

Program in Media Arts and Sciences

Graduate Program

A total of 138 students—69 master’s candidates and 69 doctoral candidates—were enrolled in the Program in Media Arts and Sciences (MAS) graduate program during the 2009–2010 academic year. The MAS graduate student community included 26 women, 42 foreign students, and five individuals from underrepresented minority groups.

During the year, 35 advanced degrees were awarded (31 master’s and four doctorates). MAS received 657 applications to the graduate program and offered admission to 59 new students (including 13 women), a 9 percent admissions rate. Fifty-two students (including all 13 women) enrolled, an 88 percent yield.

In addition to supervising MAS graduate students, MAS faculty and research staff collectively advised and supported 28 graduate students from other departments, including Architecture, Biological Engineering, Electrical Engineering and Computer Science, Mechanical Engineering, Materials Science and Engineering, and Physics. The program also enrolled students from the Harvard-MIT Division of Health Sciences and Technology.

MAS offered 33 graduate courses during the 2009–2010 year.

Student/Postdoctoral Fellows Honors and Awards

Pranav Mistry, a graduate student in the Fluid Dynamics research group, was included in *Technology Review*’s annual list of outstanding innovators under the age of 35. Mistry was also included in the Forbes India list of Indians of the Year.

Konbit, a tool to help communities rebuild themselves after a crisis by indexing the skills of local residents, was awarded the \$8,000 IDEAS Award sponsored by the Office of the Dean for Graduate Education. Students Greg Elliott (Information Ecology) and Aaron Zinman (Fluid Interfaces) are the project creators.

Another project involving MAS students received a \$3,000 IDEAS award: PerfectSight (postdoctoral fellow Ankit Mohan, with visiting student Manuel Oliveira and visiting faculty member Vitor Pamplona, working with NEC career development professor Ramesh Raskar).

Postdoctoral fellow Riley Crane and graduate students Manuel Cebrian, Anmol Madan, Galen Pickard, and Wei Pan from the Human Dynamics research group bested more than 4,000 other entrants to win the Defense Advanced Research Projects Agency’s Red Balloon Challenge in December.

Graduate student Marcelo Coelho (Fluid Interfaces) and alumnus Jamie Zigelbaum (Tangible Media) were among four winners of the 2010 W Hotels Designers of the Future Award for “Six-Forty by Four-Eighty,” an interactive installation of thousands of graspable, luminescent pixels controlled by remote light brushes.

Master's student Richard The (Design Ecology) was awarded first place in the Harold and Arlene Schnitzer Prize in the Visual Arts.

Graduate student Matt Hirsch's (Information Ecology) BiDi project, in collaboration with postdoctoral associate Douglas Lanman, Ramesh Raskar, and research scientist Henry Holtzman, won second place in the Association for Computing Machinery's student research competition.

Undergraduate Program

Students from the Undergraduate Research Opportunities Program (UROP) continued to represent the largest undergraduate presence at the Media Lab. More than 300 undergraduates from across the Institute participated in a wide variety of research projects, with many of these students pursuing their undergraduate theses under MAS faculty supervision. In addition, the MAS program offered nine undergraduate subjects.

Now in its 12th year, the MAS alternative freshman-year program enrolled 24 students in 2009–2010. These students participated in weekly Media Lab tutorial/laboratory sessions connected with two core freshman subjects, pursued Media Lab UROP projects, and took two MAS undergraduate subjects on design and research, one of which is an option for satisfying part of the undergraduate Communication Requirement. The program has also turned out to be a successful “feeder” program for graduate students: the current MAS graduate student body includes many freshman-year program participants.

Faculty and Staff

David Small, who was appointed as an associate professor of media arts and sciences in 2008, resigned to return to his private design practice.

Professor Barry Vercoe, who was one of the founding members of the MAS faculty, will become a professor emeritus as of July 1, 2010.

Faculty Honors and Awards

Scratch, a children's programming language and online community created by the Media Lab's Lifelong Kindergarten research group, was one of 10 projects selected as a winner in the third Digital Media and Learning Competition, supported by the MacArthur Foundation. Scratch was awarded \$190,000 as Best in Class in the design category.

At the 2010 Consumer Electronics Show, *Children's Technology Review* announced that Scratch won the Kids@Play interactive award in the “Informal Learning” category. LEGO Papert professor Mitchel Resnick won the Kids@Play interactive award in the Pioneer category.

Associate professor Deb Roy and his student Jeff Orkin (Cognitive Machines research group) were awarded a \$144,000 grant from the Singapore-MIT GAMBIT Game Lab for “Collective A.I. for Social Role-Playing Agents.” This grant will fund the development of a new game for behavior capture and generation using technologies from The Restaurant Game project.

Ramesh Raskar’s paper “Looking Around the Corner Using Transient Imaging” received an honorable mention in the Marr Prize—the top honor in computer vision—at the 12th Institute of Electrical and Electronics Engineers (IEEE) International Conference on Computer Vision. The paper’s coauthors were Ahmed Kirmani, Tyler Hutchison, and James Davis.

Toshiba professor Alex (Sandy) Pentland received an award of \$600,000 from the Air Force Office of Scientific Research for “Reality Mining to Understand and Influence Tribes.”

Benesse career development professor Ed Boyden was awarded \$500,000 through the American Recovery and Reinvestment Act (prime sponsor: National Institutes of Health [NIH]). The funds will support a collaborative project with the Massachusetts General Hospital that focuses on finding neural targets that, when modulated, enable more efficacious treatment of pain. He also received two additional awards: one for more than \$200,000 from NIH via Ferro Solutions Inc. for his work on “Wireless Optical Neuromodulation for Motion Disorders” and a second for \$350,000 from the Human Frontier Science Program for “Optical Interrogation of Motor Cortex to Provide Insight into Neuronal Control of Movement.”

AT&T career development professor Leah Buechley received two National Science Foundation awards for her work on computational textiles. One (focused on after-school and classroom programs for disadvantaged youth) is a collaboration with the University of Pennsylvania and Indiana University; the second is a collaboration with the University of Colorado.

New Books

William Mitchell, *Re-Inventing the Automobile: Personal Urban Mobility for the 21st Century*, coauthored with Christopher E. Borroni-Bird and Lawrence D. Burns (MIT Press, 2010)

In Memoriam

It is with great sadness that we report the passing of William J. Mitchell, a professor in our program and former dean of our school. With his death at age 65, we lost a valued member of our community: a prolific author, innovative thinker, and inspirational teacher and mentor. Professor Mitchell was an outspoken advocate for radically transforming infrastructure to create responsive sustainable cities, was a pioneer in advancing computer-aided architecture, and played an instrumental role in transforming MIT’s physical campus. We will miss him greatly.

Mitchel Resnick

Program Head

LEGO Papert Professor of Learning Research

More information about the Program in Media Arts and Sciences can be found at <http://www.media.mit.edu/mas/>.