

Department of Architecture

In 1865, William Ware, the first professor of architecture at MIT, said, “It is the aim of this School to do what it can, in its day and generation, to ensure that the architecture of the future shall be worthy of the future.” This timeless mission statement has been guiding the department for 150 years, bringing scholarship, research, and design to bear on the world’s great challenges. To this day, the Department of Architecture is committed to a critically engaged, socially progressive, technologically advanced, and culturally meaningful vision of the built environment—and it has grown to include the fields of architecture, art, design, urbanism, building technology, design computation, history, theory, and criticism.

The MIT Department of Architecture is committed not only to a deep understanding of culture and contexts, critical thinking, and new knowledge production, but also to producing creative and constructive acts which make the world a better place. Architecture faculty and students work in the fields of affordable housing, public infrastructure, disaster resilience, community spaces, displacement and migration, the environment, and architectural heritage. Often, they work at the intersection of academia, government, and industry, to design solutions for current and future problems on all scales.

The department’s highly ranked programs include the Master of Architecture (MArch); Master of Science in Architecture Studies (SMArchS); Master of Science in Art, Culture and Technology (SMACT); Master of Science in Building Technology (SMBT); and the Doctor of Philosophy (PhD) with concentrations in building technology (BT), design and computation (COMP), and history, theory, and criticism of architecture and art (HTC). Undergraduates can earn a Bachelor of Science in Architecture (BSA) or a Bachelor of Science in Architecture Studies (BSAS) and can minor in architecture; design; history of art, architecture, and design; and art, culture and technology. This academic year, departmental revisions to the BSAS degree were approved, creating the Bachelor of Science in Art and Design (BSAD), which will accept majors starting in AY2019.

Committed to a robust understanding of design, research, and scholarship, MIT Architecture comprises five discipline groups: Architecture and Urbanism (A+U); Building Technology (BT); Design and Computation (COMP); History, Theory, and Criticism (HTC) with the Aga Khan Program in Architecture (AKPIA); and Art, Culture and Technology (ACT). The department also includes several labs: the Urban Risk Lab, the Prototypes of Prefabrication Laboratory (POPlab), the Self-Assembly Lab, the Sustainable Design Lab, the Future Heritage Lab, and the Infrastructure Architecture Lab (MIT/IAL). We are committed to excellence across the six degrees offered in the department, as well as ambitious collaborations across these areas in the department, School of Architecture and Planning, Institute, and beyond.

The Department of Architecture is one of the four founding departments at MIT, and the oldest school of architecture in the United States. Fall 2018 marks the 150th anniversary of the first course in architecture offered at MIT. Our aim in celebrating the founding is not only to learn and celebrate our history but also to position our future. From fall

2018 through spring 2019, the MIT Architecture community will celebrate this milestone to reflect on the past and to envision the future of architectural education at MIT and around the world. The department is hosting several regional alumni events throughout the next year to share current student and faculty work with alumni and to hear their updates and reflections on MIT. The first alumni event was in Hong Kong in January 2018 and the second in New York City in June 2018. Through these events, we are reconnecting with our alumni and our history to create a better future.

Recognition

MIT Architecture's standing has been recognized in recent years both nationally and internationally. For the fourth year in a row, the QS (Quacquarelli Symonds) World University Rankings ranked MIT number one for architecture and the built environment and number four for art and design. In addition to the international QS ranking, the professional Masters of Architecture program has consistently been ranked in the top five schools nationally by DesignIntelligence. The doctoral programs lead their disciplines, consistently, winning their top-choice PhD candidates against better-funded competition.

Department Structure and Personnel

Architecture Design and Urbanism

For clarity, personnel in A+U are grouped below into Architecture Design (AD) and Urbanism (URB), based on their primary teaching roles in either the MArch/ SMarchS AD/BSA studio sequence and programs, or the SMarchS URB program.

Architecture Design:

- Professors Antón García-Abril, Sheila Kennedy, Andrew Scott, J. Meejin Yoon
- Associate Professors with tenure Mark Goulthorpe, Ana Miljački (on leave in spring), and William O'Brien
- Assistant Professors Joel Lamere (on leave in fall), Skylar Tibbits (AD/COMP joint appointment), and Brandon Clifford (on leave all year)
- Professors of the Practice Yung Ho Chang (on leave), Philip Freelon (on leave)
- Associate Professor of the Practice Marc Simmons
- Belluschi Lecturer Cristina Parreño Alonso
- Lecturers Lorena Bello Gomez, Jeremy Jih, and Lucy Siyao Liu
- Visiting Professors Angelo Bucci, Yolande Daniels, Cristina Goberna, Florian Idenburg, Christoph Kumpusch, Jennifer Leung, Michael Maltzan, Robert Mohr, Pratik Ravel, Rachely Rotem, and Rami el Samahy
- Design Minor (D-Minor) Instructors Marcello Coelho, Glen Cummings, Irene de la Torre, Christophe Guberon, Lee Moreau, Jessica Rosenkratz, and Richard Thé
- Technical Instructors Christopher Dewart and Justin Lavallee
- Teaching Fellows Sam Ghantous and Nick Pacula
- Research Scientist John Klein

Urbanism:

- Professors Adèle Naudé Santos, Hashim Sarkis, Anne Spirn (joint appointment with the Department of Urban Studies and Planning)
- Research Associate Reinhard Goethert

Arts, Culture and Technology

- Professors Judith Barry and Renée Green (on leave in spring)
- Associate Professor with tenure Gediminas Urbonas
- Associate Professor without tenure Azra Akšamija
- Assistant Professor Nida Sinnokrot
- Professor without tenure (retired) Joan Jonas
- Lecturers Lara Baladi, Mario Caro, Marisa Jahn, Laura Knott, Lars Bang Larsen, Lucy Siyao Liu, Tobias Putrih, Rasa Smite, and Raitis Smits

Building Technology

- Professors John Fernández (on leave all year, director of the MIT Environmental Solutions Initiative), Leslie Norford, John Ochsendorf (on leave all year, director of the American Academy at Rome), and Christoph Reinhart (on leave in spring)
- Assistant Professor Caitlin Mueller
- Professor post-tenure Leon Glicksman
- Lecturers Ben Markahm, Josphine Carstensen, and Carlos Davila Cerezo

Computation

- Professors Terry Knight and George Stiny
- Associate Professors with tenure Takehiko Nagakura and Lawrence Sass
- Assistant Professor Skylar Tibbits (AD/COMP joint appointment)

History, Theory and Criticism of Architecture and Art with the Aga Khan Program in Islamic Architecture

- Professors Mark Jarzombek, Caroline Jones, Nasser Rabbat (AKPIA), and James Wescoat (joint appointment with HTC/AKPIA/URB)
- Associate Professors with tenure Arindam Dutta and Kristel Smentek
- Associate Professors without tenure Timothy Hyde and Lauren Jacobi
- Lecturers Kurt Forster (spring) and Rebecca Uchill

Leadership

Yoon completed her fourth year as department head. Scott and Norford served as associate department heads. Academic program directors were Miljački (fall MArch) and Scott (spring MArch), Norford (undergraduate), Knight and Reinhart (SMArchS), and Urbonas (fall SMACT) and Barry (spring SMACT). Kennedy served as chair of the Committee on Graduate Students and as graduate officer. Discipline groups were led by Urbonas (fall ACT), Barry (spring ACT), Miljački (fall MArch AD), Scott (spring MArch AD), Kennedy (SMArchS AD), Rabbat (AKPIA), Reinhart (fall BT), Norford (spring BT), Nagakura (COMP), Dutta (HTC), and Wescoat (URB). Wescoat was also the co-director of the Leventhal Center for Advanced Urbanism (LCAU).

Faculty Promotions and Appointments

The department welcomed Professor Judith Barry and Assistant Professor Nida Sinnokrot to the Art, Culture and Technology faculty, and Associate Professor of the Practice Marc Simmons to the Architecture Design faculty. Assistant Professors Caitlin Mueller and Rania Ghosn were promoted to associate professor without tenure.

In addition, three faculty members were honored with chairs or named professorships: Skylar Tibbits, Inaugural Sherman Fairchild Career Development Chair; Mariana Ibañez, Class of '56 Career Development Chair; and Terry Knight, Rogers Chair.

This year, Architecture launched two new named fellowships, Pietro Belluschi Teaching Fellowship and Marion Mahoney Emerging Practitioner Fellowship, and received 73 applications for the Belluschi and 63 for the Mahoney fellowships. Hans Tursack was hired as the Pietro Belluschi fellow and Rosalyn Shieh as the Marion Mahoney fellow.

Funding

Collectively, our faculty is increasing the scope and impact of their research. Incoming sponsored research has doubled over the last three years, yielding over \$7 million of research funding and bringing more financial support and opportunities to our students.

Skylar Tibbits received a \$982,000 grant from Advanced Functional Fabrics of America for shape-shifting, climate-adaptive garments, a \$771,000 grant from the Defense Advanced Research Projects Agency for instant and reversible barriers through granular jamming, a \$190,000 grant from various sources for a multi-sponsored consortium, and a \$149,000 dollar grant from SNCF Mobility for continued research in his Self-Assembly Lab.

Miho Mazereeuw and the Urban Risk Lab received a \$2.37 million grant from the Federal Emergency Management Agency (FEMA) to further their work on designing risk reduction and preparedness into planning and public spaces. She also received a \$190,000 grant from the Singapore University of Technology and Design for design with the developing world

Takehiko Nagakura received a \$200,000 grant from the Singapore University of Technology and Design for the sustainable built environment.

Christoph Reinhart received a \$270,000 grant from Exelon Corporation for the Chicago Energy Bazar, a \$165,000 grant from the King Abdulaziz City for Science and Technology

for water, food, and energy use in urban dwellings, and a \$125,000 grant from the North American Philips Corporation for the development of urban worker personas.

Sheila Kennedy was awarded the MIT Bose Award for \$500,000 and the MQDC Grant for \$1.1 million with Professor Michael Strano (Chemical Engineering).

John Klein received a \$310,000 grant from the US Department of Agriculture for work on Mass Timber Affordable Housing.

Master of Science in Architecture Studies Program

The SMArchS program is organized into six areas of study according to the department's discipline groups. Knight and Reinhart finished their third year as co-directors. Their main goals continue to be strengthening the program's visibility outside MIT, fostering research across discipline groups, and further increasing student funding.

SMArchS students form a tight community and regularly organize department-sponsored dinners, which foster dialogue among discipline areas and provide a platform for exchange with administrators and faculty. The two main events every year are pre-thesis and thesis reviews in December and May during which SMArchS research is presented to critics from within and outside of the Institute. This year's spring thesis reviews were particularly well-organized and well-attended, and external reviewers commented on the consistently high quality, rigor, and depth of the work.

In AY2018, there were minor changes to the SMArchS curriculum. The required Architecture Studies Colloquium (4.221/4.s24) subject was revised. Credits were reduced to three and the class was structured as a forum where second-year students presented their research to the first-year students as a way of introducing the nature of SMArchS research and receiving feedback on their work. In addition, there were substantial changes in the SMArchS Urbanism curriculum, including: Urban Design Studio (4.163J) replacing Introduction to Urban Design Studio (4.162); and Contemporary Urbanism Proseminar: Theory and Representation (4.228/4.S26) replacing Urban Design Theory (4.225). In the spring, first-year students were given the choice of taking Urban Design Studio (4.163J) or Option Studio (4.154) or an urban design workshop, with the choice as a one-year experiment for students who entered the program in September 2017.

Master of Architecture Degree Program

The MArch program is a professional degree program which integrates critical thinking and design with advanced technical tool sets to prepare students to contribute meaningfully to the field—be it through practice, teaching, or research. This past year, Miljački (fall 2017) and Scott (spring 2018) directed the program.

There were no major changes to the MArch curriculum this year, as the program focused on implementing changes produced in the curriculum last year, as well as on coordinating between all discipline groups contributing to the MArch program. In addition to the Pre-Orientation Workshop (POW) conducted in the summer of 2017, there was a less formal workshop for MArch students in need of additional skilling-up after their first semester, during the Independent Activities Period.

Undergraduate Degree Programs

The Bachelor of Science in Architecture and Bachelor of Science in Architecture Studies programs are broad non-professional degree programs that prepare students for either a graduate professional degree program in architecture or a related field in design, building technology, computation, history, or art and technology. Undergraduates can minor in architecture; design; history of art, architecture, and design (Humanities, Arts, and Social Sciences [HASS] minor); and art, culture and technology (HASS minor). Norford resumed his position as the Course 4 undergraduate officer. O'Brien performed in the new role of undergraduate architecture design studio coordinator, assisting Yoon in curriculum development, and selecting and guiding studio instructors. Faculty members who served as undergraduate advisors included Akšamija, Fernández, Knight, Mueller, Norford, O'Brien, Sass, Smentek, Spirn, Stiny, and Wescoat as well as Manager of Special Projects Paul Pettigrew.

This year, the department proposed revisions to the 4B degree and a name change to the Bachelor of Science in Art and Design (BSAD), which was approved by the Committee on Curricula. Majors will be accepted into the BSAD starting in academic year 2019. Knight chaired the proposal committee and will act as coordinator for the new program.

The design minor, launched by the department in AY2017, continued in strength, fluctuating between second and fourth most popular minor at the Institute this year with 51 students (14% of all minors). Knight continues to serve as the design minor coordinator.

Department of Architecture Admissions and Enrollments

This year, the department experimented with a new approach to the fall open house by replacing it with three online web forums. The number of attendees and ensuing applications numbers were similar, so these online forums will continue to be offered.

For the SMArchS program, admissions applications were slightly up from last year, with selectivity and yields high. The diversity statistics show continuing high international student numbers (85% international applications, 70% international enrolled) and approximately equal gender numbers. Underrepresented minority (URM) numbers were low this year (17 (4%) URM applications, one URM accepted, none enrolled).

For the MArch program, admissions were highly competitive with the highest number of applicants and an acceptance rate of 10%: 588 applications, 24 targeted, 67 admitted, and 33 enrolled. Diversity statistics show good international student numbers (48% international enrolled), with an unprecedented ratio of men and women (11 men, 22 women), and 12% URMs.

In academic year 2017–2018, six students graduated from the 4B/BSAS program and three from the 4/BSA. A total of 17 students were enrolled in both programs.

As of fall 2017, Course 4 counted a total of 17 undergraduate majors, 51 undergraduate minors, and 228 graduate students. Graduate students were enrolled as follows: 104 MArch; 60 SMArchS; seven SMBT; 11 SMACT; 39 resident PhD; and eight non-resident PhD.

Lectures, Conferences, Symposium

The 2017–2018 lecture series focused on the agency of architecture and brought together speakers to discuss possible forms and scales of action across scholarly, professional, and research-based work. The department lecture series hosted Boris Groys, Beatriz Colomina and Mark Wigley, Alison Brooks, Christian Kerez, Ananya Roy, Cristina Goberna, Damon Rich and Jae Shin, Jonathan Massey, Yolande Daniels, and Manuelle Gautrand.

Leslie Robertson of SawTeen See presented the Edward and Mary Allen Lecture in Structural Design. Francis Kéré presented the 28th Arthur H. Schein Memorial Lecture. Francisco Aires Mateus presented the 23rd Pietro Belluschi Lecture. Thomas Auer and Stefan Behnisch co-presented the Ahmad Tehrani Mini-Symposium. The department also co-hosted the Association for Computer Aided Design in Architecture (ACADIA) keynote lecture by Thomas Heatherwick.

Faculty from Architecture and from Urban Studies and Planning came together to discuss the legacies of discrimination in the built environment with Garnette Cadogan, Dayna Cunningham, Mark Jarzombek, and Justin Steil; and also co-hosted a conversation on implementing gender neutral bathrooms with Shiona Heru and Joel Sanders.

ACT held a year-long celebration of the 50th anniversary of the internationally renowned MIT Center for Advanced Visual Studies (CAVS) this year, with events and exhibitions featuring both faculty and alumni.

In fall 2017, the department hosted the annual conference of the Association for Computer Aided Design in Architecture, with more than 300 participants. The conference included three days of events and an exhibition in the Building 9 lobby and was preceded by a hackathon and workshops. The event was co-chaired by Professors Tibbits and Nagakura.

In spring 2018, PhD candidates Irmak Turan and Jessica Varner organized the Climate Change Conference. Students in HTC hosted the 40th New England Society of Architectural Historians Student Symposium.

In spring 2018, the Leventhal Center for Advanced Urbanism hosted its third biennial conference on housing, called Housing+. The conference included two days of presentations and panels, as well as an exhibition in the Media Lab.

The Architecture Student Council continued its Dinner with the In-Laws series. The events in fall 2017 included “Traumatic Memorial” with Professors Akšamija, O’Brien, and Yoon, and moderator Huma Gupta; “Whiteness” with Professors Miljački, Rabbat, and Sass, and moderator Jessica Varner; and “Terms of Work” with Professors Ibañez and Kennedy, Lecturer el Samahy, and moderator Professor Hyde. In spring 2018 the conversations included “Displaced” with Professors Tibbits and Wescoat, guest Garnette Cadogan, and moderator Danniely Staback; “Copy/Paste” with Professor Ibañez, Lecturer Kumpusch, and moderators Sam Ghantous and Mackenzie Muhonen; and “Practice” with Lecturers Yolande Daniels and Cristina Goberna, researcher John Klein, and moderators Nick Pacula and Sam Ghantous.

The MIT National Organization of Minority Architecture Students (NOMAS) chapter brought Kathleen James-Chakraborty in the fall and organized additional student conversations in the spring.

Departmental Publications and Exhibitions

Manager of publications and exhibitions Irina Chernyakova produced and oversaw six exhibitions in the Keller Gallery: “Code of Ethics” with Professor Akšamija (11/2017); “Projecting Architecture” with Duygu Demir (12/2017); “Exploring the Mechanics of Representation” with SMArchS student Jonah Ross-Marrs (01–02/2018); “The Wind Egg” by Haseeb Ahmed with the ACT (03/2018); “Climate Changed: After Models?” with PhD candidates Irmak Turan and Jessica Varner (04–05/2018); and “Architectural Assemblies” with Professor Simmons, researcher Klein, and MArch students (06–08/2018).

In addition, Chernyakova produced and oversaw the second exhibit of undergraduate work from the undergraduate Architecture and Design minor courses in the Rotch Library (04–06/2018) with Teaching Fellows Ghantous and Pacula, and a School of Architecture and Planning thesis exhibit in Lobby 9 (06–09/2018).

In spring, students Eli Keller and Anne Graziano completed the journal, *Thresholds 46: Scatter*, to be distributed by MIT Press.

Student Departmental Awards

The department recognizes the accomplishments of continuing and graduating students with awards. This year, Architecture honored:

- Brandon Sanchez (Leon B. Groisser Undergraduate Travel Fellowship)
- Alina Nazmeeva (Julian Beinart Research Award)
- Natalie Bellefleur and Sridipta Ghatak (Schlossman Research Fellows)
- Malcolm Rio and Gideon Schwartzman (Louis C. Rosenberg (1913) Travel Fellowship)
- Cristina Clow (Ann Beha Travel Fellowship)
- Katherine R. Weishaar (William Emerson Prize)
- June Kim and Brandon Sanchez (Course 4 Undergraduate Thesis Award)
- Andrew J. Brose (Tucker Voss Award)
- Elizabeth S. Browne (Kristen Ellen Finnegan Fund Award)
- Stratton Coffman (Sydney B. Karofsky '37 Prize)
- Dalma Foldesi and Sarah Wagner and Emily Whitbeck (Marjorie Pierce/Dean William Emerson Fellowship Award)
- Andrea Baena (Rosemary D. Grimshaw Award)
- Danniely A. Staback and Olivia F. Huang (Alpha Rho Chi Medal)
- Maya Shopova (Special Faculty Recognition Award for Design Excellence)

Sean M. Phillips (Special Faculty Recognition Award for Academic Excellence)

Zain Karsan (Arthur Rotch Prize)

Mary Lynch-Lloyd, Ching Ying Ngan, and Maya Shopova for a joint thesis
(Course 4 Thesis Award)

Martin Elliott (Imre Halasz Thesis Prize)

Jonathan Fidalgo and Tyler Swingle (American Institute of Architects Henry Adams Medal and Certificate of Merit)

Giovanni Bellotti, Kathleen S. Hajash, and Suheyyla Takesh (Master of Science in Architecture Studies Prize for Thesis)

Zachary Cohen (Arthur Rotch Special Prize)

External organizations also recognize students with awards and prizes, including:

Mackenzie Muhonen (The Kohn Pederson Fox Travelling Fellowship)

Nicolas Kisic Aguirre (Second Prize, Harold and Arlene Schnitzer Prize in the Visual Arts)

Gary Zhexi Zhang (Honorable mention, Harold and Arlene Schnitzer Prize in the Visual Arts)

Jessica Varner and Emily Watlington in HTC (Fulbright Award)

Stephanie Lee and Ellen Shakespear for founding Spaceus (MIT Creative Arts Competition)

Also, 'Ty Austin, SMArchS '18, was awarded the Mens et Manus Award, Karl Kompton Prize, and Office of Graduate Education Ambassador Award for his work in founding and chairing the MIT Graduate Student Council Diversity and Inclusion Committee.

'The information below includes personnel, faculty activities, and notes from each discipline and program group.

Architecture and Urbanism Discipline Group

Miljački (fall) and Scott (spring) were directors of the Architecture and Design group. Wescoat was director of the Urbanism group.

The SMArchS Urbanism program had a creative year of design workshops, curricular experimentation, and active involvement with the LCAU Housing+ biennial exhibition and conference. The program was led by Santos. The new curriculum included a course on contemporary urban design theory and representation developed by Ghosn. The Urbanism joint studio, led by Segal and Professor Alan Berger (Department of Urban Studies and Planning (DUSP)), focused on urban coastal planning and design in the context of sea level rise. Working closely with LCAU, the urbanism program helped launch five concurrent Housing+ design workshops in China, India, Brazil, and Colombia. A second set of design workshops followed during Independent Activities Period (IAP) in Guyana, Peru, and India. Faculty leaders included professors and lecturers García-Abril, Law Adams, Bello Gomez, Kennedy, Brent Ryan (DUSP), Santos, Segal, and Wescoat.

The next step is to institutionalize a Housing+ studio within the urbanism curriculum. At the doctoral level, the Departments of Architecture and Urban Studies and Planning approved a new doctoral studies program supported by the Leventhal Center.

Two buildings by Kennedy's firm, Kennedy and Violich Architecture (KVA) Matx, opened during AY2018: the Institute for Data Sciences at the University of Rochester and Grays Hall, Office for Equity, Diversity, and Inclusion at Harvard University. The firm's Tozzer Anthropology Building (also at Harvard) received the Hobson Award for Design Excellence, the New York City Ferry Terminal received the American Institute of Architects (AIA) Design Award (NY Chapter), the Institute for Data Sciences at the University of Rochester received the United States National Brick Industry Gold Craft Award, and the Global Flora Botany Research Building at Wellesley College received the North American Lafarge Holcim Bronze Award for Design Excellence.

Scott continues design research, studio teaching, and development of design projects on the topic of urban housing and issues of affordability. Research includes the varying economic phenomena impacting major US cities, the scale of prefabrication infill systems that respond to suburban densification, and contemporary models for new forms of low carbon "urban living" and housing in cities, including the deployment of sustainable, mid-rise, mass timber technologies.

García-Abril has lectured in locations including the new Liangzhu campus of the China Academy of Art; Milan Architecture Week; AIA Billings, University of North Carolina (as the CriticalMASS Distinguished Visiting Critic); University of Houston; Cornell University; University of Michigan; Pratt Institute; and at the Design Indaba Festival in Cape Town, South Africa. Ensamble Studio's (García-Abril's practice) latest project, Ca'n Terra, was featured in *GA Houses*, volume 157. Their work was also featured in *Revista PLOT, GA*. The studio's project at Tipper Rise Art Center was nominated for the Mies Crown Hall Americas Prize.

Ghosn's practice, Design Earth, was invited to exhibit in Dimensions of Citizenship at the United States Pavilion at the 2018 Venice Biennale, with their project "*Cosmorama*." Their book, *Geostories: Another Architecture for the Environment*, was published by Actar and featured among *Metropolis Magazine's* spring book selections. *Geostories* was also presented as a solo-show exhibition at Cooper Union, and Ghosn's work was included in "Eco-Visionaries" at the Museum of Art, Architecture and Technology in Lisbon, Portugal, and "Let's Talk about the Weather" at Guangdong Times Museum in Guangdong, China.

Miljački's *Terms of Appropriation: Modern Architecture and Global Exchange*, co-edited with Amanda Reeser Lawrence, has been published by Routledge, as was the third book accompanying the OfficeUS project from the 2014 Venice Biennale of Architecture, the *OfficeUS Manual* published by Lars Mueller. Miljački lectured at Cooper Union; presented a paper at the European Architectural History Network in Tallinn, Estonia; and started the Architecture Broadcasting Lab, supported by the Center for Architecture, Science and Technology CAST Mellon and HASS grants. The "Slowgramming Tokyo" exhibition, produced with students in a workshop at Tokyo Tech, was on show in January and February of 2018.

O'Brien's project, "House of Horns" received *Architect Magazine's* Progressive Architecture Award for single family, new construction. His practice was profiled in *MIT Spectrum* in fall 2017.

Segal's *Space Packed: The Architecture of Alfred Neumann* was published by Park Books, Zurich, and he has been lecturing extensively on it. He organized two exhibitions on the work of Alfred Neumann as well, at the National Technical Library in Prague and at the Brno House of Arts in Vienna. Segal's project "Bight: Coastal Urbanism" was part of a group exhibition in the 2018 Venice Biennale. His firm has been commissioned to design urban and architectural projects with three kibbutz communities in Israel. The urban studio "Urbanism After Extraction" that he co-taught with Marie Law Adams (DUSP) in spring 2017 was awarded the 2017 Studio Prize by *Architect Magazine*.

Yoon's firm Höweler + Yoon was commissioned to design the Enslaved African American Memorial at the University of Virginia and the new MIT Museum at Kendall Square. Yoon is a 2017–2018 CAST Mellon Fellow for her work on FloatLab. FloatLab has also been awarded an MIT CAST grant and a Center for Advanced Urbanism grant, as well as an honorable mention for the 2018 Progressive Architecture awards through *Architect Magazine*.

Mazereeuw completed Federal Emergency Management Agency Phase I and Phase II reports on FEMA alternative post-disaster housing. She and her Urban Risk Lab have been working on real-time flood mapping projects for both Florida and India (the latter was launched in Chennai in November 2017), as well as on a resilient housing manual for Puerto Rico and UV awareness and indicator products in Singapore.

Clifford has been completing his residency for the Rome Prize in Architecture. His Five Fields Play Structure won a number of awards, including the AIA Small Projects Award, the Boston Society of Architects Small Firms/Small Project honor awards, an *AZURE* magazine AZ award, and an award from *The Architect's Newspaper*. His "Cyclopean Cannibalism" project has been exhibited at the Seoul Biennial, as well as in a group show at the California College of the Arts. Clifford's interactive concrete sculpture produced at the American Academy in Rome was presented in a performance and collaboration with composer Federico Gardella in Rome.

Spirn received the National Design Award: Design Mind, presented keynote lectures at the Canadian Society of Landscape Architects and the Washington Society of Landscape Architects. Her new film, *Marnas: A Journey Through Space, Time, and Ideas*, premiered at the Royal Danish Academy of Fine Arts and has been launched as a website as well.

Tibbits co-organized the ACADIA 2017 conference at MIT, held a solo exhibition of his lab's work at Patrick Parrish Gallery in New York, and participated in group exhibitions at the Milan Salone, Cooper Hewitt Smithsonian Design Museum in New York, and the Victoria and Albert Museum in London. He won the Ars Electronica STARTS prize with his colleagues at ETH Zurich, the Beazley Digital Design of the Year Award from the London Design Museum, and Swiss Design Award 2018 for Rapid Liquid Printing with Christophe Guberan.

Parreño Alonso's "Transparent Muqarnas" was on exhibit at the Sharjah Art Museum as part of the Sharjah Islamic Arts Festival 2017–2018. She was a resident at the Autodesk Build Space and, together with Lamere, she chaired the Projects section of ACADIA.

Bello Gomez led two workshops with the Leventhal Center for Advanced Urbanism as part of the Housing+ Biennial. Her work with students was presented at the Biennial Conference and Exhibition.

Ibañez, with her firm Ibañez Kim, presented the "Strange Weather" installation at the Seoul Biennale of Architecture, contributed to the "Souvenirs" exhibition at Storefront for Art and Architecture in New York City, completed the Balance Patch Gaming Café in Boston, and began construction on the DaMa housing project in Buenos Aires. She was in residency at the Autodesk Build Space and also lectured at Princeton University, Ryerson University, and University of Calgary.

Wescoat's research this year has concentrated on water research in the state of Maharashtra, India, with support from an MIT Tata Center grant; in Gujarat, India with the Aga Khan Agency for Habitat; and in the United Arab Emirates with the Masdar Institute and colleagues in mechanical and electrical engineering. He published peer-reviewed articles, including: "Socio-Hydrology of Channel Flows in Complex River Basins: Rivers, Canals, and Tributaries in Punjab, Pakistan," in *Water Resources Research* and "Visualizing Peri-Urban and Rurban Water Conditions in Pune District, Maharashtra, India" in *Geoforum*. He is serving as a member of the National Research Council Committee on Urban Flooding in the United States.

Klein recently received the 2018 Wood Innovation Grant from the US Department of Agriculture to demonstrate a mass timber affordable housing prototype for large-scale urban deployment.

Arts, Culture and Technology Discipline Group

Urbanas ended his tenure as ACT director in December, and Barry became ACT director in January.

The MIT Program in Art, Culture and Technology is a discipline group and an academic program within the Department of Architecture, and a center for artistic research and practice within the School of Architecture and Planning. ACT is headed by distinguished artist-professors and supported by a dynamic cast of practitioner graduate students and staff, visiting artist-lecturers, fellows, affiliates, and guests. Through an integrated approach to pedagogy, hosting of visiting artists and research affiliates, public event programming, and publications, ACT builds a community of artist-thinkers around the exploration of art's complex connections to culture and technology. The program's mission is to promote leadership in critical artistic practice and deployment, developing art as a vital means of experimenting with new registers of knowledge and new modes of valuation and expression—continually defining the scope and potential of artistic research and the learning environment.

During AY2018, ACT hosted 16 programmatic activities focused on the celebration of the 50th anniversary of the Center for Advanced Visual Studies, five lectures as part of its

Monday Night Lecture Series, nine lunch-hour presentations, five public programs, and one international symposium. Artist and educator Barry was hired in July and Sinnokrot joined ACT. Faculty were active domestically and internationally giving lectures and producing work for group and solo exhibitions. ACT received approximately \$220,000 in foundation, corporate, and private support for its activities.

In spring 2018, eight of 82 applicants to the graduate program were accepted and five were waitlisted. ACT targeted an entering class of six students. Six of the eight admitted students accepted their offers.

Building Technology Discipline Group

The directors of the Building Technology group were Reinhart (fall 2017) and Norford (spring 2018), with directorship reverting back to Reinhart in the summer.

Building Technology offers students the opportunity to explore critical topics for the future of the built environment and natural resources. The program explores ways to use design and technology to create buildings that contribute to a more humane and environmentally responsible built world. Several MIT Building Technology faculty recently led and completed a four-year funded research project on smart city modeling through the MIT Portugal Program. The project involved a close collaboration with the Department of Civil and Environmental Engineering at MIT and the Technical University of Lisbon. Norford, along with (co-PIs) Professors Steven Leeb (MIT Department of Electrical Engineering) and Reinhart, completed a three-year flagship project with the Masdar Institute of Technology and Design on outdoor comfort and building energy efficiency in desert climates. BT faculty continue to attract support from the larger MIT funding ecosystem, including the Tata Center for Technology and Design, the Center for Complex Engineering Systems at MIT and King Abdulaziz City for Science and Technology, the HKUST-MIT Research Alliance Consortium, and the Environmental Solutions Initiative, as well as the Philips Grand Challenge seed grants. In addition, industry fellowships from leading architecture firms, including Behnisch Architekten and HOK, continue to strengthen the program's ties to industry.

For the second time, the MS in Building Technology thesis students were invited to participate in the end-of-term thesis reviews May 2018. Their presentations were scheduled together with the BSAS, MArch, and SMArchS thesis reviews, including attendance by outside critics.

Leon Glicksman won the MIT 2018 Student Champion Award for First Year Advising.

In November 2017, Reinhart was awarded a Fraunhofer Bessel Research award from the Alexander von Humboldt Foundation for his research accomplishments. He spent the spring 2018 term on sabbatical at the Fraunhofer Institute for Solar Energy Systems in Germany. In June, Reinhart was awarded an Arup Global Research Challenge 2018 grant.

Fernández completed year three of a five-year term as director of MIT's ESI.

Ochsendorf completed the first year of a three-year professional leave from MIT to serve as the director of the American Academy in Rome.

Design and Computation Discipline Group

For AY2018, Nagakura served as group director.

This group's goal is to extend the boundary of research and education in computation and spatial designs, especially in collaborations with relevant industries and academic entities. This year, Knight and Nagakura started a virtual reality classroom initiative. The lecture series was organized by Knight and students Moa Carlson and Athina Papadopolou, and it focused on computing landscapes in the fall and affective bodies and sentient matter in the spring, with lectures by Shannon Mattern, Dana Tomlin, Daniel Cardoso, Mark Paterson, Don Ihde, and Behnaz Farahi. The group also hosted two visiting scholars, Takuro Kikuchi from Takenaka Research Institute in Japan, and Gabriela Celani from the University of Campinas in Brazil.

Knight led a workshop in the winter at Universidad Adolfo Ibáñez in Chile, was the keynote speaker for Schwerpunkte 6 in ETH Zurich this spring, and organized the "Design, Technology and Society" session at the Design Research Society International Conference in Ireland in the summer. Her book chapter "Craft, Performance, and Grammars" was published in *Computational Studies on Cultural Variation and Heredity*.

Sass exhibited at Housing+, the LCAU third biennial on housing, and presented "Rebuilding the Supply of Affordable Housing" at the Media Lab in June.

Nagakura presented keynotes and lectures at the Architecture Media Politics Society Conference in Istanbul, the New Jersey Institute of Technology, and the Association for Asian Studies Annual Conference in Washington, DC. His work "AR mail from Harbin" was installed at the ACM SIGGRAPH in Los Angeles and won Best App Award of 2018 from the Cultural Heritage New Technology Conference and runner-up for 2017 Best Augmented or Mixed Reality Experience. He presented papers at Cultural Heritage New Technology in Vienna, eCaade in Rome, ACADIA at MIT, and the 5th International Visual Methods Conference in Singapore. In addition, he garnered new funding from the Singapore National Research Foundation (\$6 million SGD for the team of nine professors) and the Simonos Petra Monastery gift (\$65,000).

History, Theory and Criticism Discipline Group

Arindam Dutta served as director of the program for academic year 2017–2018.

The History, Theory, and Criticism of Architecture and Art program aims to produce leading-edge scholars and intellectuals in the field of art and architectural history. The group places a strong emphasis on historiography and analytical methodologies. The faculty members explore the history of art and architectural works, the shifting attitudes towards their interpretation, and the geopolitical pressures on their appearance, preservation, and disappearance. History, Theory and Criticism faculty continued to teach, publish, and participate in key department and Institute events. All of the faculty traveled widely across the world to deliver lectures, chair conference panels, and serve as editorial board members.

The newly revised PhD guidelines were tested and deliverables from students were strengthened by the new subject numbers in place, particularly for the crucial

examination period in the third year. While it is too soon to have data on a degree completion rate increase for the PhD, these curricular changes went forward successfully.

Dutta was invited to teach studio at the Columbia University Graduate School of Architecture, Planning and Preservation in the fall.

Smentek and Hyde collaborated and contributed to the new design minor initiative with their course Design: The History of Making Things.

Jarzombek continued his work with the Mellon Global Architectural History Teaching Collaborative, with funding from the dean of the School for Architecture and Planning, and others. He also organized a tour to Sri Lanka over the Independent Activities Period and led HTC students, faculty, and alumni participants in visiting key architectural sites.

Jones received a National Humanities Fellowship for 2017–2018, in addition to a fellowship at the Max Planck Institut für Wissenschaftsgeschichte /Max Planck Institute for the History of Science in Berlin.

Several HTC participants, both current and former, represented MIT in May 2018 at the Venice Architecture Biennale as part of the US Pavilion.

HTC PhD candidates Jesse Feiman and Albert José-Antonio López spent the year as Fulbright Scholars in Austria and Mexico respectively.

Aga Khan Program for Islamic Architecture

Rabbat continues to be the director of AKPIA at MIT.

AKPIA is recognized as an academic leader in the study of architecture and urbanism in the Islamic world. Sustaining and reinforcing this standing is our main goal. AKPIA continued to recruit promising students and postdoctoral researchers and improve the curricular content of its two programs of concentration in Islamic architecture and urbanism in the SMArchS program and the PhD program in HTC. AKPIA also sponsored various activities in the department including a lecture series which invited six speakers in AY2018; the post-doctoral program which had two visiting scholars; and a travel grant program open to all students in the School of Architecture and Planning. AKPIA also financially supported two students in the SMArchS urbanism and MCP program whose work bears directly on issues of interest to the Islamic world's urbanism.

AKPIA organized two events in spring 2018: a book launch and roundtable discussion called Modern Art in the Arab World: Primary Documents, as well as a symposium "Translating Destruction: Contemporary Art and War in the Middle East" that brought together a lineup of international artists and scholars.

Further integration within the Department of Architecture and the Institute at large is one of AKPIA's foremost objectives. To that end, both AKPIA professors have engaged in a number of long-term, collaborative research projects in the fields of modern art and architecture, urban design and planning, reconstruction and resettlements, heritage protection, and water conservation—both at MIT and with other institutions around the world.

Rabbat finished rewriting his book on the dead cities of Syria, which will be published by the Hamad Bin Khalifa University Press in Doha, Qatar. He was the Louis Kahn Scholar in Residence at the American Academy in Rome this winter, where he gave two presentations on the city of Palmyra. He has published several essays on heritage destruction and reconstruction during AY2018 in *Artforum*, *International Journal of Middle East Studies*, the *MIT Faculty Newsletter*, *Qantara*, and *al-Hayat* newspaper. In April 2018, he gave the prestigious H.A.R. Gibb Arabic and Islamic Studies Lecture at Harvard University. He also co-organized with Suheyla Takesh the symposium “Translating Destruction: Contemporary Art and War in the Middle East” at MIT. This spring, he appeared in the BBC Series *Civilizations*, talking about Islamic calligraphy, mosque architecture, and Ottoman architecture. He also co-founded Global Syria in Paris and was appointed to serve on the Aga Khan Award Steering Committee for 2018–2020.

J. Meejin Yoon

Head

Professor of Architecture