

Department of Urban Studies and Planning

Highlights

In 2006, the first national study of graduate programs in urban planning in many years ranked MIT's Department of Urban Studies and Planning (DUSP) the best in the nation. Of 94 departments assessed in North America, DUSP was also ranked number one for international development; housing, social, and community development; economic development; and technology. DUSP ranked number two for real estate and number three for environmental planning, land use planning, transportation planning, and urban design. In other words, the department as a whole and every program in it have been ranked among the top three in the country. The rankings were prepared by Planetizen, a public-interest information exchange for the urban planning, design, and development community. Also as testimony to the high quality of our program, the Planning Accreditation Board reaccruited our master's in city planning (MCP) program for an unprecedented seven-year period. Not surprisingly, the number of applications to our MCP program is at the highest level it has been in decades.

Past achievements aside, this has been a busy and productive year. In March we launched the Just Jerusalem competition, which bridged across the MIT campus and the rest of the world. The competition is intended to produce ideas for a just and peaceful future Jerusalem. The public launch event in March featured a keynote address by Columbia professor Ira Katznelson, commentary from members of the international jury who were invited to Cambridge for the occasion, and participation by the project's DUSP-CIS (Center for International Studies) steering committee. The event was covered by the *Boston Globe*, Reuters, AP, the BBC, and a variety of world media outlets. As of June 30, more than 375 individuals from more than 52 countries around the world had registered for the competition on its MIT-based website. Professor Diane Davis is the lead organizer of the Just Jerusalem project.

The Mayor's Institute on City Design took place at MIT for the fifth time. This year's institute brought mayors from seven northeastern US cities together with faculty and outside experts in city planning and urban design. The program aims to develop design consciousness within the leadership of cities and focuses on difficult local issues presented by each of the mayors for discussion and debate. Organized by Professor Mark Schuster, this event is sponsored by the US Conference of Mayors, the National Endowment for the Arts, and the American Architectural Foundation.

The year concluded with the presentation of the biennial Kevin Lynch Award, which recognizes individuals or programs whose exceptional contributions to quality of life and design of cities reflect the spirit of the late DUSP faculty member Kevin Lynch. This year's recipient was the city of Vancouver and planners Ray Spaxman, Larry Beasley, and Ann McAfee, who guided Vancouver's transformation over the past 20 years into a beautiful, highly livable, and economically successful city.

On the academic side, we offered our graduate students a new opportunity to earn a certificate in environmental planning that they can complete in conjunction with either an MCP or PhD degree. Students seeking this new certificate must complete one of several listed subjects in each of six predesignated subfields. We believe that this certificate will enhance the skills (and thus the professional prospects) of our graduates in the environmental field.

On the undergraduate front, we launched CityScope, an initiative funded by the d'Arbeloff Fund for Excellence in Education and crafted by Professor Davis (in her capacity as associate dean) that offers undergraduates an opportunity to participate in hands-on problem-solving exercises in New Orleans. Cotaught by DUSP professor J. Phillip Thompson and architecture professor John Fernandez, CityScope was a highly popular subject that introduced freshmen to the complexities of urban and environmental problem solving in a flood-devastated American city. Students spent time in New Orleans and worked in teams back at MIT to offer innovative solutions that showed an understanding of the relationships among community development, politics, resource scarcities, and the struggle to craft an economically and environmentally sustainable urban future. CityScope's success can be measured by the fact that several freshmen in the class declared a major in planning. Though DUSP continues to have a small number of undergraduate majors, spring 2007 brought a double-digit intake for the first time in decades, suggesting that there may be new possibilities for modest growth in this program.

As for faculty, Judith Layzer was promoted to associate professor without tenure effective July 1, 2007, and Dennis Frenchman was appointed professor effective the same date. We were honored to have two Martin Luther King Jr. visiting faculty members this year: Eugene (Gus) Newport, who conducted the Springfield practicum course with professor of the practice Ceasar McDowell, and Professor William Harris, who taught a course on brownfields redevelopment. We also welcomed two new staff members. Dayna Cunningham became the first executive director of the Center for Reflective Community Practice, and Dr. Robbin Chapman became the School of Architecture and Planning's first manager of diversity recruitment.

In March 2007, the department held a facilitated daylong retreat for the full faculty at the Babson College conference center in Wellesley. The retreat focused on the need to enhance the sense of a department-wide commons, improve the department's visibility within MIT and beyond, and develop more venues for social events and informal gatherings. Postretreat meetings set out ideas for implementing action on these agendas during the 2007–2008 academic year. Much of this is intended to coincide with events and activities associated with the 75th anniversary of planning at MIT, which occurs in 2008.

Faculty Awards

Professor Lawrence Susskind was presented the annual Global Environmental Award by the International Association for Impact Assessment for his work establishing the field of environmental conflict. Professor Anne Whiston Spirn won both a Guggenheim

Fellowship and a Fulbright Senior Specialist Fellowship to Denmark. Professor Richard Sennett won the 2006 Hegel Prize, one of Europe's most coveted honors. Professor Eran Ben-Joseph won a Milka Bliznakov Prize Commendation.

DUSP's Contribution to MIT-wide Efforts

In addition to individual faculty achievements and the projects mentioned above, DUSP contributed to the following MIT-wide efforts: Committee to Assess Environmental Activities at MIT, MIT Energy Initiative, MIT-Portugal Program, New Century Cities, Campus Planning and Urban Ring initiatives, MIT International Advisory Committee, Program on Human Rights and Justice, Teacher Education Program, various MIT International Science and Technology Initiatives (MISTI) programs, and more.

Professors Susskind and Lawrence Vale represented DUSP and the School of Architecture and Planning (SA+P) on the Committee to Assess Environmental Activities at MIT. Much of this year was spent figuring out how to integrate MIT's ongoing efforts to strengthen teaching and research on sustainable development with President Susan Hockfield's new MIT Energy Initiative.

Professors Susskind, Frenchman, Ben-Joseph, Karen R. Polenske, and P. Christopher Zegras were active members of SA+P's Energy Council. This group was established by dean Adèle Naudé Santos to ensure SA+P involvement in the campus-wide Energy Initiative. Working across all units of the school, the council recommended multiyear research and teaching efforts focused on the energy-efficient city. The hope is that SA+P can provide a "demand-side" balance to the supply-side emphasis on the rest of the campus. In addition, the council believes that a focus on patterns of city and regional development can combine with government support of renewable energy sources to reduce reliance on fossil fuels and cut the emission of greenhouse gases.

Professor Zegras is the leader of the Transportation Systems Focus Area of the MIT-Portugal Program, a multiyear research and educational program involving several Portuguese universities and MIT departments.

Professor Frenchman, with Professor William Mitchell of the Media Lab and senior lecturer Michael Joroff, continued a cross-campus interdisciplinary research effort involving design of the Digital Mile in Zaragoza, Spain, as part of the New Century Cities initiative. They also continue to serve on the international advisory committee for the project along with distinguished visiting professor Manual Castells. The Digital Mile will integrate advanced communications and media into the public environment of this ancient Spanish city, resulting in new activities, patterns of work, and urban structure. Students and faculty from DUSP, the Media Lab, the Department of Architecture, and the Center for Real Estate participated in the project, which has been recognized as one of the leading efforts worldwide to design "digital space." Also in Zaragoza, the SENSEable City Laboratory and associate professor of the practice Carlo Ratti worked toward implementing elements of the research as part of an international expo on the theme of water resources that will open next year. MIT will help design the gateway "waterwall" pavilion to the expo as well as an interactive bus stop system. Professor

Frenchman was also appointed to serve on the MIT Framework and Urban Ring committees, dealing with critical issues facing the campus and its relationships with the Cambridge-Boston community.

The Program on Human Rights and Justice, sponsored by DUSP and CIS, hired a new assistant, organized several human rights talks, cohosted human rights events, and supported seven summer human rights internships with organizations around the world. The summer interns, many of whom were students from DUSP, were supported this year by a grant from the Graduate Student Council and an alum. Substantial time and effort were devoted to fundraising.

MIT's Teacher Education Program (TEP), led by Professor Eric Klopfer of DUSP, continued to provide MIT students with a pathway to licensure entirely at MIT. This year, TEP saw a surge of interest in the introductory courses, indicating increased interest in this area. There has been continued student interest in the certification program, and with several students hired at local schools, the program has also demonstrated a value to the Greater Boston community. Through this program, TEP will continue to contribute to the field of teacher education and to the MIT community. In June, Joseph B. and Rita P. Scheller signed a gift memorandum to create an endowment for TEP. This endowment, which will support the certification program, outreach and research, and graduate fellowships, marks an important milestone in the long-term stability of this important program. TEP will henceforth be known as the Rita P. and Joseph B. Scheller Teacher Education Program at MIT.

TEP has taken on many new educational technology research and development projects over the past year. Professor Klopfer continued to run a project, funded by the National Science Foundation (NSF), to train teachers using new technologies to improve science learning in New Mexico. Also continuing were two grants funded by the US Department of Education's StarSchools initiative. One, Augmented Reality Games for Learning, is a partnership among MIT, the University of Wisconsin at Madison, and Harvard. This effort uses handheld technologies developed in TEP to build math and literacy skills among middle school students. The other, Learning Games to Go, is a partnership with Maryland Public Television and Johns Hopkins University that is building online and mobile learning games. TEP has also worked with UPS to use some of its technology and training expertise, is making chemistry games through a collaboration with Brandeis, and is part of a new research initiative surrounding the teaching of history and government through the NBC iCue project. It is about to start on a biodiversity project with the Columbus Zoo. Professor Klopfer was on sabbatical this year, during which he wrote a book on mobile learning games that will be published by MIT Press in 2008. For more information on TEP, visit <http://education.mit.edu/>.

Research and Teaching on Urban Planning

The intellectual life of the department is organized largely around the activities of four program groups and several cross-cutting research initiatives. The program groups are City Design and Development (CDD); Environmental Policy and Planning (EPP); Housing, Community, and Economic Development (HCED); and the International

Development Group (IDG). We have also designated Urban Information Systems (UIS), Transportation Policy and Planning (TPP), and Regional Planning as cross-cutting initiatives intended to bring together faculty from the four main program groups.

City Design and Development

CDD continued its program of urban design studios and workshops in the United States and abroad. Professors John de Monchaux (DUSP) and Julian Beinart (Architecture) led a fall urban design studio in the city of São Paulo, Brazil, focused on revitalization of an important downtown neighborhood. The city has adopted some of the recommendations of the studio. This continues our long record of involvement with urban design issues and solutions in major cities throughout the world. The studio was sponsored by the city of São Paulo and a private developer.

Students of Professors Terry Szold and Eran Ben-Joseph developed a master plan and implementation strategies for a civic realm along the Mystic River and Medford Square, sponsored by the city of Medford, MA. Their proposals for land use, development, and transportation improvements were prepared in concert with local stakeholders and received wide press coverage. This DUSP practicum built on the work of Ben-Joseph and Szold in their coedited book *Regulating Place*, published by Routledge in 2004, and Ben-Joseph's recent book, *The Code of the City*, published by MIT Press in 2005.

Participants in the site planning workshop taught by visitor Theo Kindermans studied a major housing and commercial development in Lynnfield, MA, on the former Colonial Golf Course, which is about to be developed by National Development. This continued the series of on-site, real-time engagements that are the hallmark of the workshop.

Large-scale development in China was the focus of two CDD studios this year. In the spring urban design studio under the direction of architecture professor Alex d'Hooghe, students studied the potential for large-scale complex development in Kunming, China, focusing on developing a community life in the spaces between buildings. Students proposed strategic options for new commercial, educational, and transportation infrastructure within the context of mixed-use projects.

Professor emeritus and senior lecturer Tunney Lee and visiting lecturer Liang Zhao led a yearlong research initiative, coupled with the spring planning studio, on sustainable housing development in China, continuing a multiyear effort on the topic sponsored by the Vanke Corporation, China's largest housing developer. This year's studio focused on development in the Pearl River delta, examining the quality of housing that exists and making specific recommendations for improving the design and planning of these projects for the residents who reside within them.

Lecturer Susan Silberberg launched a multiyear study of security in cities and also developed a new national award program that will focus on the importance of the arts and artists in pioneering urban transformations.

Professor Vale completed work on a revised and expanded new edition of his book on the urban design of capital cities, *Architecture, Power, and National Identity*; gave talks in China, Australia, India, and across the United States; and published articles on housing and on post-Katrina New Orleans. He also was appointed to the National Membership Committee of the American Planning Association and the board of the International Planning History Society. He remains on the board of the Society for American City and Regional Planning History, the editorial advisory board of *Places: Forum of Design for the Public Realm*, and the editorial board of the *Journal of Planning Literature*.

The relationship between media technology and the city continues to gain momentum as a research area. The SENSEable City Laboratory, headed by Professor Ratti, engaged in a host of projects involving new ways of understanding and representing the city, tools for design and decision making, and incorporation of new media into city functions. Work under way this year included the iSPOT project mapping wireless activity and space utilization in real time on the MIT campus; real-time mapping of cell phone usage in Milan, Italy; and development of an intelligent bus stop system as part of the Zaragoza project.

Professors Frenchman and Zegras launched an investigation into the emerging structure of digital city regions in cooperation with the University of Grenoble. The project will focus on the city of Grenoble, a fast-growing technology and research capital in France.

Professor Ben-Joseph launched a new research effort assessing the effects of the built environment on physical activity and obesity, in collaboration with the Harvard School of Public Health. He is also investigating, with Professor Zegras, the travel behavior of aging “baby boomers,” looking at the relationship between the built environment and the travel behavior of older adults through the study of four different urban edge communities.

Students and faculty members in CDD continued their support of and participation in national competitions. Four interdisciplinary teams submitted proposals as part of the Urban Land Institute Urban Design Competition. Many other teams participated in the Federal Home Loan Bank Affordable Housing Development Competition. In addition, the Zaragoza Digital Mile research project was exhibited at the Venice Biennale of Architecture, and 20 years of work in the Beijing Urban Design Studio was exhibited in the Wolk Galley at MIT in the spring.

Environmental Policy and Planning

Several visiting scholars joined the group this year. Shizuka Hashimoto, a visiting postdoctoral fellow supported by the Japan Society for Promotion of Science, extended to a second year his research on methods of environmental dispute resolution in the United States and their possible application in Japan. Masa Matsuura, a recent PhD graduate of DUSP, remained on campus for a semester to help with a variety of research projects focused on the export of public dispute resolution techniques to Japan.

EPP faculty pursued individual research projects on a number of topics. Professor Layzer finished up her work on a book manuscript dealing with ecosystem management. Professor JoAnn Carmin organized a team to undertake extensive surveys

of environmental nongovernmental organizations (NGOs) in the Czech Republic. Professor Susskind published *Breaking Robert's Rules* (Oxford University Press), offering a consensus-building alternative to parliamentary procedure to help groups of all kinds make decisions. Professor Michael Flaxman joined DUSP, bringing new teaching and research capabilities in the area of modeling change in environmental systems. Lecturer James Hamilton, after only one semester at MIT, left to take a job in the private sector in Vermont. David Fairman joined the EPP staff during the fall term to teach Planning, Participation and Consensus Building for Sustainable Development. During Independent Activities Period, EPP students led a very successful environmental film festival (cosponsored with numerous environmental groups on campus) that attracted hundreds of students. Visiting lecturer Herman Karl offered a one-week course with David Mattson from Yale dealing with potential reforms of natural resource governance in the United States.

The MIT-US Geological Survey Science Impact Collaborative (MUSIC) had a banner year. Four new interns joined the MUSIC program in the fall of 2006 along with four returning interns. The US Bureau of Reclamation joined MUSIC as a partner. The new director of the US Geological Survey, Mark Myers, along with associate director Barbara Ryan and chief scientist Bruce Jones, visited the campus in May to meet with President Hockfield and to hear the student interns report on field-based projects in which they were involved during the year, including work on the Sagebrush Ecosystem Restoration in the Rocky Mountains, efforts in Maine to link marine and terrestrial coastal conservation, integrated landscape monitoring in the southeastern United States, and attempts to coordinate the management of groundwater and surface water in Washington state.

Finally, EPP faculty were actively involved in MIT's efforts to strengthen teaching and research in the energy field. Jonathan Raab joined EPP to teach a jointly listed course (with TPP and other departments), *Developing Energy/Environmental Policies for a Sustainable Future*. EPP continues to push for more sustainable development-oriented approaches to energy teaching and research at MIT. As part of SA+P's Energy Efficient City program, EPP has proposed a renewable energy project that will develop tools for analyzing renewable energy policy options given the mandate of more than a dozen states that 20 percent of all energy produced in those states will come from renewable sources by 2020.

Housing, Community, and Economic Development

HCED faculty and students continued and expanded their work assisting with rebuilding efforts in New Orleans. Professor Thompson continued his work with national unions and community development intermediaries, the city government, and local community-based organizations to fashion strategies that will address the affordable housing and employment needs of returning residents and build local capacity for rebuilding. A major outgrowth of these efforts has been the placement of more than 20 MIT students in internships with community organizations and the New Orleans Office of Recovery Management.

Students in two fall classes—Professor Lorlene Hoyt’s Downtown Management Organizations and senior lecturer Karl Seidman’s Economic Development Finance—teamed up to develop proposals for a new Business Improvement District serving New Orleans’ French Quarter. The students’ report formed the basis for new legislation filed in the Louisiana Legislature. Three other student teams in Economic Development Finance worked on new programs, policies, and tools for nonprofit business development organizations in New Orleans, while a fourth team helped a landmark neighborhood business address key rebuilding issues. Seidman and MCP student Ben Dookchitra also developed an Excel-based software tool to help organizations evaluate the market potential for different types of retail stores. During the spring, HCED and CDD students in Revitalizing Urban Main Streets (cotaught by Silberberg and Seidman) undertook a five-month community planning process in conjunction with several neighborhood organizations and businesses to prepare a rebuilding plan for New Orleans’ Broad Street corridor. Several client-based master’s theses were also completed that addressed rebuilding issues.

HCED faculty completed several significant publications during the past year. Professor Frank Levy coauthored a paper titled “Inequality and Institutions in 20th Century America” with Professor Peter Temin of MIT’s Department of Economics that analyzed how changing economic institutions and government policies have contributed to widening income inequality in the United States. The paper formed the basis of a recent *New York Times* editorial and has garnered a great deal of other media attention. Professor Xavier de Souza Briggs completed a multiyear comparative project on leading change at the local level that will be published in a forthcoming book, *Democracy as Problem-Solving: Civic Capacity in Communities Across the Globe* (MIT Press). The book includes cases of “smart growth” in America, community development in India and South Africa, regional economic restructuring in Brazil, and more. In addition to publishing two other papers, Professor Briggs’ 2004 article “Civilization in Color: The Multicultural City in Three Millennia” was nominated for Best Article of the Year in Urban Sociology by the American Sociological Association. Professor Lorlene Hoyt completed her work coediting *Business Improvement Districts: Research, Theories, and Controversies*, to be published by Taylor & Francis later this year. Professor Hoyt has also continued her groundbreaking work on midsized forgotten cities, which will be published in report form in September and will be released at the national “Remembering Forgotten Cities” meeting to be held at MIT on October 12, 2007.

HCED faculty also continued their work with community-based organizations in Boston, Lawrence, and Springfield. The multiyear MIT@Lawrence Community Opportunity Partnership Center had several accomplishments. A record number (19) of MIT students worked on the project throughout the academic year, with three projects culminating in DUSP master’s theses and one resulting in a Media Lab dissertation. Several recommendations from the fall Lawrence practicum course to improve the city’s vacant property disposition process were implemented in April 2007. New formal partnerships have also been established with MIT’s Center for Advanced Visual Studies and the Educational Studies Program. Professor McDowell and visiting Martin Luther King Jr. scholar Gus Newport continued work in Springfield’s North End neighborhood, leading students in the Springfield Studio to prepare plans for affordable housing.

Professor Langley Keyes and senior lecturer Seidman continued their work on the boards of the Metropolitan Boston Housing Partnership and Boston Main Streets Foundation, respectively. In other news, Professor Briggs joined the policy council of the Urban and Community Sociology Section of the American Sociological Association.

Finally, HCED faculty began implementing plans for an expanded and revitalized Center for Reflective Community Practice. As mentioned, a new executive director was hired and new funding has been secured to build the center's capacity and to support DUSP's work in New Orleans, including taking the lead in implementing the new MIT internship program with New Orleans' Office of Recovery Management.

International Development Group

The IDG faculty, including four new affiliate faculty members from other groups, continued to work on multiyear research and teaching activities, each involving two to seven graduate students and/or Special Program for Urban and Regional Studies in Developing Areas (SPURS)/Humphrey fellows. Many of the IDG faculty focus their research on comparative studies between industrialized and developing countries, often with alumni who are working in critical positions in different parts of the world. At least 10 of the group's master's and PhD students had papers accepted for presentation at international conferences in Brazil, China, India, Italy, Korea, Mexico, Spain, Sweden, and Thailand.

Following are highlights of work by IDG faculty members.

Professor Alice Amsden's book *Escape from Empire: The Developing World's Journey Through Heaven and Hell* was published this spring by MIT Press.

Professor Davis served on the committee to appoint a new graduate dean and on a committee to examine global educational opportunities at MIT. She was named a member of the new International Advisory Committee convened by provost Rafael Reif. She continues to contribute to activities of the MISTI-Mexico Program and has been invited to participate in the development of a new MISTI Israel initiative. Professor Davis continues her work on cities in conflict and the problems of policing and violence in the developing world, and she published a variety of book chapters and papers this year. In addition to her continued editorship of *Political Power and Social Theory*, Professor Davis was appointed to the editorial board of several major international journals and once again reviewed for the Human and Social Dynamics panels of the National Science Foundation, focusing on the theme "Globalization and Conflicts." She also was elected to the councils of the Community and Urban Section of the American Sociological Association and the Research Committee on Urban and Regional Development of the International Sociological Association.

Professors Davis and Zegras led a group of students to Mexico City to focus on planning alternative urban land use strategies and transportation options in order to achieve metropolitan-level goals of increasing environmental sustainability and reducing public insecurity in the Mexico City metropolitan area. Specific objectives were to determine whether environmental unsustainability (related to metropolitan sprawl and the

proliferation of cars) and public insecurity (related to crime, unemployment, informality, etc.) might have a common origin and, if so, whether proposed changes in land use and/or transportation policy could be advanced to make headway on both problems simultaneously.

Professor Ralph Gakenheimer is preparing a book in collaboration with Professor Harry Dimitriou of University College London on transportation in cities of the developing world. He continues studies of rapid motorization and related systems in developing cities, currently doing research on the western region of China's Pearl River Delta. He chairs the International Scientific Committee of CODATU, a French-based NGO focused on the improvement of urban transport in cities of the developing world, and he chairs the National Academy of Sciences Committee on Transportation in Developing Countries.

Professor Annette M. Kim has written a book manuscript titled "Learning to Be Capitalists: The Social Construction of a Market Economy in Vietnam," which examines how private real estate developers emerge and do business in a communist country. She published a book chapter about Polish property rights, and an article is forthcoming in *World Development* comparing the practice of new property rights in northern and southern regions of Vietnam. She was elected cochair of the Global Planners Educators Interest Group of the American Planning Association and was invited to present her research at several international conferences.

Professor Polenske was one of the distinguished speakers in Shanghai at the International Forum on Innovation for Sustainable Development, as part of the 100th anniversary of Tongji University. She also gave three talks at the Beijing University branch in Shenzhen, China. In addition, she gave talks on energy-intensity trends in China and on land recycling at several US universities and at several conferences. In December 2006, a book she edited, *The Technology-Energy-Environment-Health (TEEH) Chain in China: A Case Study of Cokemaking*, was translated and published by Higher Education Press, Beijing. She and her team of 15 faculty members and students completed a seven-year project that culminated in the book, which is now available in both English and Chinese. Professor Polenske also completed editing a second book this year, *The Economic Geography of Innovation*, published by Cambridge University Press. She is now preparing a translation of the book into Chinese and is negotiating with a major publisher in China to publish the translation.

Professor Balakrishnan Rajagopal and a group of 12 students worked with Navsarjan, an NGO dedicated to the advancement of the human rights of India's Dalits, or "untouchables." Across India, a subcaste of Dalits is dedicated to manual scavenging—the collection and cleaning of human excreta—in cities, towns, and villages. Because of this activity, they suffer from a lack of economic mobility, discrimination, and health risks. The practicum team worked with Navsarjan for three weeks in India to evaluate the viability of a set of low-cost sanitation technologies to address the potential of these systems to improve sanitation conditions of villages in the state of Gujarat, as well as the working conditions and livelihood of Dalits maintaining these systems. Subsequent to this practicum, Professor Rajagopal received a grant from the Omidyar Network's

Humanity First to continue community support as well as a second year of the practicum during 2007–2008. Professor Rajagopal also coedited a special volume of the leading interdisciplinary journal *Third World Quarterly* on the legal problems confronting developing countries in the international system, two articles in social science and law journals, two book chapters, and one major report based on the practicum field work. He also delivered, by invitation, a total of 16 lectures, talks, and papers around the country and the world. During fall 2006, he was on leave as a public policy scholar at the Woodrow Wilson Center for Scholars in Washington, DC.

Professor Bish Sanyal's work is described below in the SPURS section of this report.

Professor Judith Tandler initiated a large comparative research project in various states of Brazil focusing on the rule of law, economic development, and the modernization of the state in Brazil; the project involved three Brazilian DUSP PhD students. As requested by the funders, the World Bank and the United Kingdom Department for International Development, the project builds on the results of Tandler's four prior research projects in Brazil. The current research looks across the histories of a set of cases of generic conflicts that were resolved without the expected tradeoffs and classic conflicts of interest between firms and workers (and their respective associations), between infrastructure investment (and economic development more broadly) and environmental groups, and between various subsectors along the supply chain. Professor Tandler continues her research relationship (with two DUSP PhD students) with the Institute of Development Studies at the University of Sussex, including its Centre for the Future State, where she is also a member of the Advisory Review Group along with its funder, the UK Department for International Development.

Professor Zegras teaches the core quantitative reasoning class for master's students, a class on integrated transportation and land use planning, and practicum and studio courses. His current research includes a project examining the influence of gated communities on travel behavior in Santiago de Chile, and the travel behavior and residential preferences of "leading-edge baby boomers" (55- to 65-year-olds) in the United States. He continues to work on transportation and climate change issues, recently publishing an article on transportation and the Clean Development Mechanism in Energy Policy. Together with colleagues from universities in Brazil, Chile, Colombia, and Mexico, he developed a multiyear research proposal on transportation finance in the Americas, and he continues to develop a research project on metropolitan transportation energy futures in China.

Urban Information Systems

UIS research and teaching continues to examine and shape the growing impact of information and communications technologies (ICT) on urban planning, metropolitan governance, and our sense of community. ICT has greatly facilitated the capacity to study neighborhood-scale planning interventions and to understand and model the key factors that influence urban spatial structure and use patterns. Advances in information technologies have also enabled the location and spatial interaction of people, buildings, and events to be tracked, modeled, visualized, and manipulated as never before. The result has been a rapid growth of new opportunities and risks.

Some UIS-related research has already been described above under the various program groups and centers. These include the MIT@Lawrence work with community groups on urban revitalization and the SENSEable City Lab work on the social networking and urban design implications of mobile technologies in urban environments served with high densities of sensors. In addition, UIS-affiliated faculty have been researching collaborative information infrastructures for community and metropolitan planning, new models of urban spatial structure and land use and transportation interactions, and improved methods for participatory planning. Most of these projects have involved master's students, Undergraduate Research Opportunities Program students, and PhD students, and several have provided the "real-world" context and partners for class projects, workshops, and seminars.

Professor Joseph Ferreira and research scientist Raj Singh led a group of students experimenting with new technologies for accumulating and sharing local knowledge that can improve small area mapping, land use planning, and urban modeling. One project is developing "intelligent middleware" for understanding neighborhood markets. This effort involves collaboration with Boston's Metropolitan Area Planning Council, the Open Geospatial Consortium, Boston's Department of Neighborhood Development, the Boston Foundation, and local NGOs. It is supported through the Urban Markets Initiative of the Brookings Institution and is part of a national effort to improve the infrastructure for community statistics. The MIT "middleware" team has also begun working with the MIT Center for Real Estate to build online, customizable versions of the center's housing affordability index.

Professors Briggs and Ferreira are serving on the Steering Committee of Boston's MetroFuture effort to recommend a regional plan for the next two decades. Several DUSP students have worked on the forecasting, regional planning modeling, growth management strategies, and geographic information system (GIS) visualizations that have supported MetroFuture.

ICT development has changed the economics of place and the practicality of congestion pricing, car sharing, environmental monitoring, and other forms of measuring and pricing urban activity. One result has been renewed interest in modeling and influencing land use and transportation interactions in order to streamline and steer patterns of urban activity and metropolitan development. For several years, Professors Polenske, Zegras, and Ferreira have worked with DUSP students and other faculty members and students across MIT on transportation planning projects that involve extensive use of urban information infrastructure, GIS analysis, and urban modeling. One series of studies, headed by Professor Nigel Wilson of civil and environmental engineering, involves work with the Chicago Transit Authority and Transport for London on urban mass transit planning. DUSP PhD students specializing in UIS and transportation planning are studying the effects of congestion pricing in London and using data from newly installed vehicle location and fare collection systems in both cities to analyze path choice and transit demand questions for planned inner-city urban ring expansion.

Professor Flaxman joined the DUSP faculty this year with considerable experience in landscape architecture, geographic information systems, city design and development, and alternative futures modeling. This spring he arranged sponsorship for a new

workshop on alternative futures modeling that engaged students in “real-world” urban development issues for the rapidly growing and environmentally sensitive Cabo San Lucas area in the Mexican Baja.

Another class, an advanced GIS workshop taught by Professor Ferreira and visiting lecturer Fabio Carrera, undertook a project with the management information systems department of the city of Cambridge. The class analyzed the spatial and temporal patterns of Cambridge’s new online permitting system in order to recommend improvements in the permitting process and understand the traffic and neighborhood planning implications of parking and excavation permits.

Principal research scientist Tom Piper finalized plans for the FutureBoston forums and associated television documentaries and online activities that will occur during the fall of 2007. FutureBoston is an MIT-led effort in collaboration with civic-minded companies, municipalities, and nonprofits to understand and enhance the competitiveness of the Boston area with particular attention to the role of research universities.

A group of UIS-interested faculty members and students organized the Responsive City seminar to explore how ICT is shaping urban life in ways that allow unprecedented freedoms and opportunities in how the city is lived and studied, but also lead to the emergence of new and often unforeseen spatial and social phenomena. Guest speakers included national and international experts from academia and private practice.

Graduate Degree Program Enrollment and Activities

Our graduate programs enrolled 225 students this year. Of this total, 55 percent were women and 32 percent were international students; 14 percent of US students were members of underrepresented minority groups. The department granted 58 MCP, 1 SM, and 8 PhD degrees.

The MCP Committee focused on four major issues during the course of the academic year: guidelines for thesis advising, the required Gateway class, online modules, and the revising of materials sent to incoming MCP students. The committee was able to produce a document for thesis advising that was accepted in principle by both faculty and students. After evaluating efforts to divide Gateway class activities between the first and second terms, the committee determined that it was best to consolidate activities in the fall. The committee continued to explore how online modules can be used over the summer to provide incoming MCP students with the computer-based and quantitative skills necessary to complete the program.

The PhD Committee continued to implement the revised structure for general exams. As of this year, all second-year PhD students take their general exams before the beginning of their fifth term. Establishing the program has required rewriting and updating the requirements for each of the main general examination fields. The committee also continued work on resources for both incoming and current PhD students, including providing incoming PhD students with facts they need to know about the department, collecting information on basic job search strategies by area for students in the job market, and listing current job candidates on the DUSP website. Nora Libertun (PhD

2007) served as editor of Volume 6 (“Mismatched Boundaries”) of the department’s journal, *Projections*, and editorial teams have been appointed for Volumes 7, 8, and 9. Finally, the committee helped to institute a regular Thursday afternoon social gathering for PhD students and faculty that was well received.

Undergraduate Program Activities

During 2006–2007, the Undergraduate Committee continued to work on raising the visibility of DUSP among MIT’s undergraduates. Students and faculty members staffed booths at majors fairs in the fall and spring, and the department’s April undergraduate open house was well attended by prospective students, current students, and department faculty. Our outreach efforts seem to be paying off: this spring a record high 11 freshmen declared a major in urban studies and planning.

As mentioned above, some of those freshmen learned about the department through our new project-based course, *CityScope*, which was launched in fall 2006. This course introduced students to planning through a project in New Orleans that involved creating a directory of businesses opened since the 2005 hurricane in the Broadmoor neighborhood. MIT students also met with students at McDonough High School, getting a first-hand look at what it means to be poor, black, and undereducated. Final projects in the course ranged from developing a GIS program that tracks business development to organizing summer youth programs. Many of the students decided to work in New Orleans this summer as a result of their *CityScope* experience.

Another major attraction of DUSP for undergraduates is the City to City subject. This year 11 students traveled to Amsterdam with the goal of comparing planning issues there with those in Boston. Each student chose a research topic, narrowed it down to a study question, and drew on multiple sources to answer his or her question. Students investigated a variety of issues, including homelessness, red-light-district zoning, city marketing strategies, flood control strategies, and immigrant integration issues. They presented their findings in research papers and in a poster session for the DUSP community.

In addition to engaging new majors, the Undergraduate Committee undertook several initiatives that aim to improve the educational experience for our undergraduate majors. We are making a concerted effort to increase the number of subjects open to undergraduates; to that end, faculty have agreed to open more than a dozen graduate-level courses to undergraduates. We are working to strengthen relationships among undergraduate majors and DUSP faculty by encouraging undergraduates to attend department seminars and lunch series. Finally, we are assembling a website that will make it easy for current and prospective majors to understand the department’s requirements and options for meeting them.

Student Awards

Our students received a large number of awards this year from the Institute, national and international organizations, and the department.

Departmental Awards

- Outstanding Contribution to the Intellectual Life of the Department: Ari Goldstein, Bomee Jung
- Student Departmental Service Award: Jainey Bavishi, Jessica Berman-Boatright, Dulari Tahbilda, Cindy Wu
- Outstanding PhD Dissertation: Gregg Macey; honorable mention: Lianne Fisman, Nora Libertun
- Outstanding MCP Thesis: Justin Antos, Emmaia Gelman; honorable mention: Raj Kottamasu, Topher McDougal
- Outstanding Undergraduate Thesis/Project: Ruth Miller
- Flora Crockett Stephenson Writing Prize: Tejus Kothari; honorable mention: Jeffrey Fugate
- American Institute of Certified Planners Outstanding Student Award: Katherine Hay Wallace
- Rodwin Travel Grant: Isabelle Anguelovski, Yang Chen, Lu Gao, Carlos Mojica, Priyanka Shah
- Emerson Travel Grant: Isabelle Anguelovski, Jainey Bavishi, Yang Chen, Rodrigo Diaz, Lu Gao, William Ho, Meredith Judy, Topher McDougal, Elizabeth Reynolds, Cassandra Roth, Nakeischea Loi Smith, Dulari Tahbilda

MIT Awards

- Burchard Scholar: Angelica Weiner
- Martin Fellows: Catherine Ashcraft, Ryan Tam
- MIT DUSP-Public Service Center Career Development Summer Internships in International Public Service: Sai Balakrishnan, Luis Ballesteros, Oyebanke Oyeyinka, Miguel Paredes, Tegin Teich
- Public Service Center Independent Fellowship Award: Isabelle Anguelovski, Jainey Bavishi, Carlos Espinoza-Toro
- Public Service Center Summer Fellowship: Eric Brewer-Garcia, Angelica Weiner
- Public Service Center International Development Initiative Award: Topher McDougal
- Sun Fellowship (MISTI): Luis Ballesteros
- MIT-Japan International Studies Fund Award: Austin Kilroy, Weifeng Li, Xin Li, Anjali Mahendra, Akshay Mangla, Erik Nielson, Nancy Odeh
- CIS/Starr Student Travel Fellowship: Austin Kilroy
- MIT Laboratory for Energy and Environment Award: Roberto Guerrero Compean, Mimi Zhang

- Program on Human Rights and Justice 2007 Summer Internships: Isabelle Angelovski, Anna Livia Brand, Ronilda Rosario Co, Rodrigo Diaz, Cheryl Yip
- MIT International Review 1st Annual Writer's Prize, First Place: Tophér McDougal
- Horowitz Award: Leigh Graham, Tran N. Le

National and International Awards

- Dwight D. Eisenhower Graduate Transportation Fellowship: Justin Antos, Ryan Tam, Tegin Teich
- Charles Abrams Scholarship: Tegin Teich
- Eno Leadership Development Fellowship: Ryan Tam
- World Bank Young Professional: Genevieve Connors
- Fulbright Fellowship: Rodrigo Diaz, Austin Kilroy, David Lee
- Rappaport Fellowship: Benjamin Solomon Schwartz, Amanda Stout
- Hart Howerton Fellowship: Christoforos Romanos
- Presidential Management Fellowship Finalists: Katherine Van Tassel, Katherine Wallace
- Brookings Institution Fellowship: Deborah Kobes
- Design Workshop Summer Internship: Sophie Martin
- Goldman Sachs Global Leadership Scholarship: Angelica Weiner
- Professional Development Award, Canadian International Development Research Center: Rajendra Kumar
- US Department of Education Jacob K. Javits Fellowship: Abby Spinak
- Chicago Mayor's Office Fellowship: Astrid Wood
- New York City Department of Transportation Internship: Rana Amirtahmasebi
- Australian Olympic Graduate Fellowship 2007: Eva Kassens
- Member, First-Place Team, 2007 Boston Affordable Housing Competition: Stephen Crim
- Joint Japan-Inter-American Development Bank Scholarship: Luis Ballesteros
- Paul Foundation Scholarship, 2006–2007; Prafulla C. Mukerji Scholarship, 2006–2007; Taraknath Das Scholarship, 2006; Bharat Petroleum Scholarship for Higher Studies, 2006–2007: Poulomi Charkrabarti
- Banamex Prize for Economics, 2006; National Prize for Political Economy/Mexico, 2007; Autonomous University of Nuevo León Award of Social Sciences, 2007; Consuelo Meyer L'éppé Prize/Mexico, 2007; Maria Ofélia Leite Prize/Portugal, 2006; Young Researcher Prize of Ibero-America, 2006: Roberto Guerrero Compean

- American Institute of Certified Planners Student Project Award: Abigail Emison, Jonathan Leit, Dina Mackin, Masatomo Miyazawa, Alison Novak, Gena Peditto, Ommeed Sathe, Antonina Simeti, Charu Singh, Shanny Spraus, James Stevens, Moshahida Sultana, Ritesh Warade

Outreach to Alumni

Local alumni continued to play an active role in sponsoring internships for students, providing career advice at the alumni career forums organized by each of the program groups, and participating as guest lecturers in numerous classes. Alumni across the country offered summer positions for current students and served as employers for recent graduates. Alumni also participated in a key discussion panel on orientation for incoming students in August 2006. They continue to play a role in the implementation of the practicum requirement, a significant element in the revised MCP core curriculum.

DUSP continues to maintain connections with alumni across the country. The Alumni/ae Connection, a monthly electronic newsletter reaching more than 80 percent of our alumni, is well received and has prompted numerous updates from alumni on their personal and professional lives.

In fall 2006, alumni again assisted in DUSP student recruitment efforts by joining faculty and current students at open houses in Los Angeles and New York City. Both events were well attended and successful.

The DUSP career resources website continues to serve alumni as well as current students seeking continued professional development. The site also serves the needs of potential employers of DUSP students and graduates.

Departmental receptions held at the annual conferences of the American Planning Association and the Association of Collegiate Schools of Planning provided venues to catch up with alumni from across the country.

The second Alumni/ae of Color Dinner Series was held in spring 2007. The series, which focused this year on issues of environmental justice, aimed at strengthening connections between DUSP alumni of color and the Institute while providing current students with ideas on how to effectively serve communities of color. The series consisted of four well-attended dinners, each with an invited alumni speaker.

The department proudly presented the sixth annual Excellence in Public Service Awards to Ariel Bierbaum, Raymond Hodges, and Erin Kilmer Neel.

International Connections

This year SPURS hosted 20 midcareer fellows from around the world. Eleven of the fellows participated in SPURS as part of the Hubert H. Humphrey Program sponsored by the US Department of State. The SPURS/Humphrey fellows represented 15 countries: China, Korea, Mauritius, Japan, Ghana, Kosovo, Turkey, Liberia, Angola, Rwanda, Brazil, Palestine, Colombia, Argentina, and the Netherlands. Their research

interests covered a variety of areas, including transportation planning and policy, technological development and policy, urban development, public-private partnerships, geographical information systems, and environmental policy.

Two of our Humphrey fellows were selected as residential scholars at the International House at New House and at Simmons Hall undergraduate dormitories. Professor Bish Sanyal also taught a seminar to the New House students about international development. The New House course led to strong relationships being built between the undergraduate students and some of the SPURS fellows. One New House student spent the month of January working on a project in Mauritius as a result of his connection with SPURS fellow Sanjay Bissesseur. Patricia Acosta, residential scholar at Simmons Hall, organized several social events with the Simmons residents, including salsa lessons and a movie and discussion about the experiences of students from other countries.

The theme for this year's Monday Seminar Series was "In Search of Global Solidarity." The aim of the series was to bring together academics and practitioners to discuss the shared problems that we face as a global community. This theme was selected because much of the current academic literature is divided into "developing country" and "developed country" contexts, or into three "worlds," i.e. first, second and third world. This is not a useful way to think about the world. Interconnected problems around the globe need to be solved multilaterally. As a global network of thinkers and policymakers, fellows and students need to work together to develop a shared understanding of global problems and a set of innovative problem-solving techniques. The lecture series generated interest among the fellows, students, and faculty in DUSP and beyond. The speakers included prominent public intellectuals from MIT and other academic institutions.

SPURS continues to collaborate with the Loeb fellows at the Harvard Graduate School of Design. The relationship between the two groups of midcareer fellows is important because it gives each a sense of the different challenges that their counterparts from different countries face. In the fall, the Loeb program hosted an evening discussion on "Rebuilding Beirut" with Hashim Sarkis, Aga Khan professor of landscape architecture and urbanism in Muslim societies. In the spring, SPURS hosted a half-day seminar, "Race in Comparative Perspective: A Conversation," featuring Melissa Nobles, MIT associate professor of political science, and DUSP's Professor Thompson.

Community Partnerships

The Center for Reflective Community Practice (CRCP) continued its strong partnership with community-based organizations. This year was its second year of intensive engagement with community groups involved in New Orleans rebuilding efforts. Entering its seventh year, the collaboration with the North End neighborhood of Springfield, MA, continued to thrive. The DUSP-Springfield practicum continued the relationship with the Springfield community and provided a forum for students and community workers to exchange knowledge. Earlier this year, CRCP experienced a leadership transition, as Professor McDowell stepped down as director to focus on his scholarship and work with new media technology in communities. Dayna Cunningham, Sloan fellow 2004, became the new director in March.

Since Hurricane Katrina, a working group of DUSP professors and students, local New Orleans organizations, and national organizations has been piloting a rebuilding approach in several New Orleans neighborhoods that enables residents to shape their entire lived environment and the services, resources, and possible enterprises to be developed within that environment. Specific projects supported by CRCP include a graduate practicum deploying 20 students to work with small local groups in the Treme neighborhood to create a neighborhood rebuilding plan and support for resident efforts in the Broadmoor community to reopen a local library, develop program and funding proposals for the redevelopment of a community building, develop a land trust, and promote local commercial finance. DUSP students conducted comprehensive interviews of business owners in the Broadmoor neighborhood and helped develop a business directory to hand out to residents returning to the community.

Students also worked with staff and volunteers at Mary Queen of Vietnam Church to assess small business recovery needs and evaluate options to organize local businesses to support commercial corridor revitalization. In addition, students and faculty worked with residents of the Gert Town neighborhood, helping them establish an open-source property mapping system and process and creating an open-source database management system and web portal to allow them to view and update this information online.

With extensive in-kind support from MIT, a small cadre of students has remained in New Orleans over the past year and a half developing these and other projects more fully in selected neighborhoods.

During the year, CRCP completed the Boston Community Learning Project, an initiative geared toward illuminating the critical role of community organizing in community development. The project involved three Boston neighborhoods and eight community fellows who are active in local community building.

Working with the Latin American and Caribbean office of CARE International, CRCP continues to help the organization develop and implement a system for using local knowledge in rural and urban communities to alleviate poverty. The project included communities in Honduras, El Salvador, Peru, and Nicaragua.

CRCP has also begun to strengthen its ties with the work of DUSP overall. A community innovation seminar series held during the spring term enabled students and faculty from several practica across program groups to explore common themes relating to culture, community building, and planning and design challenges in urban environments. Over the next year, CRCP will engage in an aggressive fundraising and strategic planning process to set new directions for its work.

Research Funding

Faculty and staff raised \$1.55 million in new funds for research and other projects in FY2007.

Professor Susskind, in collaboration with visiting lecturer Karl from the US Geological Survey (USGS), raised \$239,200 from USGS and other federal agencies for continued support of the MUSIC program.

Professor Klopfer, director of the Teacher Education Program, was awarded two grants in FY2007: UPS awarded \$100,000 for a project titled "Improving Service Provider Candidate Performance," and the Columbus Zoo provided a grant of \$100,000 for the "Augmented Reality Pilot Project."

Professor Tendler was awarded a total of \$193,375 from the Department for International Development for Phases 1 and 2 of a project titled "The Rule of Law, Economic Development, and Modernization of the State in Brazil."

Professors Zegras and Ben-Joseph received a grant of \$70,000 administered by the Urban Transportation Center for the "Gated Communities and Boomers' Travel Behavior" project. Professor Zegras was also awarded an Alliance for Global Sustainability grant of \$30,000 (through the Laboratory for Energy and the Environment) for "Metropolitan China: Clean Transportation."

Professor Sanyal raised \$57,778 from the Institute of Financial Management and Research for a project titled "Hidden Successes: Institutional Responses to India's Economic Maturity."

Senior lecturer Joroff was awarded \$43,377 by the City Council of Zaragoza, Spain, for the project "Open Source Social Framework for Milla Digital."

Lecturer Silberberg received a grant of \$11,593 from Leveraging Investments in Creativity for "Implementation of an Arts Space Awards Program."

Other Funding

Principal research scientist Piper raised \$397,500 of funding from various sponsors for the project "FutureBoston: What Next for Boston in the First Decades of the 21st Century?"

Professor Thompson raised \$21,500 for the "Real Gains" project supporting student work in New Orleans.

Professor Rajagopal received funding in the amount of \$150,000 from Humanity United (Omidyar Fund) for a collaborative project with the Gujarat, India-based NGO Navsarjan.

Two members of the faculty raised funding to support international studio courses. Professor de Monchaux raised \$60,000 in support of an Urban Design Studio course in São Paulo, Brazil, and Professor Lee raised \$25,850 from the Vanke Real Estate Group for the Shenzhen Urban Planning Studio course.

Professor Schuster and lecturer Silberberg raised \$50,000 from the American Architectural Foundation to host the Mayor's Institute on City Design in December 2006.

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More information about the Department of Urban Studies and Planning can be found at <http://dusp.mit.edu/>.