

## President's Report, 2010-2011

The Center for International Studies is a principal venue at MIT for research and training on international relations, security, political economy, and several other areas of scholarly and popular interest. It has, since its founding sixty years ago, become one of the most productive and respected research institutions of its kind.

The Center houses the Security Studies Program (SSP), the MIT International Science and Technology Initiatives (MISTI), Seminar XXI, Political Economy and Technology Policy, Persian Gulf Initiative, Program on Environmental Governance and Sustainability, as well as several less formal activities and initiatives. Drawn mainly from the departments of political science and the urban studies and planning, some eighty faculty, scholars, researchers, and fellows are affiliated with the Center, joined by forty administrative and support staff and thirty graduate students.

The Director is Richard J. Samuels, Ford International Professor of Political Science, and the Associate Director is Stephen Van Evera, Professor of Political Science. Dr. John Tirman has been Executive Director since October 2004.

Several new developments and activities in 2010-11 are worth highlighting:

- David Miliband, former British Foreign Secretary, joined CIS as a Robert Wilhelm Fellow in April, giving several lectures and working with graduate students. Miliband, a Member of Parliament, holds a master's degree from the MIT Political Science Department.
- Political Science Associate Professor Chappell Lawson was named to head MISTI, succeeding longtime director Suzanne Berger, Raphael Dorman-Helen Starbuck Professor of Political Science. MISTI also added a new country program in Chile.
- A major new undertaking, the Puerto Rico Economy Project, was initiated with a conference in February, and began research in the spring and summer.
- With the Delhi Policy Group, CIS and SSP convened a conference in January in New Delhi on Asian security, drawing the participation of high-level Indian policy makers.
- A new research project, Urban Resilience in Situations of Chronic Violence, was launched by Professor Diane Davis with support from the U.S. Agency for International Development.
- CIS welcomed Wilhelm Fellow Hans-Georg Eichler, M.D., Senior Medical Officer of European Medicines Agency. He is working with Associate Professor Ken Oye and the MIT Center for Biomedical Innovation on new drug development paradigms.
- Led by Professor Samuels, CIS responded to the tsunami and nuclear crisis in Japan with a Starr Forum and leadership on a "Japan 3/11 Initiative," which is coordinating the efforts of many MIT faculty and students to help with the region's reconstruction.
- Rabia Mehmoud, a Pakistani television journalist, was the Elizabeth Neuffer Fellow for 2010-11. Ms. Mehmoud also worked with public broadcasting during the year.
- Sanam Naraghi Anderlini, Adviser on Gender and Conflict to the U.N., was named a CIS Senior Fellow.

## **Security Studies Program**

The Security Studies Program (SSP) is a graduate-level research and education program. The senior research and teaching staff includes social scientists and policy analysts. A special feature of the program is the integration of technical and political analyses of national and international security problems. Security Studies is a recognized field of study in the Department of Political Science. Courses emphasize grand strategy, causes and prevention of conflict, military operations and technology, and defense policy.

SSP held its second Ruina Nuclear Age Speaker Series dinner in November with guest speaker Prof. Scott Sagan, who is the Caroline S.G. Munro Professor of Political Science, co-director of Stanford's Center for International Security and Cooperation, and a Senior Fellow at the Freeman Spogli Institute. His talk was titled "Nuclear Power without Nuclear Proliferation?"

SSP held its 18th Doolittle Awards Lecture in March in memory of General "Jimmy" Doolittle, American war hero, aviation pioneer, and MIT graduate. This year's Doolittle Award recipient was Admiral Gary Roughead, Chief of Naval Operations, United States Navy.

In February-March, 2011, SSP and CIS hosted a three part seminar series titled "Central Asia in Global Affairs":

- "Strategic Regionalism and the US-Russia- China Struggle for Central Asia," with speaker Alexander A. Cooley, Associate Professor of Political Science, Barnard College, Columbia University.
- "The Afghanistan Factor," with speaker Michael Semple, Harvard Kennedy School, Carr Center for Human Rights Policy.
- "China's Policy in Central Asia," with speaker Sebastien Peyrouse, Central Asia and Caucasus Institute & Silk Road Studies Program.

SSP held several special seminars, including:

- "The Institutional and Operational Implications of the Evolving Threat Environment," with guest speaker Lieutenant General George J. Flynn, Deputy Commandant, Combat Development and Integration, US Marine Corps
- "Israel Amidst an Unstable Middle East," with guest speaker Efraim Inbar, Professor of Political Studies and Director of the Begin-Sadat (BESA) Center for Strategic Studies, Bar-Ilan University, Israel
- "Reconstruction in Iraq: The Challenges, The Wins, and the Losses," with speaker Colonel Dan Anninos, Chief of Staff, U.S. Army Corps of Engineers
- "Wars and Rumors of Wars" and the U.S. Army Corps of Engineers: The Greatest Story Never Told," with speaker Brigadier General Peter A. (Duke) DeLuca, North Atlantic Division Commander and Division Engineer.

SSP also held a special roundtable discussion on "The Post Osama bin-Laden Era." Barry Posen was moderator with commentary by members/affiliates of the Security Studies Program/Political Science Department. Discussants included Gabriel Lenz, Associate Professor, Department of

Political Science, Vipin Narang, Assistant Professor of Political Science, Roger Petersen, Professor, Department of Political Science, Professor Van Evera, and Colonel Charles Samaris, U.S. Army.

Sustaining a long tradition, SSP continued the Wednesday Seminar series, which offers talks on topics relevant to national defense and international relations, including Iraq, Afghanistan, Russian energy policies, Iranian nuclear policy, terrorism, radicalization of Muslims in Europe, the problem of religion and war, the defense industry, humanitarian intervention, military technology and transformation, and military history. Speakers were academics, military officers, government officials, and journalists.

SSP publishes an annual report; a seminar summary series, *SSP Wednesday Seminars*; a quarterly newsletter, *Early Warning*; and a working paper series. In June the SSP quarterly newsletter went digital <http://earlywarning.mit.edu/>.

In January 2011, the program received one-year awards from Lincoln Laboratory and Draper Laboratory.

Program research is built around the interests of the faculty, the dissertations of the graduate students, and occasional commissioned projects. Key research areas are:

#### *Proliferation of Weapons of Mass Destruction*

- Examining the underlying logic of current nonproliferation strategies
- Iran and North Korea
- Resource allocation and counter-proliferation policy

#### *Change and Stability in Asia*

- How China will manage active territorial disputes as a rising power
- The role of nationalism in shaping China's foreign policy
- Implications of China's growing engagement within the Asian region
- Securing Japan

#### *U.S. Foreign and Defense Policy*

- US strategy for global engagement and states at risk
- The nature and limits of U.S. military power
- The future of conventional warfare
- Reassessing U.S. grand strategy
- The U.S. resource allocation process
- Transforming the rewards for military service

#### *Internal Conflict*

- Identity politics

- Political violence
- Civil war
- Counter-insurgency
- Post-conflict reconstruction

## **MIT International Science and Technology Initiatives (MISTI)**

During 2010-2011, MISTI expanded, created a new MISTI Chile Program; sponsored the “Brazil-MIT Forum on Energy, Environment, Entrepreneurship, Policy Innovation, and Global Businesses,” a joint meeting on energy with Santander Universities in Brazil; hosted 70 public talks to inform the MIT community about international issues and helped integrate international education into MIT through programs like Accelerating Information Technology Innovation (AITI) and Middle East Education Through Technology (MEET), which send teams of students to Africa and Israel respectively to teach specific software skills. In addition, MISTI continues to educate the MIT community at large through its host country spring seminars and retreats that are open to community members. It also teaches specific seminars on the history and culture of a country for interested MIT groups.

During this period, MISTI placed 566 students for study abroad, short courses, seed fund research and internships. MISTI placed a total of 519 interns, up more than 10% from the previous year. These interns are trained in the language and culture of their host countries prior to departure, allowing them to “hit the ground running” and return to MIT with international networks and an understanding of how to work effectively in foreign cultures.

In addition to internships, MISTI added Chile, Belgium and China Seed Funds this year, which enabled faculty workshops, faculty travel and exchange of students. During this reporting period there were 112 applications for the Seed Funds. Several projects have resulted in Seed Fund recipients receiving larger grants for continuing research on their cross border projects.

In response to the triple disaster in Tohoku Japan March 2011, MISTI took the lead and spearheaded the MIT Japan 3.11 Initiative. Starting this July, this 4-year Initiative will bring together professors from MIT and the affected region around the issue of disaster planning. It has already resulted in a new MIT course—“Artistic Intervention—Creative Responses,” taught by Associate Professor Ute Meta Bauer, MIT Department of Architecture.

MISTI's efforts to internationalize MIT include a very popular minor in Applied International Studies and the MISTI 2.0 Program, which allows for MISTI graduates to compete for funds to continue their research with their host country colleagues after they return to MIT. MISTI was directed by Suzanne Berger, Raphael Dorman and Helen Starbuck Professor of Political Science.

### *MIT-Brazil Program*

Since its launch in fall 2009, the MIT-Brazil Program has been actively engaged in creating and supporting courses on Brazil and the Portuguese language, promoting an MIT-Brazil Seed Fund that was initiated in the spring of 2010, and fostering connections between MIT and Brazil. In addition to its internship program, MIT-Brazil has awarded five Dissertation Research Travel

Grants for advanced graduate students to conduct research in Brazil over the summer of 2011. MIT-Brazil also provided partial support to a student-initiated Sloan Study Tour on “The Business of Education.” In addition to the support of courses and training on Brazil, MIT-Brazil has hosted lectures on pertinent Brazilian politics and environmental issues. In the spring, the program hosted the Brazil-MIT Forum on Energy, Environment, Entrepreneurship, Policy Innovation, and Global Businesses. The forum was sponsored by Santander Universities and designed to bring together leaders from Brazil and MIT to seek solutions to common challenges. During this reporting period, the MIT-Brazil Program was co-directed by Class of 1922 Professor of Political Science and Professor of Management Richard Locke and Professor of Political Science Ben Ross Schneider. During this reporting period, MIT-Brazil sent six students on internships.

#### *MIT-China Program*

The MIT-China Program’s range of activities continues to grow through integrative collaborations with partners in Greater China and at MIT. Through the MIT China Educational Technology Initiative (CETI), teams of MIT students now introduce MIT OpenCourseWare and iLabs educational content at 12 universities and 5 high schools spanning Greater China. A new partnership with MIT-Sloan China Labs has been established that brings together Sloan MBA and MISTI China engineering students to conduct summer consulting projects at Chinese companies. The MIT-China Program has also further expanded its role in the MIT-Greater China Working Group headed by Professor of Electrical Engineering and Computer Science Victor Zue. In spring 2010, MIT-China launched the start of the MIT Greater China Fund for Innovation, a new MISTI Global Seed Fund to which MIT faculty and research scientists can apply to start collaborations in China, Hong Kong, and Taiwan. Six MIT projects were funded in 2010. MIT-China also continues to manage the MISTI partnership with the Department of Electrical Engineering and Computer Science. Eighty one EECS students were placed MISTI-wide in 2010-2011. Additionally, EECS International and MIT-China have expanded EECS’s “Empower the Teachers” program with faculty and MIT student exchanges with the University of Hong Kong and the Chinese University of Hong Kong. The MIT-China Program is directed by Professor of Political Science Edward Steinfeld. During 2010-2011, 53 interns were sent to China, Hong Kong, and Taiwan.

#### *MIT-France Program*

During this reporting period, the MIT-France Program held special training sessions for its interns on French culture, history, and current political events before sending them to research institutes, companies, and universities in France. In addition to a dynamic internship program, MIT-France supports budding collaborative research between faculty and students at MIT and in France through the MIT-France Seed Fund. This year the Program received 14 requests for funding from professors, of which it funded five. On June 28-29, 2011, the MIT France program together with the MIT Energy Initiative (MITEI) organized a meeting in Paris with major university and public research laboratories working in the energy field. The Forum France MIT was opened by MIT President Susan Hockfield and French Minister of Education and Research Valerie Pécresse. The Forum was attended by 350 people from industry, government and universities. Among the new agreements for collaboration between France and MIT that were signed at the meeting was a plan for a new joint MIT-CNRS laboratory on nano-materials to be located on the MIT campus and headed by Professor Franz Ulm and CNRS Director Roland Pellenq. This full-scale research center collaboration grows out of an early small seed research

grant. The MIT-France Program maintains close relations with sponsors; for the sixth year, it organized a weeklong seminar at MIT for top managers from Total, France's largest company. This seminar included meetings with MIT experts in science, engineering, economics, and political science. The MIT-France Program also sponsors numerous activities for the MIT community on pertinent issues involving France. The MIT-France Program is directed by Professor Berger. During 2010–2011, 97 students were sent to France.

#### *MIT-Germany Program*

During this reporting period, the MIT-Germany Program expanded its mission of international education through internships, workshops, and the establishment of a new MIT-Germany Seed Fund to be initiated in fall 2011. Specifically, the MIT-Germany Program offered two industry workshops: "Testing New Automotive Technologies" with Continental, and "Symbiosis of Mobility and Technology" with Deutsche Bahn. MIT-Germany also took part in the MiNT Educational Initiative (Mathematics, Computer Science, Natural Sciences and Technology) to reach out to German high school students to promote science and technology. During IAP, MIT-Germany partnered with the Alumni Association to offer and prepare students for externships abroad. The MIT-Germany Program also supports events on pertinent issues at MIT, and Stammtisch, a student-run club to practice language skills. The MIT-Germany Program is directed by Markus Buehler, Esther and Harold E. Edgerton Associate Professor of Civil and Environmental Engineering. During 2010-2011, 107 interns were sent to Germany and Switzerland.

#### *MIT-India Program*

The MIT-India Program expanded opportunities for interns during this reporting period. It added several new initiatives, including an India Innovation Fund to provide seed funding for faculty projects in India. This year, India Innovation funds were distributed to five faculty members whose proposals were selected out of 28 proposals; the MIT-India/IFMR Seed Fund also awarded two grants to MIT faculty during this reporting period. India was highlighted on campus through a dynamic lecture series with 13 public events cosponsored by the MIT-India Forum, the Office of the Provost, and several academic departments. This summer, MIT-India initiated a program called "Teaching Innovation" to Indian university students at Chitkara University. Over IAP the program supported an early entry program designed to encourage interest in India among underclassmen. Fourteen students traveled to India on a study trip in January of 2011 as a culmination of 4.S10 Delhi and Jaisalmer: An Architectural Journey through Two Indian Cities. The MIT-India Program is directed by Arundhati Tuli Banerjee, MIT Director of Global Initiatives. During 2010–2011, 51 interns were sent to India.

#### *MIT-Israel Program*

The MIT-Israel program has grown and expanded its activities at MIT and in Israel this year. Thirteen students did internships related to energy and the environment that were supported by a dedicated donation. The program has developed a comprehensive training module that integrates pre-internship, during internship, and post-internship experiences. One-on-one matching with Israeli MIT alumni, organized with the MIT Alumni Club of Israel, helped students build on their pre-internship training and integrate into the wider Israeli and MIT communities. Selected graduates of the MIT-Israel program were trained as mentors for the current class. In addition to pre-departure training, MIT-Israel interns also took part in a five day in-country seminar on Israeli science and technology. At MIT, the Program supported several courses on Israel and

Hebrew. The Program organized or co-supported thirteen Israel-related events on the MIT campus and three events in Israel collaborating with the MIT Club of Israel and MIT's Venture Mentoring Service. The MIT-Israel Program is directed by Christine Ortiz, Dean for Graduate Education and Professor of Materials Science and Engineering. During 2010–2011, 50 interns were sent to Israel.

#### *MIT-Italy Program*

The MIT-Italy Program has continued to expand its presence on campus and in Italy. In addition to the intensive Italian I language class for prospective interns, the program offered entry-level opportunities for 29 students to teach science and math at Italian schools using OpenCourseWare (OCW) materials through the Highlights for High Schools program during IAP. The Highlights program will continue next year with the involvement of MIT faculty from the Department of Physics and the Media Lab. A major participant in the Global Seed Funds, the program used its long-term collaborations with the Politecnici of Milan and Turin to offer funding through the MITOR Project and the Progetto Roberto Rocca. The MIT-Italy Program organized training sessions and hosted talks on pertinent issues. The program also hosted two major events this spring. Progetto Rocca Day at MIT brought together students and faculty involved in research collaborations and set the agenda for future collaborations. Italy and MIT at 150 marked the joint anniversary by bringing together faculty, Italian companies, foundations and other institutions to celebrate the strong history of partnership and future collaboration between MIT and Italy. The MIT-Italy Program is co-directed by Department of Urban Studies and Planning Associate Professor Carlo Ratti and Dr. Serenella Sferza. During 2010–2011, 47 interns were sent to Italy.

#### *MIT-Japan Program*

The MIT-Japan Program continues to enjoy great success in educating MIT students both at MIT and in Japan. Students participating in the program are required to take two years of Japanese language as well as a course on Japan and to participate in a two-day retreat, seven spring training sessions, and a training weekend in Kyoto. During this reporting period, the Program worked closely with Foreign Languages and Literature to offer an intensive Japanese course during IAP and the Fast Track Japanese Language Program, which enables students to learn two years' worth of Japanese in a single year. The program also awarded Hayashi Seed Fund grants to four MIT scientists doing research on environmental issues with Japanese and other Asian researchers. Finally, the program educated the community at large on Japan through lectures, a weekly Japanese language table, movies, and other cultural events. Following the March earthquake and tsunami, the MIT-Japan program also began working with Shun Kanda in the School of Architecture to establish the MIT-Japan 3.11 Initiative, a five-year project to involve faculty and students from MIT and universities in Tohoku and elsewhere in Japan in workshops held in Tane Japan with the collaborative goal of mobilizing the study and implementation of disaster-resilient planning that includes design and reconstruction initiatives. The MIT-Japan Program is directed by Professor Samuels. During 2010–2011, 25 interns were sent to Japan.

#### *MIT-Mexico Program*

The MIT-Mexico Program continues to expand its network of host institutions and internship opportunities in different regions of Mexico; during this period the program sent its largest group of interns to Mexico since the program was launched. Interns went to several local and international companies, government entities, research institutions and universities. In addition,

interns were involved in public service studies under the direction of Tecnológico de Monterrey at various campuses throughout the country. The MIT-Mexico program also created a University Consortium through which two of the most important universities in Mexico have become members and sponsors of the program. On campus, the program partnered with other groups at MIT, sponsoring numerous events including talks on pertinent issues such as immigration, science and technology in Mexico, economy, film screenings and other academic and cultural events. The MIT-Mexico Program is directed by David W. Skinner Professor of Political Economy Michael Piore. During 2010–2011, 36 interns were sent to Mexico.

#### *MIT-Spain Program*

The MIT-Spain Program continues to expand its network of host institutions within Spain. At MIT, the program cooperated with various departments to host public lectures and other events. MIT-Spain collaborated with the Complutense University of Madrid-Real Colegio Complutense and the Minda de Gunzburg Center for European Studies at Harvard University for a lecture entitled, “American Experiences: Spanish Professors in U.S. Universities (1936-1950)”. MIT-Spain also hosted a networking session at MIT with AMBAR Venture Capital to promote entrepreneurial initiatives in Spain. Finally, the MIT-Spain/Barcelona Chamber of Commerce Seed Fund awarded three grants to promote research collaborations between Spanish and MIT researchers. The MIT-Spain Program is co-directed by Professor of Aeronautics and Astronautics Manuel Martinez-Sanchez, Professor of Aeronautics and Astronautics Jaume Peraire, Dr. Mercedes Balcells-Camps of the Harvard-MIT Division of Health Sciences and Technology and Dr. Luis Perez-Breva of the Department of Chemical Engineering. During 2010–2011, 50 interns were sent to Spain.

#### *MIT-Africa Program*

The MIT-Africa Program was established in 2009 with Total’s gift of a Chair on Contemporary Africa to the School of Humanities, Arts, and Social Sciences. This gift was the first step in a series of collaborations in education and research between Africa and MIT. Professor Daniel Posner has been selected to hold this chair in the Department of Political Science. Professor Berger and Patricia Gercik, MISTI Associate Director, are currently managing the Africa Program.

This year MISTI once again provided support for the Accelerating Information Technology Innovation (AITI), a student-run organization that promotes development through education in appropriate information and communication technologies. During the 2011 summer recess, AITI sent fourteen students to Ghana, Kenya, Nigeria and Rwanda to teach classes on mobile phone application development with an emphasis on independent research, problem solving, and entrepreneurship.

In addition to AITI, and under the direction of Professor Berger and Akintunde Ibitayo Akinwande, Professor of Electrical Engineering and Computer Science, MISTI has initiated an Empower the Teachers Program to bring junior Nigerian computer science and electrical engineering faculty to MIT in the fall of 2011 to study pedagogical approaches in their discipline. This program is supported by Total and Google. Professor Akinwande interviewed seventeen finalists out of a pool of more than fifty applicants, and selected eight junior faculty members. These fellows will be mentored by MIT faculty in the Department of Electrical Engineering and Computer Science, take courses and participate in seminars relevant to MIT’s

problem solving approach to teaching and audit MIT courses in their disciplines. Participants will also take part in a weekly seminar whose focus will be on revisions of their own course material.

### *MISTI Global Seed Funds*

MISTI offers seed funds to help MIT faculty and researchers launch early-stage international projects and collaborations. Applicants are encouraged to involve students—both undergraduate and graduate—in their projects. These awards cover travel, meeting, and workshop costs. During this reporting period, a Belgium, two Chile and a China Seed Fund were added.

Based on the highly successful MIT-France Seed Fund, MISTI Global Seed Funds was launched in 2008 to support projects in any country. MISTI Global Seed Funds now includes this general pool and ten separate country specific funds in Chile (two funds), Belgium, Brazil, China, France, Germany, India (two funds), Italy (two funds), Japan and Spain. The maximum award is typically \$30,000.

In the second grant round of 2010–2011, 112 proposals were submitted; of these, 46 projects received \$903,912 in funding. Faculty and research scientists from 27 departments across the Institute submitted proposals for projects in 26 countries. All awardees include undergraduate, graduate, or post-doctoral student participation. As in the case of student internship programs, MISTI provides cultural preparation for participating students before their departure.

Whenever possible, MISTI leverages the seed fund program to create new opportunities for students and enhance faculty connections abroad. For instance, some students involved in seed fund grants go on to become MISTI interns, and often faculty collaborators abroad offer internships to MISTI students.

### *Minor in Applied International Studies*

The Minor in Applied International Studies (MAIS) is a rigorous, interdisciplinary academic experience that prepares MIT undergraduates for productive roles in today's global academic and professional environments. Since its creation in 2005, more than 95 students have completed the MAIS, fulfilling the requirements in the critical areas of language and culture; international politics, economics, and history; and international experience. Now the second largest minor in the School of Humanities, Arts, and Social Sciences, MAIS draws students from MISTI, D-Labs, the Cambridge-MIT Institute, and the Public Service Center. During 2010–2011, MAIS had 33 undergraduates.

### *MISTI 2.0*

A new initiative for MISTI alumni to build on their previous international experiences, MISTI 2.0 provides funding and support for new collaborative research and projects with former host country colleagues and partners. MISTI alumni can form project teams and apply for up to \$2,000 per student for travel, meeting, and workshop costs. An evaluating committee (the MISTI 2.0 Coordinator, two additional MISTI country coordinators, the Associate Director of MISTI, and three mentors from the Venture Mentoring Service) reviewed the 16 applications for funding and awarded MISTI 2.0 funding to seven teams returning to work in Brazil, France, Germany, Israel, Italy and Mexico. MISTI 2.0 grantees are expected to attend a 10-hour country-specific training session during IAP and complete a post-project report detailing their experience. During

2010–2011, seven students were awarded MISTI 2.0 funds.

### **Political Economy and Technology Policy Program**

This CIS program applies theories and methods from the discipline of political economy to issues in science and technology policy, with work in two primary areas. The program is headed by Kenneth Oye, Associate Professor of Political Science and Engineering Systems and former CIS Director.

*Program on Emerging Technologies (PoET).* This multidisciplinary program links the Engineering Systems Division, the Department of Political Science and the Program on Science, Technology and Society. PoET examines the nature and effects of emerging technologies; conducts research on key areas of uncertainty on these issues; and offers recommendations for improving the capacity of public and private institutions to adapt in the face of irreducible uncertainty. Retrospective studies on the automobile, laser, and GPS provide a basis for identifying factors that affect the diffusion of technologies across actors and applications; and for evaluating assessments of effects of technologies during their infancies. PoET was founded under an National Science Foundation IGERT grant (2004-2009), with support for creating new courses and for integrating research and training for doctoral students from ESD, Political Science and STS. IGERT trainees conducted research on Information Technology and Military Strategy; Standard Setting and Craft in Satellite Design; Projecting Economic Effects of Synthetic Biology; Synthetic Biology Security; Design of Survivable Systems; Regulatory Foresight and Adaptation; and Technology Policy and Innovation.

Research continues on two emerging technologies: (1) synthetic biology research has been led by Professor Oye and supported by NSF SynBERC, in partnership with biological engineers at MIT, Harvard, Stanford, LBNL and BU and with the David Rejeski technology policy group at the Woodrow Wilson Center. The MIT group has worked on protocols and standards, safety and security issues, and intellectual sharing and ownership. In 2010-2011, the MIT group focused on the design, testing and demonstration of ready-to-roll applications of synthetic biology for safety and sustainability. One highlight was a joint MIT-Wilson Center exercise entitled “Beyond Containment: Assessing, Testing and Demonstrating Safety on Release of SynBIO Devices and Chassis,” with emphasis on a re-engineered arsenic biosensor and on “rE.coli” engineered to limit horizontal gene flow. Participants from MIT, the White House Office of Science and Technology Policy, the Environmental Protection Agency, Friends of the Earth, and Dow AgroSciences committed to work in depth on risk governance in this area. The MIT group has also managed “human practices” judging in the 2010 iGEM Jamboree; trained iGEM faculty on safety and security issues; and presented research on synBIO policy issues to conferences and workshops organized by AAAS, IRGC, Genopole of France, the ETH, Massachusetts Medical Research Association and the FBI, and SynBERC. (2) future internet research has been led by David Clark of CSAIL and NSF Future Internet Design (FIND). Under the leadership of Professor of Political Science Nazli Choucri, CSAIL Senior Research Scientist David Clark, and IGERT trainees are now carrying the security components of internet work to a new level with their independent Department of Defense MINERVA project.

*Project on Knowledge Assessment and Policy Adaption.* Lawrence McCray and Kenneth Oye are leading research on the evaluation and utilization of scientific and technical knowledge in areas

of uncertainty and controversy. *Grasping Third Rails: Assessing Scientific and Technical Knowledge in Areas of Controversy* is examining public controversies with significant scientific and technical content, with research underway on security issues including ballistic missile defense and Iraq WMD claims; and on health and environmental issues including PM2.5, methyl mercury, climate change, and dietary standards. *Uncertainty, Anticipation, and Adaption* is assessing the potential of anticipation and adaptation under conditions of pervasive uncertainty, using studies comparing US and EU policies on particulates, prion based diseases, water, and pharmaceuticals. In 2010, McCray, Oye and Petersen published “Planned Adaptation in Risk Regulation: An Initial Survey of US Environmental, Health and Safety Regulations” in *Technology Forecasting and Social Change*.

In 2010-2011, work focused on reform of systems for evaluating the safety, effects, and cost effectiveness of pharmaceuticals, with emphasis on adaptive approaches to drug licensing. This work has been conducted jointly with Hans-Georg Eichler, CIS Wilhelm Fellow and Senior Medical Officer of the European Medicines Agency; and has been supported by the MIT Center for Biomedical Innovation. Highlights of the past year include a draft paper by Eichler and Oye on the Climate for Adaptive Licensing; workshops with regulators, payers, drug developers and others on prospective pilot exercises to test new approaches to licensing; and consultations with PCAST staff on the reform of drug licensing.

### **Seminar XXI: Outreach to the Washington Policy Community**

For more than two decades, the CIS has hosted Seminar XXI, an educational program for senior military officers, government officials, and executives in NGOs in the national security policy community. The program provides future leaders of that community with the analytic skills needed to understand other countries and foreign relations in general. A cohort of about 90 meets throughout the academic year in Washington, DC, and northern Virginia.

Fellows learn to recognize the assumptions that underlie assessments of foreign societies and to explore policy issues critical to American interests through a variety of lenses. At each session, eminent speakers present alternative perspectives from which to understand a given country or problem. The fundamental criterion for choosing fellows is that they currently hold or are expected to hold top posts in the military or government within the next three to five years.

The program just completed its 25th year and now has more than 1,600 alumni. Robert Art, Christian A. Herter professor of international relations at Brandeis University and senior fellow in the CIS Security Studies Program, directs Seminar XXI.

### **Program on Environmental Governance and Sustainability**

PEGS is in its third year, founded and directed by JoAnn Carmin, Associate Professor of environmental Planning and Policy in the Department of Urban Studies and Planning. The program explores with students research and ideas about how to promote environmentally sound and socially just development. Many of the activities associated with PEGS draw on field-based knowledge, complemented with consideration of global governance institutions, organizations,

and processes. In 2010-11, PEGS selected four PEGS Fellows—graduate students whose work is partially funded by the program. PEGS convenes a Global sustainability Working Group of students as well. During this past academic year, Professor Carmin worked with Professor Davis and students on conflict and environmental challenges in cities.

### **Persian Gulf Initiative**

Begun in 2005, this project seeks to bring together scholars and practitioners from the Gulf and the United States to explore contemporary issues, particularly security relationships. It has over the years sponsored several research initiatives, publications, visiting scholars, and public forums at MIT and in New York, Washington, and elsewhere. In 2010-11, the Initiative convened the third in a series of “critical oral history” conferences at the Musgrove conference center in Georgia, which brought together high-level decision makers from the U.S. and Iran to discuss the fitful attempt to normalize relations in the late 1990s. With MIT’s HyperStudio, that project is developing a rich resource of documents for scholars and students.

### **Puerto Rico Economy Project**

CIS was invited by MIT alumnus Jon Borschow to help develop a healthier, sustainable economy for Puerto Rico, and the Center has responded by organizing a major research effort. Kicked off a two-day conference at MIT in February, the Puerto Rico Economy Project (PREP@MIT) is cooperating with the Foundation for Puerto Rico to develop practical ideas for implementation on the island. Several MIT faculty and graduate students from Political Science, Urban Studies & Planning, and the Sloan School are participating. PREP@MIT is also working with federal officials to introduce new ideas into the policy-making process.

### **Urban Resilience in Situations of Chronic Violence**

This new project, headed by Diane Davis, Professor of Political Sociology in the Department of Urban Studies and Planning, seeks to better understand the ways in which urban communities cope successfully with chronic violence. Based on field studies in eight cities (Mexico City, Managua, Medellin, São Paulo, Kigali, Nairobi, Johannesburg, and Karachi), the researchers will build theories of this coping, or resilience, with respect to security, livelihoods, and justice. The project is supported by a major grant from the U.S. Agency for International Development.

### **South Asia**

The Joint Seminar on South Asian Politics continued into its second year with eight sessions on discrimination in India, corruption in India, political violence in South Asia, religion, and other topics. The seminar is cosponsored with Harvard and Brown universities, and co-managed by Assistant Professor of Political Science Vipin Narang.

In January, CIS co-organized a major conference in New Delhi with the Delhi Policy Group on Asian security. Speakers included Professor Narang, Professor Posen, Professor Samuels, Admiral William J. Fallon (chair of the CIS Advisory Board and former Wilhelm Fellow), among others. The conference was also addressed by the foreign minister and several other

Indian political leaders, intellectuals, and journalists. Siddharth Shriram, a CIS Advisory Board member, was instrumental in the conference's organization.

## **Women & Security**

The culmination of a two-year effort, this project launched its case-study report, *What the Women Say: Participation and UNSCR 1325*, at the U.S. Permanent Mission to the United Nations in October. Assessing the landmark U.N. Security Council resolution on women, the project commissioned case studies in six countries. The well-received report, done in cooperation with the International Civil Society Action Network and CIS Senior Fellow Sanam Anderlini, earned extensive press coverage and presentations at the National Security Council, the U.S. Institute of Peace, and Harvard Law School, among others. Principal Research Scientist John Tirman published an article in *Foreign Service Journal*, and Anderlini spoke in Colombia and elsewhere on the findings. The project was supported by the Irish and Norwegian governments.

## **Myron Weiner Seminar Series on International Migration**

Named in honor of the late director of CIS and professor of political science, the seminar held four well-regarded sessions in 2010-11, including discussions on refugee protection, development in Mexico and Morocco, and controversies over citizenship in the U.S. and Brazil. It is a project of the Inter-University Committee on International Migration, which has participation from six area universities and is hosted by CIS.

## **Public Programs**

In 2010-11, CIS continued to foster a very active public education program—lectures, seminars, films, and other events that draw in the MIT community and broad swath of the Greater Boston Metropolitan area. The Center's Starr Forums and public lectures continued to offer events on pressing global issues with leading academics, policymakers and journalists. The events were well attended by the MIT community and beyond. Dialogue was spirited and informed. Videos of our events are posted on our website, TechTV, MIT World and YouTube. When possible, we involve like-minded organizations on campus and the local community as well as local media outlets.

Several Starr Forums were staged soon after two unexpected global events: the revolution in Egypt and Japan's nuclear crisis. On Egypt, we offered an eyewitness account from a photojournalist who was in Tahrir Square during the uprising. Later, we hosted a talk with the founders of the April 6 Youth Movement—a peaceful organization that played a key role in President Mubarak's departure.

On Japan, MIT experts discussed the country's nuclear past, present, and future from a political and engineering perspective. The talk was co-sponsored by the Department of Nuclear Science and Engineering and included on the panel Richard Samuels and Ken Oye (both from CIS) and Mike Golay (from the Department of Nuclear Science and Engineering).

We were delighted to host a talk with David Miliband, the former foreign secretary of the UK, who was a CIS Wilhelm fellow in residence in April. Miliband discussed “mending, not just ending, the war in Afghanistan.” Months prior to Miliband’s talk, we hosted a “Report Card on President Obama,” featuring MIT experts who graded the Administration’s work on three hot issues: Afghanistan, climate, and the economy.

Multiple book talks were held with their respective authors, including: "Washington Rules: America's Path to Permanent War" with Andrew Bacevich; “Peace Meals” with Anna Badkhen; and “The Shah,” with Abbas Milani.

Art, again, was used as a means to increase awareness on global issues. We featured a one-man show that portrayed the complexities and contradictions in Palestinian-Israeli identity. And we hosted two film screenings: "Enemies of the People," with co-director Rob Lemkin, a harrowing elucidation of the minds and souls of Pol Pot regime officials. And CIS presented “Budrus,” a film about a Palestinian who unites local Arabs and Jews in an unarmed movement to save his village.

Public Programs assembled a CIS display for the much-lauded MIT 150 Open House. The display included a poster session, videos, and print materials. And, we continued to publish *precis*, the Center’s biannual newsletter as both a print and web-based publication.

Finally, the Emile Bustani Middle East Seminar (organized by Philip Khoury, Associate Provost and Ford International Professor of History) continued with several lectures, including: "U.S. & Israeli Interests: Aligned or Diverging?" with Andrew Bacevich; "Fundamentalist & Other Obstacles to Religious Tolerance" with Malise Ruthven; "Lebanon: Consensus in Times of Enmity" with Augustus Richard Norton; and "What Happened to the End of Ideology and the Triumph of Liberalism in the Arab World?" with Michaelle Browsers.

## **Publications and Notable Activities & Awards**

### *Books*

JoAnn Carmin and Julian Agyeman (eds.), *Environmental Inequalities Beyond Borders: Local Perspectives on Global Injustices* (MIT Press, 2011).

JoAnn Carmin and Adam Fagan (eds.), *Green Activism in Post-Socialist Europe and the Former Soviet Union* (Routledge, 2011).

Diane Davis and Nora Libertun de Duren (eds.), *Cities and Sovereignty: Identity Conflicts in Urban Spaces* (Indiana University Press, 2011).

John Tirman, *The Deaths of Others: The Fate of Civilians in America’s Wars* (Oxford University Press, 2011).

Stephen Van Evera and Sidharth Shah (eds.), *The Prudent Use of Power in American*

*National Security Strategy* (The Tobin Project, 2010).

*Articles, Papers, and Book Chapters*

Owen Cote and Benjamin Friedman, "Overwrought on START," *The National Interest*, (December 1, 2010).

Diane Davis, "Irregular Armed Forces, Shifting Patterns of Commitment, and Fragmented Sovereignty in the Developing World," in Michael Hannagan and Chris Tilly (eds.), *Contention and Trust in Cities and States*, (Springer Publishers, 2011).

Diane Davis, "The Political and Economic Origins of Violence and Insecurity in Contemporary Latin America: Past Trajectories and Future Prospects," in Desmond Arias and Daniel Goldstein (eds.), *Violent Democracies in Latin America: Toward an Interdisciplinary Reconceptualization*, (Duke University Press, 2010).

Fotini Christia, Stephen Biddle and J. Alexander Their, "Defining Success in Afghanistan: What Can the United States Accept?" *Foreign Affairs*, July/August 2010, pp. 48-60.

Fotini Christia, Book review of *Afghanistan: A Cultural and Political History* by T. Barfield in *The Middle East Journal*, 64, no. 4 (2010): 650-651.

M. Taylor Fravel and Evan S. Medeiros, "China's Search for Assured Retaliation: Explaining the Evolution of China's Nuclear Strategy," *International Security*, Vol. 35, No 2 (Fall 2010): 48-87.

M. Taylor Fravel, "International Relations Theory and China's Rise: Assessing China's Potential for Territorial Expansion," *International Studies Review*, Vol. 12, No. 4 (December 2010).

Barry R. Posen, "Overkill," *Foreign Affairs*, (July/August 2010).

Richard J. Samuels, "An ancient tool for holding passions captive," *Boston Globe* (July 28, 2010).

Richard J. Samuels and Robert Madsen "Japan's Black Swan," *Foreign Policy* (March 16, 2011).

Richard J. Samuels, Eric Heginbotham, Adam Liff, and Ely Ratner. "Japan Debates its Security Options: The USAF in a Dynamic Security Landscape," Paper prepared by the RAND Corporation for Project Air Force, Washington, D.C., 2010.

Harvey M. Sapolsky, "Security Studies and Security Policy: An American Perspective," in Robert Denmark et.al., eds. *The International Studies Compendium Project*, (Oxford: Wiley-Blackwell, 2010).

Harvey M. Sapolsky and Benjamin Freidman, “When intervention is easy: For post-Cold War America, military adventures forever beckon – and their lessons are quickly forgotten.” *Philadelphia Inquirer* (April 8, 2011).

John Tirman, “UNSCR 1325: Slow Progress, Uncertain Prospects,” *Foreign Service Journal* (April 2011).

John Tirman and Sanam Naraghi Anderlini, *What the Women Say: Participation and UNSCR 1325* (MIT Center for International Studies and International Civil Society Action Network, October 2010).

Jim Walsh, “Pyongyang Policy Options: Instruments and Principles for Dealing with North Korea,” Paper for the Tobin Project, 1-28.

Cindy Williams and Benjamin Friedman, “How to Cut the Military,” *New York Times* (May 8, 2011).