machines and computational toys, emotion modeling for intelligent machine behavior, tools to help develop human social-emotional skills, and new sensors and devices to help gather, communicate, and express emotional information.

Camera Culture, Ramesh Raskar, Director

The Camera Culture group is building new tools to better capture and share visual information. What will a camera look like in ten years? How should we change the camera to improve mobile photography? How will a billion networked and portable cameras change the social culture? The Camera Culture groups exploits unusual optics, novel illumination, and emerging sensors to build new capture devices and develop associate algorithms.

Design Ecology, David Small, Director [through 2009-10 academic year]

Design Ecology is the study of malleable design that is aware of and can seamlessly react to changing environments. This new approach to design will enhance understanding, enable creativity, and ease interactions with the technological environment. The relationship with information should be appropriately situated in both spatial and social contexts; thus, while traditional design methods focus on single products and users, the Design Ecology group believes that looking at the interplay between multiple people and multiple devices will yield significant results. To this end, they create visual communication that incorporates new display and computational technologies, novel software techniques, and perceptual and cognitive issues.

Fluid Interfaces, Patti Maes, Director

The Fluid Interfaces research group is radically rethinking ways to interact with digital information and applications. They design interfaces that are more intuitive, and better integrated in our daily physical lives. The group investigate ways to augment the everyday objects and spaces, making them responsive to actions. The resulting augmented environments offer opportunities for learning and interaction and ultimately for enriching lives.

Hi-Low Tech, Leah Buechley, Director

The High-Low Tech group integrates high and low technological materials, processes, and cultures. Their primary aim is to engage diverse audiences in designing and building their own technologies by situating computation in new cultural and material contexts, and by developing tools that democratize engineering. The group believes that the future of technology will be largely determined by end-users who will design, build, and hack their own devices, and their goal is to inspire, shape, support, and study these communities. To this end, they explore the intersection of computation, physical materials, manufacturing processes, traditional crafts, and design.

Lifelong Kindergarten, Mitchell Resnick, Director

The Lifelong Kindergarten group is sowing the seeds for a more creative society. They develop new technologies that, in the spirit of the blocks and fingerpaint of kindergarten, expand the range of what people design, create, and invent—and what they learn in the process. The ultimate goal is a world full of playfully creative people, who are constantly inventing new possibilities for themselves and their communities.

Mediated Matter, Neri Oxman, Director

The Mediated Matter group explores how digital design and fabrication technologies mediate between matter and environment to radically transform the design and construction of objects, buildings, and systems. Oxman's goal is to enhance the relationship between the built and the natural environments by employing design principles inspired by nature and implementing them in the invention of digital design technologies. Areas of application include product and architectural design, as well as digital fabrication and construction.

Music, Mind and Machine, Barry L. Vercoe, Director [through 2009-10 academic year] The Music, Mind and Machine group is working towards bridging the gap between the current generation of audio technologies and those that will be needed for future interactive media applications.

Object-Based Media, V. Michael Bove, Director

This group explores how the distribution of computational intelligence throughout video and audio communication systems can make a richer connection between the people at each end. In particular, they seek to build systems which represent content as a collection of meaningful objects accompanied by procedural metadata. To support this vision, they develop not only applications and tools, but also novel content-understanding methods and hardware/software systems.

Opera of the Future, Tod Machover, Director

The Opera of the Future group (also known as Hyperinstruments) explores concepts and techniques to help advance the future of musical composition, performance, learning, and expression. Through the design of new interfaces for both professional virtuosi and amateur music-lovers, the development of new techniques for interpreting and mapping expressive gesture, and the application of these technologies to innovative compositions and experiences, they seek to enhance music as a performance

art, and to develop its transformative power as counterpoint to our everyday lives. The scope of research includes musical instrument design, concepts for new performance spaces, interactive touring and permanent installations, and "music toys." It ranges from extensions of traditional forms to radical departures, such as the Brain Opera and Toy Symphony.

Personal Robots, Cynthia Breazeal, Director

Robots are an intriguing technology that can straddle both the physical and social world of people. Inspired by animal and human behavior, the group's goal is to build capable robotic creatures with a "living" presence, and to gain a better understanding of how humans will interact with this new kind of technology. People will physically interact with them, communicate with them, understand them, and teach them, all in familiar human terms. Ultimately, such robots will possess the social savvy, physical adeptness, and everyday common sense to partake in people's daily lives in useful and rewarding ways.

Responsive Environments, Joseph A. Paradiso, Director

The Responsive Environments group explores how sensor networks augment and mediate human experience, interaction and perception, while developing new sensing modalities and enabling technologies that create new forms of interactive experience and expression. Current research encompasses the development and application of various types of sensor networks, energy harvesting and power management, and the technical foundation of ubiquitous computing. The work operates in diverse application areas, including wearable computing and interactive media.

Smart Cities, William J. Mitchell, Director [through 2009-10 academic year]

The research of the Smart Cities group focuses on intelligent, sustainable buildings, mobility systems, and cities. It explores the application of new technologies for enabling urban energy efficiency and sustainability, enhanced opportunity and equity, and cultural creativity. The group is particularly concerned with the emerging roles of networked intelligence in fabrication and construction, urban mobility, building design and intelligently responsive operation, and public space. It takes a broadly multidisciplinary approach, not constrained by traditional boundaries.

Software Agents, Henry A. Lieberman, Director

The Software Agents group investigates a new paradigm for software that acts like an assistant to a user of an interactive interface rather than simply as a tool. While not necessarily as intelligent as a human agent, agent software can learn from interaction with the user, and proactively anticipate the user's needs. The Software Agents group builds prototype agent systems in a wide variety of domains, including text and graphic editing, web browsing, e-commerce, information visualization, and more.

Tangible Media, Hiroshi Ishii, Director

The Tangible Media group's focus is on the design of seamless interfaces between humans, digital information, and the physical environment. People have developed sophisticated skills for sensing and manipulating physical environments. However, most of these skills are not employed by traditional GUIs (Graphical User Interfaces). The Tangible Media group is designing a variety of "tangible interfaces" based on these skills by giving physical form to digital information, seamlessly coupling the dual worlds of bits and atoms. The goal is to change the "painted bits" of GUIs to "tangible bits," taking advantage of the richness of multimodal human senses and skills developed through interaction with the physical world.

Centers

Center for Future Civic Media, Chris Csikszentmihalyi, Michael Resnick, Principal Investigators (A collaboration between MIT Media Lab and CMS)

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Center for Future Storytelling, V. Michael Bove, Ramesh Raskar, and Cynthia Breazeal, Directors

Storytelling is fundamental to being human: it's how humans share our experiences, learn from the past, and imagine the future. With the establishment of the Media Lab's Center for Future Storytelling, the Media Lab, together with Plymouth Rock Studios, is rethinking what "storytelling" will be in the 21st century. The Center will take a dynamic new approach to storytelling, developing new creative methods, technologies, and learning programs that recognize and respond to the changing communications landscape. The Center will examine ways for transforming storytelling into social experiences, creating expressive tools for the audience and enabling people from all walks of life to embellish and integrate stories into their lives, making tomorrow's stories more interactive, creative, democratized, and improvisational. It will seek to bridge the real and the virtual, creating tools for both adults and children that allow stories to incorporate synthetic characters and actors, such as robots. It will also pioneer innovative imaging technologies, from new systems for movement capture, to "morphable" movie studios that allow one physical space to represent a variety of settings.

Facilities

The expansion of The MIT Media Lab, completed in Fall 2009 and fully occupied in Summer 2010, brings together the Center for Advanced Visual Studies, Visual Arts programs (merged as of July 1, 2009) and the Media Arts and Sciences programs in the School of Architecture and Planning, the Comparative Media Studies program in the School of Humanities, Arts and Social Sciences, and the List Visual Arts Center.

Faculty and Research Staff

Frank Moss, PhD, Director (2006-2011), Professor of the Practice, Jerome B. Wiesner Professor of Media Technology

Hiroshi Ishii, PhD, Associate Director, Muriel R. Cooper Professor of Media Arts and Sciences

Faculty and Research Staff (related to art and design)

Michael Bove, PhD, Principal Research Scientist

Edward S. Boyden III, PhD, Assistant Professor of Media Arts and Sciences, Benesse Career Development Assistant Professor of Research and Education

Leah Beuchley, PhD, Assistant Professor, AT&T Career Development Professor of Media Arts and Sciences

Cynthia Breazeal, ScD, Associate Professor, LG Career Development Professor of Media Arts and Sciences

Chris Csikszentmihalyi, Research Scientist

Peter Gershenfeld, PhD, Professor of Media Arts and Sciences

Hugh Herr, PhD, Associate Professor of Media Arts and Sciences

Joseph Jacobson, PhD, Associate Professor of Media Arts and Sciences

Henry Lieberman, Research Scientist

Tod Machover, Professor of Music and Media

Pattie Maes, PhD, Associate Program Head, Associate Professor of Media Technology

William J. Mitchell, MS, Alexander W. Dreyfoos, Jr (1954) Professor, Professor of Architecture and Media Arts and Sciences

Nicholas Negraponte, MArch, Professor of Media Technology

Neri Oxman, PhD, Assistant Professor, Sony Corporation Career Development Professor of Media Arts and Sciences

Joseph Paradiso, PhD, Associate Professor, Sony Corporation Career Development

Professor or Media Arts and Sciences

Alex Pentland, PhD, Toshiba Professor of Media Arts and Sciences

Rosalind W. Picard, PhD, Professor of Media Arts and Sciences

Ramesh Raskar, PhD, Associate Professor, NEC Career Development Professor of Media Arts and Sciences

Mitchel Resnick, PhD, Head, Program in Media Arts and Sciences, LEGO Papert

Professor of Learning Research

Deb Roy, PhD, Associate Professor of Media Arts and Sciences

David Small, PhD, Associate Professor of Media Arts and Sciences, Asahi Broadcasting Corporation Career Development Associate Professor Research in Education

Barry Vercoe, PhD, Professor, Media Arts and Sciences

Sources:

http://web.mit.edu/catalog/degre.archi.media.html

http://media.mit.edu

http://cfs.media.mit.edu/

Tod Machover, Professor of Music and Media, MIT Media Lab

Appendix 2.7: List Visual Arts Center (LVAC), Office of the Associate Provost

Background

Just as MIT pushes at the frontiers of scientific inquiry, it is the mission of the List Visual Arts Center to explore challenging, intellectually inquisitive, contemporary art making in all media.

The collections distinguish themselves from conventional museum holdings not only by the focus on contemporary art, but also by public visibility. The Institute itself has become the museum, with works of art sited either outdoors or in offices, lobbies, libraries, corridors, and conference rooms, thus becoming integrated into daily life and working situations of those affiliated with MIT and of MIT's many visitor populations—visiting scholars, students, parents, alumni, and friends.

History

While the first permanently installed works of art at MIT were the decorative murals painted in 1924 and 1930 by Edwin H. Blashfield for the Walker Memorial (Building 50), MIT did not begin actively collecting and exhibiting art until decades later. At that time, former MIT president James Killian, with former Director of Libraries and, later, Dean of Humanities and Social Science, John Burchard, provided the impetus for the establishment of a visual arts program on campus.

Administration

The List Visual Arts Center is an administrative department of MIT, under the auspices of Associate Provost Philip Khoury, who also oversees the MIT Museum and the Office of the Arts.

The List was accredited by the American Association of Museums in 1993 and reaccredited in 2004. The List belongs to the American Association of Museums and the Contemporary Art Museum Directors Association.

Collections

Public Art Collection

MIT's noted public art began to take shape in 1961 when Mr. and Mrs. Samuel A. Marx commissioned MIT's first outdoor sculpture, Dimitri Hadzi's bronze *Elmo* (MIT). This work inspired many subsequent gifts that have furnished MIT with numerous outstanding examples of work by major artists.

In 1963, funds given by Mr. and Mrs. Eugene McDermott made possible the commission of MIT's signature sculpture, Alexander Calder's *La Grande Voile (The Big Sail)*, the centerpiece of McDermott court. Additional gifts, loans, and purchases have expanded the collection over the years. It is international in scope, and contains works in a wide variety of materials and techniques.

Several major bronzes by Jacques Lipchitz, given by the artist's wife, Yulla Lipchitz, are located in the Hayden Library courtyard. Among the works that grace the campus of the Sloan School are a rare cast concrete sculpture by Pablo Picasso, a steel sculpture by Bernar Venet, and a painted metal wall relief by Frank Stella. Michael Heizer's geometric stone sculpture *Guennette* in Killian Court is on long-term loan from the Metropolitan Museum of Art in New York. Other notable gifts include Jennifer Bartlett's enameled steel painting *Overhill Road, Shawnee Mission* (1977), located in the Warehouse graduate residence (Building NW 30), and two large bronze reclining figures by Henry Moore, one located in Killian Court, and the other at the Wiesner Building (Building E15) plaza.

Percent-for-Art Program

Commissions through MIT's Percent-for-Art Program, many of which are accessible to the public, also enrich MIT's Public Art Collection. Percent-for-Art commissions include Matthew Ritchie's three-part installation in the Zesiger Sports and Fitness Center, Sol LeWitt's polychrome terrazzo floor in the new Green Center for Physics (Building 6C), and Sarah Sze's sculpture for the façade and lounges at Sidney-Pacific residence, among many others.

Permanent Collection

The List's permanent collection was established in 1951 with a donation of 26 paintings and drawings from the Standard Oil Company of New Jersey. Since there was no museum to house the works at the time, they were exhibited around campus, and thus began MIT's unique tradition of "distributed art." Today the permanent collection includes over 1,000 works of art hung in offices, laboratories, and living spaces around campus. This unusual display policy was expanded in 1966 with the creation of the Student Loan Program, an initiative of the MIT Art Committee, predecessor of the Council for the Arts.

Student Loan Art Collection

Through this popular annual loan program, administered by the List Visual Arts Center, individual students and student groups may borrow original works of art from the collection for their private rooms and communal spaces by means of a unique exhibition and lottery system. Approximately 500 framed prints, photographs and multiples by leading artists are made available for loan each September after Labor Day. During the course of an exhibition in the main galleries, MIT students may view the available artworks and register their top three preferences for a free lottery. Generally, close to 1,000 entries are received--therefore entrants have about a two in five chance of receiving one of three choices. Student appreciation of this special program can be seen in the way works are returned in good condition at the end of the academic year.

The collection is comprised of the Alan M. May Fund (1957), the Catherine N. Stratton Collection of Graphic Arts, established in 1966, the List Student Loan Collection, established in 1977, and the Ronald A. Kurtz Student Loan Collection, established in 1985. Approximately 15 new works are added to the collection annually to expand the breadth of its offerings. The previous year's purchases are exhibited in the Stratton Student Center (Building W20, third floor) for one academic year, after which they are moved to the active collection for borrowing.

Exhibitions

MIT List Visual Arts Center

The MIT List Visual Arts Center has garnered an international reputation for the several changing exhibitions presented each year in galleries located on the first floor of the Wiesner Building (20 Ames St.) on the MIT campus. These thematic and solo exhibitions of emerging and established artists are usually accompanied by an illustrated catalogue and receive extensive press coverage. Many travel to other art spaces around the world.

Media Test Wall

The Media Test Wall is an ongoing series of contemporary video exhibitions located in the Whitaker Building (21 Ames St., Bldg. 56), on view 24 hours a day, 7 days a week.

The Dean's Gallery

Three exhibitions per year in The Dean's Gallery at the MIT Sloan School of Management highlight works from the LVAC Collection.

Programs

Tours

Gallery exhibition tours are offered during regular gallery hours. These tours are led by curatorial and education staff. Group tours of the MIT Public Art Collection are also available.

Artist/Curator Talks and Lectures

Over the years the List Center has presented notable and renowned guest artists, curators, and scholars in a broad range of public forums including: lunch time gallery talks, exhibition opening panel discussions, and stand-alone lectures.

Film Nights

Film programs presented at the MIT List Visual Arts Center are organized by John Gianvito, Assistant Professor in the Department of Visual & Media Arts at Emerson College. Many, but not all films presented are thematically linked to issues and perspectives raised by exhibitions.

Lecture Series

The Leroy and Dorothy Lavine Lecture Series was established to honor the Lavines, prominent Boston art patrons and long time supporters of the MIT List Visual Arts Center. The Leroy and Dorothy Lavine Lectures bring to the Boston community distinguished art world figures for talks on modern and contemporary art.

Artist-in-Residence Program

The Artist in Residence Program enables contemporary artists to work with MIT's most remarkable asset—the extraordinary intellectual richness of its students and faculty. The resulting program initiates extensive contact between artists and traditionally non-arts community members, scientists, and engineers as well as humanists and social scientists. Residency activities may develop into a project, such as a new work, exhibition, or broadcast, or the artist and MIT constituents may want to work on an idea or project that will not manifest itself in an on-campus presentation.

The Max Wasserman Forum on Contemporary Art

The annual Max Wasserman Forum on Contemporary Art was established in memory of Max Wasserman (MIT Class of 1935), a founding member of the Council for the Arts at MIT. This public forum is funded through the generosity of the late Jeanne Wasserman, and addresses critical issues in contemporary art and culture through the participation of renowned scholars, artists, and arts professionals. A recent Wasserman Forum, "A Matter of Time: Feedback and Immersion in Video Installation Art," featured panelists Stan Douglas, Thomas Y. Levin, Diana Thater, and moderator Christopher Eamon, in a discussion on the evolution of video art over its first three decades.

Facilities

LVAC Gallery and Offices

The List Visual Arts Center is housed in a handicapped-accessible, I.M. Pei-designed building constructed in 1985. Public spaces include three galleries, entry area, an atrium for receptions, a 189-seat theater shared with other MIT programs, and restrooms. Non-public spaces include offices, conference room, art storage, and general storage.

Off-site Storage

With a collection of nearly 3,000 works to oversee, on-site storage is supplemented by art storage in several secure locations in the area.

Staff

Jane Farver, Director (retired June 2011)
David Freilach, Assistant Director
Patricia Fuller, Curator of Public Art (retired July 2010)
Mark Linga, Educator/Public Relations Officer
John Osorio-Buck, Gallery Assistant
Tim Lloyd, Gallery Manager
Barbra Pine, Administrative Assistant
John Rexine, Fine Arts Registrar
João Ribas, Curator
Alise Upitis, Curator of Public Art (beginning August 2010)
Gallery Attendants (6)

Appendix 2.8: MIT Museum, Office of the Associate Provost

Background

The mission of the MIT Museum is to engage the wider community with MIT's science, technology and other areas of scholarship in ways that will best serve the nation and the world in the 21st century. The MIT Museum fulfills this mission by: collecting and preserving artifacts that are significant in the life of MIT; creating exhibits and programs that are firmly rooted in MIT's areas of endeavor; engaging MIT faculty, staff and students with the wider community. The Museum stands alone among university museums in its focus on the impact on society of the research, teaching and scientific innovations of its parent institution.

History

Founded in 1971 as the MIT Historical Collections by Warren Seamans, the MIT Museum's original mandate was the collection and preservation of historical artifacts then scattered throughout MIT. Renamed MIT Museum in 1980 by the MIT Corporation Executive Committee, it began to develop exhibits and educational programs based on the Museum's MIT focused collections. The Museum was designed to meet the needs and interests of the MIT community as well as society at large.

Administration

The MIT Museum is an administrative department of MIT, under the auspices of Associate Provost Philip Khoury, who also oversees the List Visual Arts Center and the Office of the Arts.

The Museum was accredited by the American Association of Museums in 1984 and reaccredited in 2002. The MIT Museum belongs to the American Association of Museums, Association of Science and Technology Centers, Museum Computer Network, New England Museum Association, International Confederation of Architectural Museums, and the International Council of Maritime Museums.

Collections

Architecture and Design

MIT's School of Architecture (conceived in 1864 and first admitted students in 1868) is the oldest in the country, and the Museum's Architecture and Design Collection is one of the country's most important for the study of architectural instruction and practice.

Hart Nautical

The Francis Russell Hart Nautical Collections are one of the oldest and most extensive archives of nautical technology in the US. The collections date from the 16th century to recent cutting edge ocean technologies. The collections primarily document design and construction by the leading ship builders, marine engineers and yacht designers of the past 150 years.

Holography

The collection of holograms is the largest in the world and documents holography since its inception in the late 1940s. The collection includes the archives of New York's Museum of Holography, which chronicle the innovators, ideas and techniques of the medium. This vast collection is searchable via a new on-line collections database.

MIT General Collections

The MIT General Collection is comprised of visual and written material as well as artifacts that record the social and cultural history of MIT from its founding to the present day.

Science and Technology

The MIT Museum Science and Technology Collection preserves artifacts of historical interest and significance that document MIT's role in the history of modern science and technology. Best known are the negatives and historic artifacts of Professor Harold E. Edgerton, the Charles Stark Draper Laboratory Collection documenting the pioneering work of MIT in the field of inertial guidance and navigation, and the Robotics collection, which includes the Minsky Arm, Cog, and Kismet. In addition, electrical and electronic devices are among the highlights of the collection, ranging from components of Project Whirlwind to the ingenious mechanical toys of the late Professor Claude Shannon.

Exhibitions

The MIT Museum presents an extensive array of exhibitions and displays, providing a window into MIT's fascinating world of science and technology. The mission of the Museum is to share the creative energy of MIT, and to stimulate an understanding and appreciation of the meanings of scientific and technological innovation in the modern world.

Recently expanded by 5,000 square feet, the Museum's galleries present ongoing and changing exhibitions on architecture and design, oceanography and ship design. A campus-wide initiative entitled Public Engagement with Research at MIT (PERMIT) presents current research in engineering, science and technology.

Programs

Cambridge Science Festival

The Cambridge Science Festival, presented by the MIT Museum, takes place each April for nine to ten days and features around 200 events. The Cambridge Science Festival showcases Cambridge as an internationally recognized leader in science and technology. A multifaceted, multicultural event modeled on art, music and movie festivals, the event makes science accessible, interactive and fun, highlighting the impact of science and technology in everyone's life. Now planning its fourth year, the Cambridge Science Festival has spawned science festivals in several US cities, and the Museum recently received an NSF grant to replicate the model in other cities around the country.

Soap Box

Soap Box is a series of salon-style, early evening conversations with scientists and engineers who are making the news that really matters. Soap Box is a public forum for debate about important ideas and issues in science and technology.

Friday After Thanksgiving Chain Reaction

The Friday After Thanksgiving with kinetic sculptor Arthur Ganson is a grand event in which participants link their mini chain reactions together, forming one mega chain reaction that is set off at the end as the event's thrilling culmination.

For Families and Young People

Throughout the school year the Museum Programs staff produces interesting hands-on workshops and drop-in activities for middle and high school students and their families.

Facilities

The MIT Museum is located at 265 Massachusetts Avenue. There are two floors that are used by the Museum as both gallery space and administrative space.

Galleries

The Mark Epstein Innovation Gallery (ground floor 265 Massachusetts Avenue)

Compton Gallery (Building 10)

Hart Nautical Galleries (Building 5)

Koch Gallery (Building 68)

Wolk Gallery (Building 7), School of Architecture and Planning, programmed by the Museum's Curator of Architecture and Design

Staff

John Durant, PhD, Director, Adjunct Porfessor of Science, Technology and Society Mary Leen, Associate Director

Jon Markowitz Bijur, Education Coordinator

Brenda Blais, Administrative Assistant to Director of Cambridge Science Festival

Frank Conahan, Curatorial Associate, Hart Nautical & MIT General Collections

P.A. d'Arbeloff, Director, Cambridge Science Festival

Deborah Douglas, Curator, Science & Technology

Allan Doyle, Director of Technology

Alex Fiorentino, Exhibition Coordinator, Koch Institute Public Gallery

Jeffrey Fitzgerald, Visitor Services Assistant

Kurt Hasselbalch, Curator, Hart Nautical Collections

Laura Knott, Curatorial Associate, Architecture & Design Interim Exhibitions Coordinator

Claudia Majetich, Visitor Services & Functions Manager

Robin Meisner, Director of Education and Programs (through December 2010)

Josie Patterson, Director of Public Relations and Marketing

Katherine Porter, Administrative Assistant, Director's Office

Erika Reinfeld, Education Coordinator

Seth Riskin, Manager, Emerging Technologies and Holography/Spatial Imaging Initiative

Matt Rochon, Weekend Visitor Services Assistant

Don Stidsen, Exhibitions Manager

Alan Sugerman, Visitor Services Assistant

Gary Van Zante, Curator, Architecture & Design

Ariel Weinberg, Curatorial Associate, Science & Technology

Ben Wiehe, Science Festival Alliance Manager

Joan Whitlow, Registrar & Collections Manager

Appendix 2.9: Office of the Arts, Office of the Associate Provost

Background

Under the direction of the Associate Provost, the Office of the Arts supports and promotes arts activities on campus through Arts Communication, the Council for the Arts at MIT, Artist-in-Residence and Student programs, which include the extra-curricular classes and facilities in traditional visual arts offered by the Student Art Association. The Director of Arts Initiatives, the List Visual Arts Center and the MIT Museum also report to the Associate Provost.

Programs

Arts Communications

Arts Communication is a central source of information on arts events and activities at MIT and works to increase awareness of the arts at MIT both within and outside the Institute. Reporting to the Director of Arts Initiatives, Arts Communication collects and publishes up-to-date information on MIT arts events and exhibitions and maintains the Arts at MIT web site. Arts Communication also offers a number of communication- and promotion-related services to the MIT community, including assistance with press releases, media relations, and mailing lists.

Council for the Arts

The Council for the Arts is a volunteer group of alumni and friends established to support the visual, literary, and performing arts at the Massachusetts Institute of Technology. The Council has supported projects as visible as the sculpture collection gracing the campus and as pragmatic as new dance floors. Members endow annual arts awards and a grants program that has supported over 2,000 art projects. They underwrite student membership to Boston's Museum of Fine Arts, admission to the Boston Institute of Contemporary Art, the Harvard Art Museum, the Photographic Resource Center, and the Boston Symphony Orchestra's College Card Program. The Council also provides tickets to BMOP (Boston Modern Orchestra Project) and the Boston Chamber Music Society concerts. The Council subsidizes 50 percent of American Repertory Theater's Student Pass Program for MIT students and distributes over 300 free tickets to local performances to MIT students annually. The Grants Program offers funding for projects created by students, staff and faculty. The Council founded the Arts Scholars Program to nurture a community of student artists at MIT.

The Council administers the Laya and Jerome B. Wiesner Student Art Awards, the Louis Sudler Prize, presented annually to MIT students and/or student groups, and the Harold and Arlene Schnitzer Prize in the Visual Arts.

Student Programs

The Student & Artist-in-Residence Program is a branch of the Office of the Arts designed to connect students to the arts in and around MIT. The Arts Scholars are a group of MIT upperclassmen and graduate students who are active in and committed to the arts at MIT. Students explore the arts through monthly events, workshops, and art shares on and off campus. Scholars also interact with fellow students and distinguished artists through monthly dinners. The Grad Arts Forum encourages interdisciplinary communication among MIT graduate students who are interested in and active in the arts. Through a year-long series of evening forums, graduate students making art can discuss overlapping themes in their work. The Art Representatives are a network of arts ambassadors in MIT dormitories, fraternities, sororities, independent living groups, and graduate departments. Art Reps receive promotional material to build interest and send out information to the rest of the student body about upcoming arts events at MIT.

Artists-in-Residence Program

The MIT Artist-in-Residence (AiR) Program provides students with opportunities to interact with nationally and internationally recognized artists through master classes, lecture-demonstrations, performances and workshops. Designed to promote innovative interdisciplinary work, these residencies offer insight into different cultures and creative ways of approaching familiar problems. There are four endowed residencies: the Abramowitz, Katzenstein, McDermott and Rubin.

Classes for Credit

Freshman Arts Seminar Advising Program. FASAP is a 6-unit seminar allowing freshmen to discover the arts in and around MIT. The class introduces freshmen to many of the rich art resources available to them and gives them the opportunity to meet other freshmen interested in the arts. Additionally, freshmen receive advising from MIT professors, staff, and upperclassmen on academic opportunities in the arts at MIT.

Promoting the Arts through Design (PATD). This 6-unit spring service seminar is designed around a student project to promote a local non-profit arts organization. The projects expose participants to design skills and concepts as well as the process of dealing with clients and the mission and structure of arts organizations. Previous projects have involved collaborations with Green Street Studios and thoughtandmemory.org.

Non-Credit Classes (Student Art Association)

The Student Art Association provides instruction and studio experience in the arts at the novice and intermediate levels in an extensive range of media. The program is designed for MIT students, although all members of the MIT community may participate as space permits. Classes are offered during Fall, IAP, Spring, and Summer.

Exhibitions

Student Mural Competition

Each spring, the Student Mural Project selects one piece of artwork made by an MIT student to be professionally printed and displayed for one year in the Stata Center.

The Harold and Arlene Schnitzer Prize in the Visual Arts

Artwork by the top prize winners is displayed in the Wiesner Art Gallery in the Student Center.

Facilities

The Student Art Association has four studios that serve ceramics, photography, 3D and 2D visual arts and finishing. The studios are open 24 hours a day, every day, throughout the term. The Wiesner Student Art Gallery -- open 24 hours every day -- is located on the second floor of the Student Center. It is curated and maintained through the Student Art Association. The Office of the Arts is located in E15-207.

Staff

Susan Cohen, Director, Council for the Arts at MIT Lynn Heinemann, Senior Editorial Assistant, Arts Communication (through December 2010) Sam Hunter Magee, Coordinator, Student Programs Meg Rotzel, Producer of Artist in Residence and Public Programs Carla Sehbani, Administrative Assistant (through December 2010)

Instructors

Darrell Finnegan, Studio Manager, Ceramics Aimee Belanger, Screen Printing and Drawing Robert Boyer, Ceramics Biyeun Buczyk, Photography John Ellis, Beginning Life Drawing Happy Goethert, Ceramics Stephanie Houston, Ceramics Ewa Herabasz, Oil Painting Valerie Jayne, Watercolor Belle Kuo, Glass Mosaics AJ Liberto, Sculpture and Illustration Chin Lin, Ceramics Qingxiong Ma, Chinese Calligraphy and Painting Marc Mancuso, Ceramics Matthew Mazzotta, Studio Manager, 2D/3D Thery Mislick, Studio Manager, Photography, Finishing John Nikolai, Photography Pell Osborne, Line Storm Animation Jon Proulx, Photography Graham Ramsay, Photography Jess Wheelock, Abstract Acrylic

Source:

http://arts.mit.edu