

Department of Architecture

The Department of Architecture is dedicated to a socially responsible, technologically sophisticated, environmentally sensitive, and culturally engaging vision of architecture. It is distinguished in that it includes within one department the many disciplines required for an architecture curriculum; more significantly, it creates the opportunity for each discipline to have specialized advanced degree programs. We incorporate outstanding research and teaching programs in each of these discipline groups: Architectural Design; Building Technology; Computation; History, Theory, and Criticism; and Visual Arts. Undergraduates can earn a bachelor of science in architecture studies with a concentration in one of five discipline streams and can minor in architecture and history of art and architecture.

The commonly shared attributes of the department that cut across all the discipline groups are our devoted and spirited teaching, the grounding of architecture in both social and material issues, interdisciplinarity, and the remarkable internationalism of faculty, students, teaching, and research. The faculty includes architects, landscape architects, urbanists, building technologists and engineers, historians of art and architecture, artists, and various specialists in areas of architectural research, including computation as it addresses design issues.

The department announced the following promotions: Marilyne Andersen to associate professor without tenure, John Ochsendorf and J. Meejin Yoon to associate professor with tenure, and Rahul Mehrotra and Nader Tehrani to full professor.

New faculty appointed in 2008–2009 were James Wescoat, Aga Khan professor with tenure (effective July 1, 2008); Gediminas Urbonas, associate professor of visual arts without tenure (effective January 1, 2009); and Kristel Smentek, assistant professor of the history of art (effective July 1, 2008). Three additional appointments were made: Philip Freelon, professor of the practice of architecture, promoted from lecturer; Sheila Kennedy, professor of the practice of architecture; and Dennis Shelden, associate professor of the practice of computation and design. A search for a tenure-track position in architectural design concluded with the hiring of William O'Brien Jr., effective July 1, 2009. A search for a tenure-track position in visual arts was approved and will be carried out in 2009–2010.

Increasingly, efforts have been made to make our programs green. Shun Kanda, along with Eran Ben-Joseph (from the Department of Urban Studies and Planning), Adèle Naudé Santos, and Andrew Scott, offered workshops and studios in the summer and fall of 2008 and the spring of 2009 to design prototype housing and sustainable communities in Japan. Yung Ho Chang, together with Dennis Shelden and Tony Ciochetti from the Center for Real Estate, taught a studio on the design of a house that costs \$1,000 (the 1K House) and addressed the issue of energy as well as poverty. John Ochsendorf, Marilyne Andersen, and J. Meejin Yoon prepared a new subject on design and sustainability that will be offered in the fall of 2009. Also worth mentioning is the interdisciplinary nature of these project teams: collaboration has been developed not only between the discipline

groups within the Department of Architecture but between departments as well. In the fall of 2008, the departmental lecture series took on climate change as a theme for the first time.

Another major task in 2008–2009 was the further refinement and implementation of the new Master of Architecture (MArch) core curriculum (discussed in more detail below in the Architectural Design section). In the spring of 2009, the National Architectural Accreditation Board (NAAB) conducted a site visit to review the MArch degree program. Shortly thereafter, the MIT Corporation Visiting Committee conducted its biennial visit. The results of the NAAB review were not available at the time of this writing.

The academic year also witnessed the beginning of the reshaping of the Master of Science in Architecture Studies (SMArchS) degree program. Rahul Mehrotra was appointed director of the program and co-chair of the SMArchS committee with Terry Knight. With the new leadership, a number of changes were made immediately, including alterations of the content and structure of the colloquium, organization of the thesis review, and SMArchS participation in open houses, among others. Included in this report is a separate section on the SMArchS program.

Numerous academic events were organized by the discipline groups and programs, for example the water workshop and the history and practice symposium by the Aga Khan Program for Islamic Architecture and the first annual alumni symposium by the computation group.

The discussion below is organized by discipline group, followed by individual topics that cross discipline areas.

Architectural Design

Faculty and Staff

Personnel in Architectural Design (AD) were professors Julian Beinart, Yung Ho Chang, Charles Correa (on leave), Michael Dennis, Adèle Naudé Santos, Anne Spirn (joint appointment with the Department of Urban Studies and Planning, on leave, spring), Jan Wampler, and James Wescoat; associate professors Alexander D'Hooghe, Mark Goulthorpe (on leave), Rahul Mehrotra, Andrew Scott, Nader Tehrani, and J. Meejin Yoon; assistant professor Ana Miljacki; senior lecturer Shun Kanda; professor of the practice Sheila Kennedy (spring); professor emeritus William Porter; principal research associate Reinhard Goethert; lecturers Dan Chen, Philip Freelon, Bill Hubbard Jr., Alan Joslin (fall), Simon Kim (fall), Jeannette Kuo (fall), Joel Lamere, Rebecca Luther (fall), Nondita Mehrotra, Paul Paturzo (Independent Activities Period [IAP]), Corinne Ulmann (fall), Angela Watson (fall, IAP), and Elizabeth Whittaker (spring); visiting professors Angelo Bucci (fall) and Finn Geipel (fall); visiting associate professor Weijen Wang (fall); and technical instructor Christopher Dewart. Rahul Mehrotra and Tehrani were promoted to full professor, effective July 1, 2009. Yoon was promoted to associate professor with tenure, effective July 1, 2009. Chang served as director of the design faculty.

Directions

Restoring the delivery of the core knowledge and skills of architecture to students has been the focus of the design group for the last several years. In the meantime, concerns relating to technology and the city have emerged as the defining issues for architecture at MIT. One of the reasons for this development is that, in recent decades, climate change and rapid urbanization have had the most impact on the living environment. The other is that technological research and urban studies have traditionally been strengths of MIT. In contrast, a more in-depth exploration of technology and the city may give the architectural programs at MIT their identity.

MArch Core Curriculum Reform

With the above-mentioned general directions and under the leadership of Tehrani, the design faculty has re-examined and re-structured the first year of the MArch program.

Studio design exercises were reconfigured to address fundamental issues in architecture, such as space, program, site, geometry, and material in the first semester and to take on complex programs and basic structural concepts to arrive at a comprehensive building design as the end product in the second semester.

The computation aspect of the skills subject has been greatly enhanced. The skills subject and the studio are far more coordinated than before.

A subject that deals with the analysis of precedents of buildings and practices has been introduced.

A free-hand drawing course was reinstated. For the academic year 2009–2010, we will further develop the second-year core curriculum. The third-semester studio will concentrate on urbanism, and the fourth on technology; the latter will also address environmental issues.

Faculty Activities and Achievements

Architectural Design faculty members who also practice as architects include Beinart, Chang, Correa, Dennis, D'Hooghe, Freelon, Goulthorpe, Kanda, Kennedy, Mehrotra, Miljacki, Porter, Santos, Scott, Tehrani, Wampler, and Yoon. Faculty members lectured widely, entered and placed in competitions, conducted research, and served as guest critics and jurors. They were well represented in the architecture and popular media. Selected achievements are as follows.

Chang published a book on cultural policy in China based on the Conversation on Art and Architecture series that documented a discussion among Chang, artist Ai Weiwei, and art collector Uly Sigg. He also published an interview in *Mark* magazine illustrated by MIT students. In his practice, he won the international competition to design a 200-meter skyscraper for Shenzhen Television in Shenzhen, China. Dennis's firm, Michael Dennis & Associates, won the Boston Society of Architects Honor Award for Planning Excellence for the Middlebury College Campus Master Plan. D'Hooghe and Tehrani won a design competition for their proposal for Saemangeum Bay, Korea, reputedly the

world's largest landfill. D'Hooghe won additional competitions in Belgium and New York City; exhibited work in several venues, including the Shenzhen Biennial; and launched a research group in architectural urbanism, Platform for a Permanent Modernity.

Freelon, as a partner in Freelon Adjaye Bond/SmithGroup, was awarded the design commission for the Smithsonian National Museum of African American History and Culture in Washington, DC, and, with partner HOK, the design of the Civil Rights Museum in Atlanta. Among other awards, Freelon was the recipient of the 2009 American Institute of Architects (AIA) Thomas Jefferson Award for Public Architecture. Goulthorpe was on professional leave for the academic year as technical advisor for CChange Investments. Kennedy received a United States Artists Congressional Award for her achievement in design for clean energy and an Energy Globe Award for the Portable Light Project in Mexico, as well as significant grants to continue her work in smart materials. She was a finalist for Denmark's prestigious INDEX Award. Her firm received major commissions from the University of Pennsylvania, Harvard University, and the city of Birmingham, AL.

Larson received major grants from the Finnish National Funding Agency for his Mobile Health and Situated Innovation projects, as well as an MIT Energy Initiative Grant for his Siemens Lighting Project. Mehrotra published *Bombay Deco* and served on the Steering Committee of the Aga Khan Awards and Prince Claus Awards. Miljacki was named the Ida and Cecil Green career development chair for three years, beginning July 1, 2009. In addition to running her architectural practice, she exhibited at the Young Architects Exhibit and designed and curated *13:100, New York Architects Design for Ordos*, both at the Architectural League of New York, and researched and designed the *YouPrison* installation for curator Francesco Bonami in Turin, Italy.

Scott served on the Committee on the Advancement of Sustainability and the Boston Society of Architects Board of Directors, consulted for a design competition with HOK Architects, and was an organizer and speaker for the Stavanger Forum in Norway. Tehrani, principal of his firm Office dA, was engaged in numerous projects; among others, the Helios House, Banq, and Macallen Building projects won important national design awards. In addition to lecturing internationally, Wampler received commissions for a community building in Tangshan, China, and a research center in the Galapagos Islands.

Wescoast is represented below in the section on the Aga Khan Program for Islamic Architecture. Yoon published two books, *Expanded Practice: Howeler + Yoon Architecture/My Studio* (Princeton Architectural Press) and *Public Works: Unsolicited Small Projects for the Big Dig* (Map Book Publishers), and received a United States Artist Award for architecture and design.

International Outreach and Design-and-Build Projects

In recent years, our students have been given extensive opportunities in the studios to take on design challenges globally. One example is the design of the Beichuan High School as part of the postearthquake reconstruction effort in Sichuan, China. With a renewed interest in the physicality of architecture, there have been more and more design-and-build projects, sometimes as part of studio/workshop assignments and

sometimes initiated by students as part of their thesis projects or IAP activities. Yoon taught a studio and a workshop to design a boat house and construct a float for the city of New Bedford, MA. Projects such as Beichuan High School and the New Bedford Boat House also contain a strong social agenda.

Next Steps

We will continue with the MArch core curriculum reform and the new focus on integration; we are looking at ways in which we can incorporate mechanical systems and energy concerns into the studio. We will also begin to redefine urbanism as part of the design discipline at MIT.

Admissions

Students in our professional MArch degree program are admitted at two levels: Level 1 for those whose undergraduate background is studies in another area of study, and Level 2 for those who come from undergraduate programs in architecture and thus receive one year of advanced standing in our 3.5-year graduate program. In spring 2009, results for Level 1 were 342 applications, 55 admitted, 27 targeted, and 19 enrolled. Results for Level 2 were 223 applications, 18 admitted, eight targeted, and seven enrolled.

Building Technology

Faculty and Staff

Personnel in Building Technology (BT) were professors Leon Glicksman (on leave, spring) and Leslie Norford; associate professors John Fernandez (on leave both terms), John Ochsendorf, and Andrew Scott; assistant professor Marilyne Andersen (on leave, spring); and lecturers Leonard Morse-Fortier (spring) and Carl Rosenberg (spring). Ochsendorf was granted tenure, effective July 1, 2009. Andersen was promoted to associate professor without tenure, also effective July 1, 2009. Glicksman served as director of the group. Norford continued to serve as associate head of the department.

Program Notes

BT's teaching continued to support the education of professional architects, graduate students in building technology and engineering disciplines, and MIT undergraduates. The group's major activities in research focused on advanced technologies for sustainable buildings and development of design tools for architects. BT faculty are involved in the MIT Energy Initiative (MITEI) in various capacities. The program as a whole is involved in the Institute's major initiatives in Portugal, Abu Dhabi, and Singapore.

Faculty Activities and Achievements

Andersen received grants from the MIT Energy Initiative to develop a sustainable futures workshop that will be offered to undergraduate and graduate students and will be a subject offering in the planned Institute undergraduate minor in energy. Andersen will co-teach the subject with building technology and design faculty. Andersen also received an MITEI seed grant to assess the energy savings potential of leading-edge building façade technologies. Glicksman continued as a member of the MITEI Energy Council and as co-chair of the MIT Campus Energy Task Force. He received

the American Society of Mechanical Engineers Heat Transfer Memorial Award and was selected to be a fellow of the American Society of Heating, Refrigerating and Air-Conditioning Engineers. As part of the MIT-Portugal Program, he continued research into building energy efficiency.

Glicksman and Norford carried out research on the Abu Dhabi Masdar project to develop energy-efficient air conditioning systems and design tools and investigate building energy use in urban settings. Norford studied urban airflows and heat island influences as a principal investigator in the Center for Environmental Sensing and Modeling, a research group under the Singapore-MIT Alliance for Research and Technology. He was the School of Architecture and Planning's representative on the provost's Race Initiative Committee. Fernandez spent the academic year in residence in Lisbon at the Department of Mechanical Engineering, Instituto Superior Técnico, with the MIT-Portugal Program.

Ochsendorf was selected as a MacArthur fellow in recognition of his work "to preserve historic structures and to reinterpret ancient technologies for contemporary use. In a discipline whose practitioners rarely venture into comparative cultural and historical studies, he is a pioneer in exploring alternative engineering traditions." Two of his PhD students, Philippe Block and Matthew Jung, defended their dissertations this spring and will take up faculty positions at ETH Zurich and Cambridge, respectively. Another, Jennifer Furstenau, was awarded a Fulbright Fellowship and will investigate Roman dome technology at the University of Bern in Switzerland.

BT maintains a website at <http://bt.mit.edu/>.

History, Theory, and Criticism

Faculty and Staff

Personnel in History, Theory, and Criticism (HTC) were professors Stanford Anderson, Mark Jarzombek, Caroline Jones, Nasser Rabbat, and James Wescoat; associate professors Arindam Dutta (on leave, spring) and David Friedman; assistant professor Kristel Smentek; visiting assistant professor Jorge Otero-Pailos (spring); and lecturers Marek Bartelik (spring), M. Ijlal Muzaffar (spring), and Kazys Varnelis (fall). Jones served as director of the group. Jarzombek completed the second year of his appointment as associate dean, charged with focusing on consolidation of the School's arts offerings and their integration into the larger MIT academic community and assisting in the development of a strategy for the School's diversity efforts.

Program Notes

Continuing for a second year as director of HTC, Jones utilized the visits of the NAAB team and the MIT Visiting Committee to focus on development and fundraising needs for HTC and to make progress in revenue development for the School of Architecture and Planning. HTC recommended that the current PhD stipend be converted to a 12-month award (as in the sciences) in order to remain competitive in attracting the top students. At the same time, HTC continued its own efforts to develop resources for the program. Notably, in 2008–2009 HTC gained for the second time an award of a

curatorial fellowship from the List Visual Art Center at MIT for a PhD student. Jones worked with Anne Deveau, administrative assistant in HTC, to prepare a request to the US Department of Education for a Foreign Language and Area Studies (FLAS) grant to fund summer research and language study for PhD students. This effort is being carried forward in partnership with MIT's Center for International Studies and will result in a proposal for a \$500,000 per annum grant for a four-year period, to be submitted in the fall of 2009.

Finally, Jones and Jarzombek prepared a request to the Graham Foundation to support an alumni anniversary workshop and conference proposed for the fall of 2010. Discussions within the School and with MIT Press explored the possibility of moving *Thresholds*, the student-edited department journal traditionally managed by HTC, to an outside publisher. Amplifying these efforts by faculty and staff, HTC students continued to achieve unparalleled success in attracting external fellowship support (more than \$200,000 in grants, fellowships, and other forms of support), as well as postdoctoral and faculty positions.

HTC admissions at the PhD and SMArchS levels suffered from the static level of our financial aid in comparison with our competition. Though we continued to attract top applicants and will enroll outstanding students who accepted our offer despite more significant funding elsewhere, fundraising is a top priority. There were 57 applicants overall (38 PhD and 19 SMArchS; one PhD applicant was moved to the SMArchS pool). Faculty ranked 13 of the PhD applicants into three lines; eight applicants were admitted, and four accepted. Six applicants from the SMArchS applicant pool were admitted (nine were ranked), yielding two enrollees.

HTC faculty participated in discussions with colleagues in design and urbanism about the MArch curriculum and the SMArchS program. HTC staff in consultation with faculty developed a key document, *Best Practices for the SMArchS Program*, to assist students with benchmarks and time frames for meeting them. The document and practices are being studied for adoption across the department's several programs, have already become a model adopted by the Aga Khan Program for Islamic Architecture (AKPIA), and have been put into practice for the three first-year HTC SMArchS students with good effect.

Diversity was a consistent priority at every level of HTC operations, with two members of our small faculty serving in leadership roles for the School (Jones as chair of the School's Diversity Committee and a member of the MIT Gender Equity Chairs Committee and Jarzombek as associate dean with ex officio standing on many of the School and Institute diversity committees). Milestones in HTC's long-term commitment to diversity were the hiring of Smentek (contributing to gender diversity at HTC, the School of Architecture and Planning, and MIT) and Jarzombek's work with the dean of graduate students to implement his plan for a Robert R. Taylor graduate fellowship for underrepresented minority graduate students.

Goals in Progress

The informal five-year plan discussed among the faculty in 2008 reexamines HTC's offerings at both the intellectual and financial levels and is aimed at making MIT competitive once again with other top-ranked universities. The fundraising initiatives outlined above address this plan and are aimed primarily at relieving the Institute of one or more graduate fellowships while providing summer and language study funds for existing doctoral students. Additionally, the section's offerings of undergraduate subjects were evaluated, and the director pressed several faculty members to consider broader topics of stronger undergraduate appeal. Along these lines, Jarzombek will proceed with plans to teach a cross-disciplinary class on modernisms with professor James Buzard (Literature). Jarzombek also piloted a graduate subject in global architecture in the spirit of his highly successful textbook on the topic and will develop this curriculum further for undergraduates in 2010–2011. As part of these curriculum development efforts, the director is building into the FLAS grant request (discussed above) a postdoctoral teaching position whose occupant will focus two years of instruction on the art and architecture of Asia.

An alumni conference and development event is planned for the fall 2010 semester, partly in celebration of the 35th anniversary of HTC and partly as a local launching pad for the 150th anniversary of the founding of MIT. Funding will be solicited from the Graham Foundation to support a general scholarly examination of the critical turn in architectural schools during the late 1960s and 1970s, of which the founding of HTC is a key exemplar.

Program Activities

Endowed by alumnus Thomas Beischer and named in honor of his advisors, HTC inaugurated the H  l  ne Lipstadt and Nancy Stieber Fund for the Graduate Forum, a student-run lecture series, with a celebratory event in October featuring talks by Lipstadt and Stieber about their work. Joseph Koerner, Diane Ghirardo, Spyridon Papapetros, and Ara Merjian were also featured in the fall; in the spring, the forum hosted John Dixon Hunt and Ondine Chavoya and a panel discussion among Javier Arbona, Kazys Varnelis, and Mark Jarzombek.

Public events hosted by HTC included the US premiere of Erich Schmid's documentary film *max bill: the master's vision* on April 3, 2009, supported generously by the Swiss Consulate of Boston, and the annual meeting of the New England Chapter of the Society of Architectural Historians on March 10, 2009.

The interdisciplinary graduate student conference "research in progress," sponsored by HTC through an MIT Graduate Student Life Grant (from the Office of the Dean for Graduate Education) and matching funds from the Department of Architecture and the Office of the Dean of the School of Architecture and Planning, was organized for April 3–4, 2009. The theme for the fifth annual conference was "What Site?" Keynote speakers were Max Page and Felicity Scott. Six HTC students presented (Ash Lettow, Alla Vronskaya, Igor Demchyenko, Ana Maria Leon, Nori Tsuneishi, and Ellen Haller) as well as AKPIA student Laura Schmidt.

Jordan Kauffman's paper received the faculty nomination for the New England Society of Architectural Historians graduate symposium and was accepted into the symposium. The event was held February 21, 2009, at MIT.

No students from Venice participated in the fifth year of the Fondazione Scuola di Studi Avanzati-Benezia Exchange Program, probably as a result of financial constraints.

Staff, in consultation with faculty, developed two documents, the PhD Planner and Best Practices for the SMArchS Program, to assist students through their respective degree programs. The first document describes the hurdles and expectations of the program and includes a form to help students plan their time accordingly. PhD students must now produce a planner in week eight of their third term instead of at the end of their fourth term. The second document complements the existing SMArchS guidelines with special emphasis on benchmarks for terms two and three.

HTC hosted two visiting scholars, Feng "Philip" Yuan from Shanghai, China, who investigated contemporary urban design, participated in teaching with Stanford Anderson, and attended various lectures over the academic year, and Alessandra Moro from Cesena, Italy, who studied high-rise buildings in Europe.

Five PhD (Lucia Allais, Lauren Kroiz, Michael Osman, Sarah Rogers, and Kirsten Weiss) and two SMArchS (Ateya Khorakiwala and Catherine McMahan) candidates earned their degrees this year. One SMArchS degree was postponed to the September degree list.

PhD students continued to perform excellently with respect to outside funding: eight students gained \$209,500 in predoctoral research funding, with only one grant as a two-year award. Additionally, three prestigious postdoctoral fellowships were received, two by September 2008 graduates and one by a PhD candidate. One PhD candidate received a tenure-track position to begin in fall 2009. PhD students attended conferences and published in a variety of venues in the US and abroad.

Three SMArchS students were admitted into PhD programs for the fall, and a Fulbright grant received for 2008–2009 was renewed for 2009–2010.

Faculty Activities and Achievements

HTC faculty serve as leaders in scholarship and the various disciplines with which their scholarship intersects, traveling for research, publishing, and lecturing worldwide. Anderson continued to play an active role in bridging architectural education and practice in China, Europe, and the US. Dutta's foundational essay for the new journal *Design and Culture* was published, and his plans for a 150th anniversary volume on the impact of MIT's architecture school are well under way. Friedman served as a consultant and exhibition programmer for the Museum of the "Terre Nuove" (Founded Towns) in San Giovanni Valdarno, Italy. Jarzombek became a widely cited theorist on architectural blogs and produced an exhibition for MIT's Wolk Gallery on the urbanism of the medieval South Asian city Angkor Wat. He received a Fulbright Senior Specialist Award.

Jones was a grant evaluator for the John Simon Guggenheim Foundation and the American Council of Learned Societies (ACLS) Luce Foundation Awards for Dissertations in American History; served on the advisory boards of the New York Science Festival, the Berlin-based Zentrum fuer Litteratur und Kulturforschung, and the Berg journal *Senses and Society*; and acted in a visiting professor capacity at the Yale School of Art. In preparation for her 2009–2010 sabbatical, she received several major research grants, as follows: Newhouse Center for the Humanities Fellowship, Stanford Humanities Center Fellowship (declined), an Italian Academy of America grant (declined), and a grant from the Institut National d’Histoire de l’Art. Smentek lectured on the epistemology of mounted porcelain. Notes on Rabbat and Wescoat are included below in the section on AKPIA below.

HTC maintains a website at <http://architecture.mit.edu/htc/>.

Visual Arts

Faculty and Staff

Personnel in the Visual Arts Program (VAP) were professors Joan Jonas and Krzysztof Wodiczko; associate professors Ute Meta Bauer and Gediminas Urbonas (as of January 1, 2009); lecturers Jim Finn (video, fall), Andrea Frank (photography), Amber Frid-Jimenez, Wendy Jacob, Robert Knight (video, fall), Joseph Gibbons (video, on leave, fall), Jae Rhim Lee, and Joe Zane (foundations); and visiting professors Yvonne Doderer (fall) and Antoni Muntadas (spring). A search for a tenure-track visual arts faculty position was approved and will be launched over the summer. Bauer continued to serve as director of VAP.

Program Notes

VAP operates as a critical production- and education-based laboratory within the context of an advanced technological community. The program explores the role of art in society and considers artistic practice as knowledge production, thus promoting an approach that challenges traditional genres and the limits of the gallery/museum context. Studio investigations and artistic research are realized through performance, sound and video, photography, and interrogative design, as well as through experimental media and new genres. The program also emphasizes art that engages public spheres, the production of space, networked cultures, and questions relating to the environment, gender, and social stratification. Students are encouraged to work individually or collectively to develop their own vision of artistic practice. Extracurricular activities include a cross-disciplinary lecture series, field trips, workshops, studio visits, and public presentations. VAP serves undergraduates, offers electives for the MArch program, and conducts a master of science in visual studies (SMVisS) graduate program. It is the only program in the country offering an SMVisS degree and is uniquely situated in a technological community to pursue interdisciplinary relationships exploring the intersection of art, science, and technology.

VAP experienced a burst of growth in AY2009, with an increase in applications to the graduate program, higher enrollments overall, and the addition of five new subjects. The program enrolled 299 students (40 percent graduate students, 60 percent undergraduates; 45 percent from within the School of Architecture and Planning, 55 percent from outside

the School). A nearly 50 percent increase in applications to the SMVisS program over last year yielded six accepted students. VAP was granted Humanities, Arts, and Social Sciences (HASS) credit for two subjects, one of which also received Communication Intensive (CI) status. VAP enrolled nine SMVisS students in 2008–2009.

A wide variety of initiatives heightened the program's profile inside and outside of MIT, including those described below.

The fall Monday Nights @ VAP lecture series, "This is Tomorrow? Utopia-Dystopia-Heterotopia," featured speakers from art, architecture, urbanism, and related research fields including Peter Marcuse, Lucy Orta, Philippe Rekacewicz, and Stefano Boeri. The spring series, "Collision: Science, Technology and Contemporary Art," focused on the intersection of art and science and paired artists with researchers in mobile communication design, renewable energy, and neuroscience, including Sebastian Seung and Carlo Ratti.

Directed by Lee, the yearlong Federal Emergency Management Agency (FEMA) trailer project at MIT redesigned and rebuilt a surplus trailer originally purchased by FEMA to house victims of Hurricane Katrina. The repurposed trailer will be donated to the nonprofit arts organization Side Street Projects and will tour nationally.

Directed by Jacob, the multidisciplinary 4.366/4.396 Autism Studio class investigates the autistic experience.

Jacob established a collaboration with Gallaudet University for deaf and hard-of-hearing undergraduates, resulting in a two-day seminar at MIT on low-frequency vibration.

Led by SMVisS candidate Jegan Vincent de Paul, the E-Wheel/Community Grid Project envisioned creative and socially meaningful solutions to secure energy access for marginalized communities. It was short listed for a Lemelson student award.

Muntadas led students in his 4.367/368 Studio Seminar in Public Art: Perspectives from the Space In-Between on a field trip to Istanbul.

To celebrate its 20th anniversary in the fall of 2009 and in collaboration with *ASPECT: The Chronicle of New Media Art*, VAP began work on a DVD of time-based art by faculty and selected alumni. The DVD will be distributed to art museums and libraries worldwide and will be used for fundraising efforts.

The program prepared for its planned merger with the Center for Advanced Visual Studies (CAVS), which will connect teaching with research and consolidate the efforts of both units. The merged unit will reside outside the Department of Architecture, in the School for Architecture and Planning, and report directly to the dean. The merger will entail relocation to Buildings E14 and E15 and ongoing consideration of funding, curricular, and organizational challenges and opportunities.

Faculty Activities and Achievements

VAP faculty and academic staff are active in many organizations around the world and are sought after as reviewers, workshop leaders, and guest lecturers. They participated in many local, national, and international solo and group exhibitions. Bauer served on a number of international boards, including the International Committee and Jury of the 3rd Yokohama Triennale and the 9th Sharjah Biennale (United Arab Emirates). She lectured worldwide at, among other venues, the 28th Biennial of São Paulo, the High Art Museum (Atlanta), La Reina Sofia (Madrid), and the Centre for Contemporary Art in Kitakyushu, Japan; she also published *Lo que nos queda (What's Left...What Remains?)* [Patronato de Arte Contemporáneo, Mexico City, 2009]).

Frank published *Andrea Frank: Ports and Ships* (Kunstalle Göppingen, 2008). Jacob was coauthor of *With Love from Haha* (Whitewalls, 2008). Jonas participated in the 53rd Venice Biennale, the 28th Biennial of São Paulo, the Yokohama Triennale 2008, and the Sydney Biennale 2008. She also performed at the Isabella Stewart Gardner Museum (Boston) and the Staatstheater Stuttgart and presented at the Wilkinson Gallery (London). She was awarded the Francis J. Greenburger Award and the 2008 Hans Molfenter Prize for her contributions to contemporary art. Lee received a \$10,000 grant from Creative Capital, a national organization that supports individual artists.

Muntadas exhibited at Fundación Mies van der Rohe, Barcelona; La Fábrica Galería, Madrid; the SBC Gallery, Montreal; and Centro Atlántico de Arte Moderno, Canary Islands. He received the Velázquez Prize from the Spanish Ministry of Culture in recognition of his outstanding career and contribution to contemporary art. Urbonas presented at the Finnish Academy of Fine Arts, NABA Italian Design Academy (Milan), and University College London. He published *Villa Lituania* (Sternberg Press, 2008) and *Devices for Action* (Museum of Contemporary Art, Spain). Wodiczko represented Poland at the 53rd Venice Biennale and received the Golden Gloria Mundis Award from the Polish minister of culture. His "War Veteran Vehicle" public art piece was exhibited during the Democratic National Convention in Denver. Zane was a finalist for the James and Audrey Foster Prize.

VAP maintains a website at <http://visualarts.mit.edu/>.

Computation

Faculty and Staff

Personnel in the Computation discipline group were professors Terry Knight, William Mitchell, and George Stiny; associate professors Takehiko Nagakura and Larry Sass; professor without tenure (retired) William Porter; associate professor of the practice Dennis Shelden (effective January 1, 2009); principal research scientist Kent Larson; and research scientist Stephen Intille. Nagakura served as director of the group.

Program Notes

The group's research and teaching are focused on areas situated at the intersection of architectural design, computer applications, and computational theory in design representation, synthesis, and construction, with consideration for the broader

cultural and societal impacts of digital technologies on built form at all scales. New undergraduate subjects (4.502 Designing Scripting and 4.503 Advanced Visualization) were initiated to support the Computation stream in the bachelor of science in architecture studies program. This concentration, approved for fall 2008, exposes students to the many facets of the rapidly changing and increasingly important area of computational design. The objectives are to prepare students to pursue diverse career paths or further education in multiple areas of design and to enable them to take advantage of emerging opportunities in industry and academia. Required subjects encompass three central aspects of design—visualization (2D and 3D modeling, lighting, color, simulation, animation), construction (physical, full-scale fabrication), and synthesis (generative and parametric techniques for designing)—as well as fundamentals of computer programming for design. The Computation lecture series hosted speakers from academia and industry: Leah Buechley, Ziggy Drozdowski, Shane Burger, Chris Williams, Jose Luis Gonzales, Michael Stzivos, David Small, Yanni Loukissas, Jenny Sabine, Philippe Block, Keil Moe, and Onur Yuce Gun. The group showcased recent student work in an exhibition at the Wolk Gallery and held its first annual alumni symposium in February.

Faculty and Staff Activities and Research

Mitchell published *World's Greatest Architect: Making, Meaning and Network Culture* (MIT Press). Knight and Sass completed a National Science Foundation grant project on visual-physical grammars that developed a new computational methodology for low-cost, high-quality, mass customizable building assembly systems. Sass's digitally fabricated shotgun house was part of the Museum of Modern Art's exhibition, *Home Delivery*, in New York City. Larson completed his second year of the four-year project, Enabling Population-Scale Physical Activity Measurement on Common Mobile Phones, for the National Institutes of Health and received a grant from the Finnish National Funding Agency (TEKES) for Situated Innovation Project using mobile phones and House_n experience sampling software to study mobile and distributed work in Helsinki. Nagakura received US and Chinese patents for Deskrama, an interactive visualization device that he continues to develop with new capabilities.

The group created a new website at <http://descomp.scripts.mit.edu/www/>.

Undergraduate Program

After many years, the department consolidated all the architecture design studios in one location on the main campus. In the fall of 2008 we succeeded in bringing the last and largest undergraduate studio from Building N51 to the fourth floor of Building 7. The 4.111 Experiencing Architecture Studio class successfully integrated 61 undergraduates over the course of two terms, allowing them access to greater resources and support.

Undergraduate officer Leslie Norford, director of the Undergraduate Architectural Design Program Jan Wampler, and administrator for academic programs Renée Caso continued to support and strengthen the undergraduate experience. Several new undergraduate subjects have been added in response to the changing needs of the students and their desire to tap into subjects traditionally geared toward the graduate student population: 4.205 Analysis of Contemporary Architecture is a newly required

class for all architecture design majors, and 4.502 Design Scripting and 4.503 Advanced Visualization support the newly created design computation discipline stream now available to our undergraduates.

In an effort to promote greater intellectual rigor and independent thinking, our undergraduates are being encouraged to complete a senior thesis. With six completed theses this May, we saw the largest number of successful theses yet.

Undergraduates continue to be encouraged to participate in a variety of international experiences offered by the department. Our first two students attended the architecture design exchange program with Hong Kong University (HKU). Shani Cho and Joanna Rodriguez-Noyola spent the fall term of their senior year studying architecture design at HKU. Students in 4.116 Advanced Architecture Design Studio, led by Nondita Correa-Mehrotra, traveled to Bombay, India, with seniors in the final design studio. Students in 4.170 International Workshop traveled to Leogane, Haiti, just south of Port au Prince, where they designed a school with a community center, health facilities, a dormitory and cafeteria, and related facilities on a site in a low-income neighborhood. The 4.180 Veneto Experience undergraduate workshop, led by instructor Shun Kanda, focused on the work of Veneto architect Carlo Scarpa through extensive fieldwork in and around Venice, Italy. Finally, students from 4.291 Singapore/Bangkok Workshop traveled to both cities to study how each is handling the Third World urban explosion and how well prepared they are for increasing populations.

For the third year, the department participated in the Institute's August Freshman Pre-Orientation Program by offering "Discover Architecture," a three-day program of fun exploration for incoming freshmen. The program included a sandcastle competition on Crane's Beach in Ipswich, faculty presentations on current research, a tour of the Walter Gropius House in Lincoln coupled with a visit to Walden Pond, and a tower building competition using recycling materials. Twenty-four freshmen participated. The program was led by instructor and alumna Angela Watson.

The department prepared to participate in the Minority Introduction to Engineering and Science (MITES) program for the first time in the summer of 2009 by teaching an architecture design component as part of elective study. MITES is a rigorous six-week residential, academic enrichment summer program for promising high school juniors who are interested in studying and exploring careers in science and engineering.

The department sponsored a number of public activities for undergraduates or their parents, including Wampler's talk and reception at Family Weekend, an open house, tours, a building workshop and reception for prefreshmen, a new-major orientation program, and senior thesis presentations. In addition, two exhibitions of undergraduate design work were presented in a new exhibition space in the lobby of Building 9.

The second annual Design/Build Competition, an open competition for undergraduates of all levels to submit a sculpture design to a faculty panel, was held in April. The chosen design will be built on the MIT campus by the winning team.

In August 2008 the department published *Projects of the Design Process*, a companion book to *Conversations of Design: Essays by the Undergraduate Architecture Faculty*, published in 2007. The first publication addressed the theories behind teaching undergraduates within the new curriculum; the second publication focused on the work produced using these theories.

Faculty members who served as undergraduate advisors, in addition to Norford and Wampler, were Marilynne Andersen (on leave, spring), Nondita Correa-Mehrotra, Arindam Dutta, John Fernandez (on leave), Andrea Frank, Leon Glicksman (on leave, spring), Bill Hubbard, Terry Knight, John Ochsendorf, Larry Sass, Kristel Smentek, Anne Spirn (on leave), and George Stiny. Twelve sophomores entered the department in 2008–2009, joining 16 juniors and 14 seniors to bring the total number of undergraduate majors to 42.

Master of Science in Architecture Studies Program

Rahul Mehrotra, director of the SMArchS program, along with faculty engaged with SMArchS students in each discipline group, established an agenda to strengthen the interaction and intersection of the discipline groups and create synergies between them that could shape the collective identity of the program.

Toward these goals, the program:

- Energized the 4.221 Faculty Colloquium, the only required subject in which all SMArchS students participate, and made this a potentially department-wide forum.
- Fostered interaction among student and faculty through frequent meetings and proposed a common room as a way to bring students together in a spatially dispersed organization.
- Studied the department website to identify problems with the way the SMArchS program is represented in an effort to better reflect its strengths and uniqueness.
- Participated more effectively in open house events by inviting potential students to campus and making SMArchS faculty available. This paid rich dividends in the surge of acceptances for some discipline groups, especially in architecture and urbanism.
- Coordinated the admissions process to validate candidate eligibility across disciplines and met with discipline group directors before extending offers. While not solving the persistent problem of building consensus on group quotas, this set up some transparency, and the group will continue to work to bring greater objectivity to the process of allocation of numbers and funds across the different groups.
- Coordinated final thesis presentations such that students' work was reviewed not only by faculty in their discipline groups but by faculty across the entire SMArchS program, providing welcome public exposure to the work as well.
- Appointed a director (Michael Dennis) for the Architecture and Urbanism Group, which restructured its core requirements and subject structure to orient

the group toward design in keeping with the larger thrust in the department. As noted above, the group attracted a large number of applications and acceptances and now finds itself looking for even more alliances across groups or proposing a new position in order to best serve the larger population of students.

Next year the SMArchS program will focus on the creation of a SMArchS common room, the development of an SMArchS book template for an annual or biannual publication of student and faculty research, the nomination and review process for the annual SMArchS prize, coordination of the SMArchS lecture series, strengthening of the program's website presence, continued coordination of thesis reviews with external reviewers, allocation of an SMArchS budget to cover activities specific to the program, and discussion of admissions quotas.

Overall, SMArchS admissions results in spring 2009 were 282 applications, 54 admitted, 26 targeted, and 30 enrolled.

Enrollments

As of October 2008, the Department of Architecture counted a total of 262 students: 42 undergraduates, 108 MArch students, 48 SMArchS students, three SMBT students, nine SMVisS students, 43 resident PhD students, and nine nonresident PhD students. (Note that Center for Real Estate students are no longer counted in the Department of Architecture on the Institute's Yearly Enrollment Report.)

In addition to the 220 graduate students counted above, two SMArchS dual-degree students were registered in the Department of Urban Studies and Planning as their home department in October 2008 and one SMBT student was counted in the Engineering Systems Division/Technology and Policy Program.

Aga Khan Program for Islamic Architecture

The Aga Khan Program for Islamic Architecture at MIT, established in 1979, is a leading program in the study of architecture in the Islamic world. Its outreach activities include a lecture series, a travel grant program open to all students in the School of Architecture and Planning, and a visiting postdoctoral program. Faculty, listed in the department under the History, Theory, and Criticism Program, were professors Nasser Rabbat, director of the program, and James Wescoat. In 2008–2009, the program numbered seven PhD and six SMArchS students.

Program Activities

AKPIA admitted one new PhD student and three SMArchS students and graduated one PhD student and two SMArchS students. The program hosted five postdoctoral fellows: Ahmed Zaib Khan Mahsud, Adriana de Miranda, Sarah Moser, Abdul Rehman, and Salim Tamari. The lecture series featured Daniel Gorini, Hashim Sarkis, Rahul Mehrotra, Steve Wolf, James Wescoat, and Adriana de Miranda in the fall and Ahmed Zaib Khan Mahsud, Sarah Moser, and Salim Tamari in the spring. Aga Khan Travel Grant recipients Zehra Ali, Zameer Basrai, Christian Hedrick, Anneka Lenssen, and Alexa Rosenberg also presented in the spring lecture series.

The program hosted two workshops: “Water in Architecture, Landscape + Urbanism,” organized by Wescoat, on April 18 and “Exploring the Role of History in Contemporary Architectural Practice,” organized by AKPIA students Christian Hedrick and Zameer Basrai, on April 25. *Riverscapes*, an exhibition of photos of historical water landscapes by Adriana de Miranda, was on display in Rotch Library in the fall. New subjects included 4.617 Balancing Globalism and Regionalism: The Heart of Doha Project and 4.628 Modernization and Colonization: Cairo in the Long 19th Century, both taught by Rabbat, and 4.629 Mughal Landscapes: History, Heritage, and Design; 4.214J/11.314J Water, Landscape and Urban Design; 4.286/11.945 Landscape Heritage Conservation Workshop: Nizamuddin, Delhi; and 4.666/11.943 Water in Environmental History, Policy and Design, taught by Wescoat.

Faculty Activities

Rabbat continued to serve as president of the Middle East Medievalists, lectured worldwide, and published articles and book sections. He appeared on public radio and public television and in two documentary films. Wescoat was elected a lifetime national associate of the National Research Council’s Water, Science, and Technology Board; he also lectured widely and prepared articles and chapters on water research and policy.

Across the Department

Computer Resources

The Computer Resource Office Network completed the merger of the computer facilities of the Department of Architecture and the Department of Urban Studies and Planning under the direction of Duncan Kincaid, allowing both departments to derive greater benefits from shared resources while continuing to serve their own particular needs.

Lectures

In the fall, the Architecture Lecture Series was organized around the theme “Urgent! Architecture for Climate Change.” Speakers were Gordon Gill, Matthias Sauerbruch, Christoph Ingenhoven, Matthias Schuler, Mirko Zardini, Charles Renfro, Vincent James, Peter Head, Stellan Fryxell, and Stephen Kieran. In the spring, the theme was “The New Craft of Architecture.” Speakers were Rahul Mehrotra, Marlon Blackwell, Stanley Saitowitz, Fabio Gramazio, Matthias Kohler, Tony Fretton, Riken Yamamoto, Sebastian Irarrazaval, and Vittorio Lampugnani. Rafael Moneo presented the Pietro Belluschi Lecture. James Carpenter presented the 3rd Goldstein Architecture, Engineering, and Science Lecture. The 2009 Schein Lecture was cancelled. Lecture series open to the public also were sponsored by the BT, Visual Arts, HTC, Computation, Undergraduate, and Aga Khan programs.

Exhibitions

The department supported exhibitions on architecture organized by the MIT Museum for the Wolk Gallery by sharing publicity efforts or offering associated lectures. Exhibits included *Fading Hutongs: Photographs by Julio de Matos*; *Working in Mumbai*, illustrating the architecture and design work of Rahul Mehrotra; and *The Cities of Angkor*, organized

by Mark Jarzombek. Student and faculty work continued to be featured on the School's PLAZmA screens and on dedicated PLAZmA screens programmed by the department.

Publications

Thresholds, a journal edited and produced by students, is noted for developing diverse architectural themes in each issue. The theme for issue number 34 was "Portability," and the theme for issue number 35 was "Difference."

Architecture Student Council

The Architecture Student Council (ASC) has been developing its role as the voice of the Department of Architecture student body. It acted as the facilitator for student-faculty relationships, working with the department's faculty on new avenues of student involvement and activity. As the vehicle for student activity, ASC focused on both academic and social commitments. Academically, it offered invaluable support for the fall and spring departmental open houses by contributing to the programming and organizing a student panel discussion and a lunch to allow interaction with prospective students. It played a key role in rallying student participation for the discussion sessions with the visiting team from the National Architectural Accrediting Board and is working with administration to follow up on some of the team's suggestions for change. In addition, ASC assembled a vast representation of students to interact with the Visiting Committee as it reviewed the department in the spring, offering the student perspective for each departmental degree program. Working on internal dialogue, it held a town hall meeting in the fall that allowed students to directly interact with the department head, Yung Ho Chang. It also sponsored the design and judging of a department T-shirt competition and held a Beaux-Arts ball. The council put a great deal of effort into promoting and organizing regular triweekly or monthly happy hours to bring students together, informally, outside of school hours. The 2008–2009 ASC officers were Pamela Ritchot, president; Leslie Lok, vice president; Jennifer Dunnam, secretary; and Juliet Hsu, treasurer.

Student Awards and Fellowships

The Department of Architecture honored the accomplishments of the following undergraduate and graduate students:

- Undergraduate Faculty Award for achievement in design: Tal Goldenberg
- William Everett Chamberlain Prize for achievement in design at the undergraduate level: Joanna Rodriguez-Noyola
- Outstanding Undergraduate Prize for academic excellence: Lori Ferriss
- Marjorie Pierce (1922)/Dean William Emerson Fellowship Award for a MArch Level II woman for outstanding academic and design achievement: Sarah Hirschman
- Sydney B. Karofsky '37 Prize for the outstanding MArch Level II student: T. Buck Sleeper

- Rosemary Danehy Grimshaw Award to an MArch student whose thesis proposal best exemplifies the spirit of Professor Grimshaw: Salomé Francpourmoi
- Special Recognition Award for outstanding service to the department: Lisa Pauli
- Kristen Ellen Finnegan Memorial Award in History, Theory and Criticism of Architecture: Iris Moon
- Tucker-Voss Award in recognition of promise for the future in the field of building technology: Matthew Dejong
- Francis Ward Chandler Prize to a graduating MArch student for achievement in architectural design: Edmund Ming-Yip Kwong
- Alpha Rho Chi Medal for a graduating MArch student for service, leadership, and promise of professional merit: Sarah Dunbar
- AIA Henry Adams Medal for the top-ranking graduating MArch student: Ryan Murphy
- AIA Certificate of Merit to an MArch student for academic excellence: James Graham
- Imre Halasz Thesis Prize in recognition of academic excellence as represented in a MArch thesis in which the design recognizes the expanding responsibility of architecture: Simon Schleicher
- Master of Science in Architecture Studies Prize for Thesis: Nancy Demerdash, Sandra Frem, Ateya Khorakiwala
- AKPIA Travel Grants: Zameer Basrai, Nancy Demerdash, Christian Hedrick, Anneka Lenssen, Simon Schleicher, Deniz Turker

Institute prizes were awarded to Renée Reder (first place, Robert A. Boit Prize for Poetry, and second place, Robert A. Boit Writing Prize for Short Stories), Jack Murphy (Everett Longstreth Jazz Award for his contribution to the Festival Jazz Ensemble), Cristen Blair China (Austin Kelly III Essay Prize for the best undergraduate essay and second prize for the Robert A. Boit Writing Essay), Daniel Cardoso (MIT Council for the Arts Grant), Matthew Mazzotta (first place, 2009 Harold and Arlene Schnitzer Prize), and Jess Wheelock (third place, 2009 Harold and Arlene Schnitzer Prize).

The following graduate students received research awards, grants, and fellowships from sources outside of the Department of Architecture:

- Azra Aksamija: Charlotte W. Newcombe Doctoral Dissertation Fellowship from the Woodrow Wilson National Fellowship Foundation and a Travel Fellowship in the History of Art from the Samuel H. Kress Foundation
- Jennifer Ferng: Bourse Jeanne Marandon Fellowship, La Société des Professeurs Français et Francophones d'Amérique, 2009–2010; Samuel H. Kress Institutional Fellowship in the History of Art, Institut National d'Histoire de l'Art, 2009–2011; 2009 Research Support Grant from the Paul Mellon Centre for Studies in British Art; and Eleanor Tufts Predoctoral Fellowship in Art History, Southern Methodist University, 2009–2011 (declined)

- Jennifer Furstenau: Fulbright Fellowship
- Lauren Kroiz: Postdoctoral Fellowship from the Center for the Study of Modern Art, Phillips Collection, Washington, DC, in collaboration with the University of Illinois, Urbana-Champaign
- Anneka Lenssen: US Student Fulbright Grant, sponsored by the Institute of International Education, 2009–2010
- John Lopez: 2009 Edilia and François-Auguste de Montéquin Junior Fellowship in Iberian and Latin American Architecture from the Society of Architectural Historians and a Fulbright/Garcia Robles Grant from the Institute of International Education and the US-Mexico Commission for Educational and Cultural Exchange
- Fabiola Lopez-Duran: 2009–2011 Mellon Postdoctoral Fellowship in the Humanities, University of California, Berkeley, and Andrew W. Mellon/ACLS Recent Doctoral Recipients Fellowship (declined)
- Karin Oen: Summer Study Grant from MIT's Center for International Studies
- Neri Oxman: 2008 Earth Award
- Sarah Rogers: 2009–2010 Terra Foundation for American Art Fellowship, Smithsonian American Art Museum
- Norihiko Tsuneishi: Fulbright Graduate Student Grant renewed for 2009–2010
- Tijana Vujosevic: Doctoral Studies Project Grant, Gerda Henkel Stiftung (International Foundation for the Historical Humanities), Düsseldorf
- Mechtild Widrich: Charlotte Newcombe Doctoral Dissertation Fellowship for 2009–2010 from the Woodrow Wilson Fellowship Foundation
- Winnie Wong: Mellon/ACLS Dissertation Completion Fellowship for 2009–2010

Yung Ho Chang
Department Head
Professor of Architecture

More information about the Department of Architecture can be found at <http://architecture.mit.edu/>.