MIT Research, Education and Activities Related to Social Responsibility

This survey by MIT’s Industrial Liaison Program identifies selected research, initiatives, programs and education in the area of social responsibility and humanitarian issues at MIT. Note that some of these centers, programs, initiatives fit more than one of the categories listed below.

The mission of MIT is to advance knowledge and educate students in science, technology, and other areas of scholarship that will best serve the nation and the world in the 21st century. The Institute is committed to generating, disseminating, and preserving knowledge, and to working with others to bring this knowledge to bear on the world’s great challenges. MIT is dedicated to providing its students with an education that combines rigorous academic study and the excitement of discovery with the support and intellectual stimulation of a diverse campus community. We seek to develop in each member of the MIT community the ability and passion to work wisely, creatively, and effectively for the betterment of humankind.

For more information, please contact MIT’s Industrial Liaison Program at +1-617-253-2691.

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MIT Industrial Liaison Program
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ABDUL LATIF JAMEEL POVERTY ACTION LAB (J-PAL)

Directors: Prof. Abhijit Banerjee and Prof. Esher Duflo
http://www.povertyactionlab.org/

The Abdul Latif Jameel Poverty Action Lab (J-PAL) is a network of academics who conduct randomized evaluations of poverty programs around the world. J-PAL aspires to serve all those engaged in the fight against poverty, anywhere in the world. It aims to play a leading role in the dissemination of knowledge relevant for fighting poverty, in carrying out randomized evaluations of anti-poverty programs and in providing help and training to those who want to start carrying out randomized evaluations.

The J-PAL Website provides a growing list of development projects and evaluations conducted by Lab affiliates. The project database can be searched by researcher, project location, and development theme. The project description provides information, not only about results, but also about methodologies and practical implementation. Links to publications and working papers are also available for more technical and detailed information. All J-PAL studies are available in our working paper series "Research into Action". Also, J-PAL publishes a bulletin online "Fighting Poverty: What Works" to provide accessible summaries of results from randomized evaluations conducted around the world on selected topics, with links to the authors' papers.

J-PAL has developed a 5-day Executive Education program geared towards development practitioners from government, philanthropic foundations, international aid agencies, and non-governmental organizations, interested in learning the techniques required to implement randomized trials. The use of randomized evaluations as an effective tool for policy assessment requires a solid understanding of the relevant methodology (including the methodology of implementation) and we hope that this course, which combines theoretical as well as hands-on case-based training, provides that. To ensure that the course attracts practitioners from NGOs and developing countries, we also plan to find sponsors who can help them bear the cost of attending the program.

J-PAL also offers its technical expertise to those who are interested in evaluating the impact of a particular program. Whether you are an NGO with a potentially exciting new program or a donor worried that you are paying for something that does not work: we can help...

Examples of Completed Projects:

- Women as Policy Makers: The impact of female political leaders on policy decisions.
- Balsakhi Program: Does remedial tutoring for primary school students improve learning?
- Discrimination in the Job Market: Are Emily and Greg More Employable than Lakisha and Jamal?
• Computer-Assisted Learning Project: Does access to computer-assisted learning in primary schools improve the quality of education?

• Encouraging Teacher Attendance through Monitoring with Cameras in Rural India: Cameras with time-date stamps documented teacher attendance, incentive pay rewarded attendance, and tests measured how student performance changed as a result.

Evaluating Social Programs: Executive Training at J-PAL
This five-day program on evaluating social programs will provide a thorough understanding of randomized evaluations and pragmatic step-by-step training for conducting one’s own evaluation. While the course focuses on randomized evaluations, many of the topics, such as measuring outcomes and dealing with threats to the validity of an evaluation, are relevant for other methodologies. The program is designed for people from a variety of backgrounds: managers and researchers from international development organizations, foundations, governments and non-governmental organizations from around the world, as well as trained economists looking to retool...

CALTECH/MIT VOTING TECHNOLOGY PROJECT (VTP)
http://web.mit.edu/polisci/research/vtp.html
http://vote.caltech.edu/drupal/
http://web.mit.edu/polisci/research/representation.html

Established by Caltech President David Baltimore and MIT President Charles Vest in December 2000 to prevent a recurrence of the problems that threatened the 2000 U.S. Presidential Election. Since establishment, members of the VTP have studied all aspects of the election process, both in the United States and abroad. VTP faculty, research affiliates, and students have written many working papers, published scores of academic articles and books, and worked on a great array of specific projects. All of this research and policymaking activity seeks to develop better voting technologies, to improve election administration, and to deepen scientific research in these areas...

“3 Questions: Charles Stewart on voting survey”
MIT News Office, March 26, 2009

Charles Stewart III, the Kenan Sahin Distinguished Professor of Political Science and head of MIT’s Department of Political Science, recently helped to complete the first comprehensive nationwide study that focused exclusively on how American voters experience the administration of elections. The "2008 Survey of the Performance of American Elections," conducted for the Pew Center on the States with support from the AARP and the JEHT Foundation, found that while the vast majority of Americans said that their 2008 Election Day experience went smoothly, many U.S. voters did not cast ballots because of voter registration problems [see http://www.pewcenteronthestates.org/news_room_detail.aspx?id=50418]. Stewart took time to discuss some of the survey findings, which were presented in testimony before Congress on Thursday, March 26...
http://www.pewcenteronthestates.org/uploadedFiles/Final%2oreport20090218.pdf
This study is based on the responses to an Internet survey of 200 registered voters in each of the 50 states, for a total of 10,000 observations overall. Individuals were asked about their experience voting—either in-person on Election Day, in-person early, or absentee voting. Non-voters were also surveyed....

MIT CENTER FOR INTERNATIONAL STUDIES (CIS)
Director: Prof. Richard Samuels
http://web.mit.edu/cis/index.html

The Center for International Studies (CIS) aims to support and promote international research and education at MIT. Whenever possible, we capitalize on MIT's great strengths in science and engineering, examining the international aspects of these fields as they relate to both policy and practice, and focusing on those issues where science and engineering intersect most closely with foreign affairs.

CIS includes 160 members of the MIT faculty and staff, mainly drawn from the departments of political science and urban studies, and visiting scholars from around the world. We sponsor formal programs, multidisciplinary working groups and numerous public events...

CIS sponsors several interdisciplinary working groups. Working groups enable the MIT scholarly community to tackle research issues that are not confined to a single department or discipline. Several groups are structured to link the efforts of social science professionals with those of engineers and natural scientists on problems of academic and policy significance. They also encourage collaboration between graduate students and faculty members. Most working groups are open to any MIT faculty member or student who wishes to participate; some draw participants from outside the MIT community. Some of the working groups are as follows:

Environmental Vulnerability, Resilience, and Justice Working Group
http://web.mit.edu/cis/wg_evrj.html

The CIS Working Group on Environmental Vulnerability, Resilience, and Justice will bring together graduate students, faculty and research scientists from across MIT to discuss environmental challenges and appropriate governance frameworks. We will look across a variety of scales and disciplines and from diverse methodological and epistemological standpoints. We will consider existing and emerging theoretical advancements as well as how researchers and practitioners can contribute to the creation of more just and resilient cities and regions in both the global North and South.

The work of the group will be anchored in discussions of student and faculty work in progress. The intent is to encourage analytic discussions and critical feedback by the members of the group and invited participants. We envision work in progress as encompassing new faculty projects, doctoral student papers, research reports, and dissertation and thesis projects (at different stages of development)...
Humanitarian and Disaster Relief Working Group
http://web.mit.edu/cis/wg_hdr.html

The MIT Humanitarian and Disaster Relief Working Group seeks to provide a forum in which students and faculty can share their research and insights into the critical field of humanitarian and disaster relief with the aim of fostering interdisciplinary, practical solutions to the problems facing the world's most vulnerable populations. The goal is to establish a campus organization that represents the community of those interested in the field at MIT on campus and build the presence and reputation of MIT in this field in Boston and throughout the world. The group focuses on exploring research and field research methods as well as building stronger connections with other institutions in the Boston area. Activities include a humanitarian practitioner roundtable series, a guest lecture series and discussions of research works in progress by various members of the working group.

Violent Conflict and Economic Institutions
http://web.mit.edu/cis/wg_vcei.html

The CIS Working Group on Violent Conflict & Economic Institutions seeks to make important progress toward better understanding those organizations and institutions (broadly defined) that arise in, adapt to, and allow individuals to cope with violent conflict. These institutions form the substrate of the wartime and postwar economy, and underpin the transition from the former to the latter. The Group focuses on five broad areas of interest:

1. Firm organizational dynamics
2. Distribution networks
3. Urban spatial & economic structures
4. Formal & informal regulatory institutions
5. Property rights & civilian livelihoods.

The Inter-University Committee on International Migration
http://web.mit.edu/cis/www/migration/

Since its establishment in 1974, the Inter-University Committee on International Migration has been a focal point for migration and refugee studies at member institutions, which include Boston University, Brandeis University, The Fletcher School of Law and Diplomacy, Harvard University, MIT, Tufts University, and Wellesley College. The committee is chaired by MIT as a program of the Center for International Studies (CIS).

Seminar Series: During each academic year, the Committee sponsors two seminar series on international migration: the Migration Seminar Series, held at MIT's Center for International Studies. The seminars explore factors affecting international population movements and their impact upon sending and receiving countries and relations among them.

Workshops and Conferences: The Committee organizes workshops and conferences on specific aspects of international migration. Selected papers from these and from the seminars are
published by CIS in the Rosemarie Rogers Working Paper Series, named after the late founding member of the Inter-University Committee.

**Persian Gulf Initiative**


The Persian Gulf Initiative seeks to explore the shifting dynamics in this critical region in the vernacular of the region—providing a platform for understanding emerging issues and their policy implications from the perspective of the region itself, and how they relate to the United States and to the broader international community. In effect, this is an effort to shift the focus from U.S.-centric to region-centric, and to include issues that evolve from and affect the domestic and regional political and security environment.

The Initiative is organized around workshops at which leading scholars and practitioners from the region, Europe, and the United States examine issues of common concern and interest. From these workshops, occasional papers, reports, published articles, and public forums, we provide both the context and the means to create new knowledge useful to scholars, policy practitioners, journalists, and NGOs. Our goal is to constructively contribute to public debate in the United States, the Gulf and beyond, on this region of central geography, venerable history, great cultures, and contemporary significance.

In its initial offerings in 2005, the Initiative hosted a series of workshops on "The Crisis in Governance" in Saudi Arabia, Iraq and Iran. In 2006, two workshops were convened, one in April on transnational violence and the second in November on the regional implications of the war in Iraq. Future workshops are planned on topics relevant to India and the Gulf, energy security, Iranian civil society, and the governance challenge.

The Iraq mortality study was commissioned from this program and published in The Lancet, stirring important new debates on the human cost of the war. Several public forums have been mounted in New York, Washington, D.C., and the MIT campus. Among the notable events was a talk by former Iranian president Mohammed Khatemi, who visited in September 2006, addressing faculty, students, alumni, and guests.

**Iraq: The Human Cost**

Prof. John Tirman, Executive Director, MIT Center for International Studies


Conventional wisdom in American politics focuses only on American costs in the war in Iraq: the casualties to U.S. soldiers, the financial costs, and sometimes the strategic costs. But the human cost to the Iraqis themselves are nearly ignored in political discourse, the news media, and intellectual circles. This site is a corrective to those oversights. We present empirical reports, studies, and other accounts that convey and assess the consequences of war for the people of Iraq.

**Jerusalem 2050**

Prof Diane Davis, Project Director
Jerusalem 2050 is a uniquely visionary and problem-solving project, jointly sponsored by MIT’s Department of Urban Studies & Planning and the Center for International Studies with the participation of Palestinian and Israeli scholars, activists, business leaders, youth and others. It seeks to understand what it would take to make Jerusalem, a city also known as Al Quds, claimed by two nations and central to three religions, “merely” a city, a place of difference and diversity in which contending ideas and diverse citizenries can co-exist in benign, yet creative, ways.

In order to break out of the stalemate that has reinforced the cycle of despair and conflict in Jerusalem and largely removed questions of urban livability from the public discourse, the Jerusalem 2050 project aims to bypass the standard route of negotiation between "representative" peoples and turn instead to the liberating potential of imagination and design. Rather than aiming for unity or synthesis among competing parties in their plans for the city, we will encourage the production of bold and “non-negotiated” visions for Jerusalem, with the assumption being that only through such methods can there emerge a shared understanding of the basic urban conditions necessary for a tolerant and culturally vibrant city to flower, independent of ethnic or religious partisanship.

Another goal of this project is to promote the use of design and other creative imaginings of space as techniques for arriving at a more positive social, political and economic organization of the city...

Program on Human Rights & Justice (PHRJ)
Professor Balakrishnan Rajagopal
http://web.mit.edu/phrj/

The MIT Program on Human Rights and Justice (PHRJ) is a collaborative effort between the Center for International Studies and the Department of Urban Studies and Planning. Established in 2001, the Program on Human Rights and Justice aims to create a cutting-edge interdisciplinary environment for research, teaching, curricular development and real-world application in human rights, especially relating to the global economy and science and technology. It is the first human rights program in a leading technology school and the first in the world with a specific focus on the human rights aspects of economic, scientific and technological developments. Cross-cultural dimensions of human welfare, security and dignity animate all the activities of the Program.

The Program focuses its activities on the following areas:

a) The global economy and human rights including labor and environmental rights
b) Governance, political transitions and human rights
c) Development planning, public policy and human rights
d) Science & technology and human rights
e) Global security, democracy and human rights
f) Social movements, democracy and human rights; and
g) Justice and human rights, including in transitional regimes...

On-going research projects at the PHRJ include the impact of globalization on local democratic institutions, the integration of human rights and development, the relevance of human rights to
new areas of science and technology and alternative models of accountability for mass crimes. In addition, the affiliated faculty members are leading experts on current rights-related issues such as global economy, corporate best practices, labor standards, environmental assessment and monitoring, e-development, social movements, ethnicity, gender, race, rule of law and crime in cities and the politics of science and history. Together, these projects make the PHRJ one of the most exciting places to do interdisciplinary human rights work.

CENTER FOR THE STUDY OF DIVERSITY IN SCIENCE, TECHNOLOGY, AND MEDICINE
Profs. David Jones, Erica James,
http://web.mit.edu/csd/CSD/Homepage.html

The Center for the Study of Diversity in Science, Technology, and Medicine was founded at MIT in June 2000 by a generous grant from The Andrew W. Mellon Foundation. Professor Evelynn M. Hammonds envisioned a center that would pursue two primary goals. Scholars at the CSD examine both the impact of diversity on the theory and practice of science, medicine, and technology, and the contributions of racial and ethnic minorities to those fields.

2008 Conference: What’s the Use of Race?
Race continues to thrive as a category of analysis among state and federal institutions and in medical, scientific, and social research. Despite concerns that race is a hollow and misleading concept, studies of race have produced overwhelming documentation of inequalities from birth to education, income, crime, punishment, disease, treatment, and death. Can race and ethnicity be objects of analysis and targets of policy, to alleviate inequalities, without causing harm by reifying invidious distinctions? This conference probes these quandaries by bringing together researchers and journal editors in medicine, science, law, and social science to explore the competing interests that make studies of race both feared and desired.

FLOODSAFE HONDURAS
http://web.mit.edu/lem/honduras/

FloodSafe Honduras is a group of MIT students and affiliates working within Honduras to solve community problems using engineering and science skills. Current projects include developing an automated flood early warning system -- the Sistema de Alerta Temprana, or SAT -- and helping with water chlorination projects in the rural North Coast region of Honduras. The warning system has the potential of alerting 10,000 people in the Rio Aguan Basin of impending life-threatening floods. The water chlorination team is developing technology and educational materials to improve community chlorination systems in the municipality of Bonito Oriental.

All MIT students - engineers and non-engineers, those willing to travel to Honduras and those who will help from MIT - are invited to participate. Our work is a partnership with Centro Tecnico San Alonso Rodriguez of Tocoa, Honduras. We are sponsored by the Edgerton Center and the Lutheran Episcopal Ministry at MIT, with funding from Thrivent Financial for Lutherans, MIT DLAB, MIT IDEAS competition, MIT Public Service Center, and the Carroll Wilson Award.
GLOBAL SYSTEM FOR SUSTAINABLE DEVELOPMENT (GSSD)
Nazli Choucri, Director
http://gssd.mit.edu/GSSD/gssden.nsf

The GSSD initiative is an integral part of a broader research program focusing on sources and consequences of international transformations. GSSD focuses on the role of knowledge and knowledge networking in the domain of Sustainable Development. Sustainability, per se, is one of the most critical and complex challenges at the global and local levels and it is also calling into question some of the most serious scholarly and theoretical assumptions about development that have been inherited from past century.

While overall research program examines complexity in international transformations, the GSSD related research focus specifically on the knowledge-sustainability linkages. Ongoing activities cluster around three themes, namely: (1) Globalization & International Relations, (2) Global Sustainability & Security, and (3) Information Technology & Development.

Consortium of Global Accords for Sustainable Development is committed to “reducing the gap between knowledge & policy”. Its founding members and collaborators consist of governmental institutions, corporations, research foundations, and academic institutions. Through innovative uses of advanced information technologies, the mission is to create new knowledge coupled with novel form of institutional synergism to facilitate transitions toward sustainability. Operationally, the Consortium focuses on enabling mechanisms and institutional innovations. The core mission of the GSSD Consortium is to reduce knowledge gaps between industrial and developing countries in decision-making for sustainability by:

• Contributing to global policy formation through a range of targeted knowledge-based stakeholder deliberations
• Creating a virtual "knowledge-bank" on sustainable development drawing on the powerful but disparate and unconnected knowledge bases worldwide.
• Encouraging "knowledge-brokerage" as well as networking and transaction facilities to help close the gap between "demand" and "supply" of knowledge, and between prevailing "problems" and potential "solutions" and
• Enhancing potentials for implementation and feedback through knowledge-based policy dialogues at all levels and in all contexts
• Helping to help drive policy on sustainable development, based on shared knowledge, new technology frontiers, and the consolidating efforts of partners.

HOUSING, COMMUNITY, AND ECONOMIC DEVELOPMENT (HCED) GROUP
Department of Urban Studies & Planning
http://web.mit.edu/dusp/hced/

The Housing, Community, and Economic Development (HCED) Group aims to advance the well-being of children, families, and communities in America’s cities and suburbs. We are especially concerned with the prospects of low and moderate income people and the institutions that serve them. Our multi-disciplinary research and teaching address the interactions among the economic, political, and social institutions that determine the character and quality of urban life. The group
pays particular attention to the shifting racial and ethnic make-up of many communities in America and to the opportunities and challenges these shifts are creating. HCED emphasizes the understanding of city and regional economies; the design and financial analysis of housing and economic development initiatives; the role of community organizing, community building, and “social capital” strategies; the effectiveness of employment and training programs; and the potential of technology to improve decision-making—at both the grassroots and “grasstops”—and expand civic engagement in America. HCED faculty members, who bring decades of experience in leadership roles outside the academy, engage actively in public, private, and nonprofit initiatives to tackle the issues on which our research and teaching focus.

The HCED faculty leads cutting-edge research projects in urban and regional affairs, including action research that directly engages us with agents of change in the public, private, and nongovernmental sectors. Our research aims to understand and call attention to the dynamic forces shaping metropolitan economies, politics, and community life and to inform policymaking and planning practice. Our dual commitment to building theory and improving practice creates a rich and flexible environment, grounded in reflective practice, for students at all levels...

INTERNATIONAL DEVELOPMENT GROUP @ MIT (IDG)
Department of Urban Studies & Planning
Prof. Balakrishnan Rajagopal
http://web.mit.edu/dusp/idg/

Formerly known as the International Development and Regional Planning (IDRP) group, the International Development Group (IDG) in the Department of Urban Studies and Planning conducts research and assists in the planning practice in countries around the world striving for social, political, and economic development. IDG faculty examines the urban, regional, and national socioeconomic impacts of major public and/or private investments, and address problems of squatter housing, municipal finance, metropolitan sprawl, and social disparities at a variety of scales. IDG faculty and students believe that effective planners operating in today's world must acquire an integrated institutional and historical view of economic, physical, political, and social factors.

Research
With the largest Planning faculty in the United States, MIT's Department of Urban Studies and Planning has unparalleled breadth and depth of expertise. In particular, IDG faculty conduct research or work on projects in virtually every area of the world, including Africa, Asia, Europe, the Middle East, North America, Oceania, and Central and South America. They explore issues as diverse as our geographic scope: Development, Globalization, Governance, Health and the Environment, Human Rights, Industrialization, Policy and Law, Regional Economies, Technology, Transportation, Urban Issues, and Water and Sanitation.
MIT INTERNATIONAL DEVELOPMENT INITIATIVE (IDI)
A Partnership of the Edgerton and Public Service Centers
J. Kim Vandiver, Sally Susnowitz, Amy Smith, Laura Sampath, Alison Hynd

The 2008 – 2009 yunus challenge...innovative small-scale energy storage solutions
The MIT International Development Initiative is excited to announce the 3rd year of the Muhammad Yunus Innovation Challenge to Alleviate Poverty. Each year, the Yunus Challenge highlights a need of the world’s poor and enables MIT students to develop solutions through a variety of mechanisms, including Public Service fellowship grants, the IDEAS Competition and D-Lab. The Challenge, named in honor of 2006 Nobel Prize winner Dr. Muhammad Yunus, was initiated and also supported by MIT alumnus Mr. Mohammed Abdul Latif Jameel, supporter of the MIT International Development Initiative, and benefactor of the Abdul Latif Jameel Poverty Action Lab at MIT (J-PAL).

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2008 – 2009: affordable small-scale energy storage solutions
One in four people in the world lack access to electricity. Low-cost renewable energy systems are increasingly accessible to the world’s poor, but batteries remain a costly, unsustainable way to store this energy. This year’s Yunus Challenge calls for innovative small-scale energy storage solutions to help alleviate poverty. Solutions must address the needs of people living on less than $2 per day. Solutions are not limited to electrical storage; applicants are encouraged to consider other types of storage, such as storing thermal or mechanical energy. However, solutions should focus on storage and not on insulation or other energy-related issues.

MIT PROJECT ON SOCIETY, BUSINESS AND THE ENVIRONMENT (MIT-SBE)
Environmental Policy and Planning (EPP)
http://web.mit.edu/dusp/epp/research/index.html#sbe

The MIT Project on Society, Business and the Environment (MIT-SBE) hosts a variety of domestic and international research projects and educational activities, all of which focus on how business can become more sustainable. The projects, courses, and seminars affiliated with MIT-SBE are distinguished by their commitment to two underlying premises. The first is that a healthy, resilient natural environment imposes fundamental limits on the nature and extent of commercial activity that is desirable. The second is that government oversight and stakeholder monitoring are necessary to ensure that business achieves socially equitable and environmentally sustainable outcomes. The goal of MIT-SBE research and education activities is to advance theory and generate practical insights into the kinds of government and stakeholder activity that are most likely to promote environmentally sustainable business.
PROJECT FOR RECLAMATION EXCELLENCE (P-REX)
Professor Alan Berger, Environmental Policy and Planning (EPP)
www.theprex.net

P-REX is a multi-disciplinary research effort at MIT focusing on the design and reuse of deindustrialized landscapes worldwide. By using low-angle aerial photography, maps, and other graphic evidence, Berger visually reveals evidence and trends of landscape waste throughout the world—from public health hazards such as abandoned mine pits, mountains of slag, and pools of cyanide, to vacant land, landfills, military installations, and places associated with high and low-density urbanization. How these sites are cleansed, valued and considered for adaptive reuse at local and regional scales is Berger's main area of interest. His work emphasizes the link between our consumption of natural resources, and the waste and destruction of landscape, to help us better understand how to proceed with redesigning our wasteful places for future productive uses and more sustainable outcomes.

Systemic Design implies that there are larger scale forces in the built and natural environment that, if properly understood, will lead to more intelligent project scenarios as opposed to superficial cosmetics. Systemic Design merges the existing stresses on a landscape with multi-layered, time-based strategies that work to reclaim value and increase sustainability in the built environment. Systemic Design seeks to interact with the environmental, economical, and programmatic stresses across regional territories. Understanding how natural and artificial systems dynamically function in regions and cities, and ultimately feedback from new design and planning interventions, forms the basis for smarter urban landscape projects in the future. Rapidly expanding technological and design mining tools enable new readings of landscape systems, and the invisible flows and forces that shape the tactile world. Professionals who are prepared to understand, use, and act on those readings will produce the next generation of strategic solutions to address the most pressing environmental and social challenges of our time, including: climate change, landscape toxicity, renewable energy, water process, deindustrialization, environmental justice, and adaptive reuse. Acting individually, professional fields are having marginal to no effect on urban sustainability. Conversely, Systemic design reorganizes disciplinary thought and process around one critical idea: innovation. The goal: to plan and design more environmentally sustainable urbanism at all scales.

THE URBAN LABORATORY (URBLAB)
School of Architecture + Planning
http://sap.mit.edu/resources/portfolio/urb_lab/

MIT and Tsinghua Join Forces on City Design and Development
Dean Adèle Naudé Santos and Professor Zhu Wenyi, Dean of the Tsinghua University School of Architecture, signed an agreement in Beijing in the summer of 2006 to establish an Urbanization Laboratory between the two schools focused on city design and development.

Officially known, for now, as the MIT/Tsinghua University Urbanization Laboratory, ‘UrbLab’ will build on a long history of cooperation between the two schools – including, most significantly, the Beijing Urban Design Studio which celebrated its twentieth anniversary last summer. (See PLAN 65 story.)
Led at MIT by Yung Ho Chang, Head of the Department of Architecture, and Dennis Frenchman, Director of the City Design and Development Program, UrbLab will create a structure for exploring design and development issues posed by the kind of rapid urbanization now being seen in China and for inventing new models of city form and function to accommodate such breakneck growth without sacrificing livability. Corresponding efforts at Tsinghua will initially be led by Professors Qin Youguo and Zhou Rong.

The need is nothing if not urgent. China is now experiencing a rate of urbanization that has no precedent in history. With the population of its cities doubling every twenty years, 600 million more people will be living in urban areas by the year 2050; to accommodate them will require building the equivalent of 50 cities the size of Shanghai. Fifty cities the size of Shanghai.

But to shape this massive growth, architects, planners and developers are relying largely on a very simple language of city form defined in the 1930s – industrial parks, shopping centers, highways, historic districts. As a result, urban areas are taking on a monotonous similarity in which day-to-day livability is increasingly tied to the car. In the long run, such patterns of development are unsustainable and will degrade both the quality of life and competitiveness of Chinese cities...

The first urban research project will likely concern a new town on the outskirts of Shenzhen, exploring the history of the modern city and making proposals for new urban models.

The UrbLab Expands to India: A Workshop and a Studio Focused on the Southern Town of Erode

http://sap.mit.edu/resources/portfolio/erode/

Established in 2006, the Urbanization Laboratory is MIT's response to rapid urbanization in China and India. UrbLab addresses the many challenges and opportunities posed by urbanization through policy, finance and design mechanisms, working at scales that range from single buildings to entire regions. The goal of the Lab is to invent new models of city form and function that will accommodate such fast growth without sacrificing livability.

Now the UrbLab program was expanded to India with a workshop and design studio in the southern town of Erode, both co-taught by Dean Adèle Naudé Santos. Together, the studio and the workshop provided an introduction to architecture and urbanism in a region where the idea of 'city' is an elastic urban condition rather than the product of a grand vision - a context in which it might be accurate to describe design and planning as a series of 'adjustments' and the challenge for architects and planners as the need to incorporate unpredictability and flexibility into their projects.

A prime example of such a place is Erode, the fastest growing urban region in the Southern Indian state of Tamil Nadu. At its core lies the Erode Municipality, an 8.4 sq km town that serves as an important railway junction and inter-city bus hub; figures vary, but it has been estimated that up to 400,000 people - roughly 2.5 times the town's population - pass through the area daily.

The Erode region as a whole is an important node in India's growing textile industry as well as the location for the trade and processing of turmeric and other agricultural commodities. With a relatively high literacy rate (74%) and a mix of small and medium-sized industries, the area is
poised for further economic growth but the region's future is also threatened by crippling environmental pollution, rising land and labor costs, and by an acute shortage of affordable housing...

At the end of the workshop, a report was presented to city authorities that demonstrated the merits of combining spatial and institutional analysis, as well as the merits of aligning urban design proposals with economic development goals. Based on that report, the government of Tamil Nadu has begun to take steps to better integrate physical planning and economic planning at the local level.

Following on that workshop, this fall's Erode studio examined the architectural and urban design implications of the strategies identified during the workshop, including structuring regional growth, stimulating environmental and urban renewal, and designing new growth centers...

**MIT's Growing Presence in India**

The Erode Studio is one of a dozen formal collaborations currently underway between MIT and India, reflecting growing faculty and student interest in the region. Recently, MIT's president Susan Hockfield led a delegation on a weeklong trip to India during which she announced a new initiative to strengthen, connect and accelerate MIT's global innovation efforts; the International Innovation Initiative (I-3) will act as a catalyst for new strategies to solve world problems such as climate change, energy and the environment, and to drive economic growth. Hockfield is the first sitting president of MIT to go to India.

**EDUCATION**

**CHINA EDUCATIONAL TECHNOLOGY INITIATIVE (MIT-CETI)**

http://web.mit.edu/mit-ceti/www/

The goal of MIT-CETI is to promote cultural exchange between American and Chinese students by exploring science and technology. Each summer for the past ten years, CETI has sent between 15 and 21 MIT students to high schools in the cities and towns of Anxian, Beijing, Chengdu, Guangzhou, Guilin, Kunming, Mianyang, Nanjing, Shanghai and Xi’an. Teaching in teams of three, some of the past CETI participants have taught curriculums on web design, programming, robotics, electrical engineering, civil engineering, English, biology, aerospace engineering and more.

CETI began in 1996 with the purpose of connecting Chinese high schools to the internet and teaching basic web design techniques. Since then, the swift progress of internet technology in Chinese schools has enabled CETI to grow above and beyond its original commitments. Recently, CETI sent a special development team to four rural towns in China to reach out to students who have had less exposure to technology education and virtually no previous opportunity for cultural exchange. In addition to working with high schools in China, CETI is now also collaborating with MIT OpenCourseWare and MIT iCampus to introduce and implement MIT educational technologies at Dalian University of Technology, Kunming University of Science & Technology, Qinghai University, Tsinghua University, Sichuan University, Xi'an Jiaotong University, Yunnan University, and Zhejiang University...
GLOBAL ENTREPRENEURSHIP LAB (G-LAB)
Prof. Richard Locke, Prof. Yasheng Huang, Shari Loessberg, M. Jonathan Lehrich, Kenneth Morse, Anjali Sastry
http://g-lab.mit.edu/

Global Entrepreneurship Lab (G-Lab) is the flagship international internship course offered at the MIT Sloan School of Management.

G-Lab is a mix of classroom learning matched with a global, often emerging market, internship. Teams of MBA students work with host companies around the world in essentially a 4-month, unpaid mini-consulting project. Host companies set the project focus. That is, our teams work on the problems host companies want to fix.

This website is focused on providing potential host companies with an in-depth view of the program, and the value it has provided since 2000 to over 200 companies around the world. If your firm is considering becoming a host company for G-Lab, please explore the site to learn about our program and our teams’ outstanding success in delivering value to the companies who host them.

G-Lab Projects
The G-Lab schedule is as follows: our classes begin meeting in early September. We post the internship projects on an internal website, using information provided by the host companies from a standardized questionnaire. Students form their own teams, mindful of building a strong mix of resumes and skill sets. Where appropriate, we ask teams to have at least 1 fluent local language speaker on the team. After a bidding and matching process, team assignments are announced in early October.

Teams then begin project work, talking with their companies by phone and email, fixing scope and deliverables, and beginning their research on campus. The heart of the internship occurs in January (when classes are not in session at MIT): the teams travel to their host companies and work for 3 to 4 weeks, full-time, on-site, in country. At the end of the internship, teams formally present their conclusions to senior management, and deliver written reports and backup data detailing their analysis.

GLOBAL ENTERPRISE FOR MICRO-MECHANICS AND MOLEULAR MEDICINE (GEM4)
http://www.gem4.org/index.html

GEM4 has brought together researchers and professionals in major institutions across the globe with distinctly different, but complementary, expertise and facilities to address significant problems at the intersections of select topics of engineering, life sciences, technology, medicine and public health.

GEM4 creates new models for interactions across scientific disciplinary boundaries whereby problems spanning the range of fundamental science to clinical studies and public health can be addressed on a global scale through strategic international partnerships.
Through initial focus areas in cell and molecular biomechanics, and environmental health, in the context of select human diseases, GEM4 creates a global forum for the definition and exploration of grand challenges and scientific studies, for the cross-fertilization of ideas among engineers, life scientists and medical professionals, and for the development of novel educational tools.

HUMAN RIGHTS AND SUSTAINABLE SANITATION
Prof. Balakrishnan Rajagopal
http://sap.mit.edu/resources/portfolio/human_rights/

A New Planning Practicum in India: A practicum on human rights and sustainable sanitation in the Indian state of Gujarat has resulted in a potential solution to the human rights issue of manual scavenging. The practicum was conducted by Balakrishnan Rajagopal, Ford International Associate Professor of Law and Development in the Department of Urban Studies and Planning and Director of MIT’s Program on Human Rights and Justice.

Manual scavenging, the act of removing excreta from dry pit latrines, is a prevalent practice in parts of India where water shortage has made the widespread use of public pour-flush toilets infeasible. Dalit (also known as untouchables) workers gather excreta without protective apparel and often use their bare hands and feet and a broom to perform their job, earning less than a dollar a day – a state of virtual forced labor from which there is little hope of exit due to India’s centuries-old caste system. Though dangerous and odious, it is often the sole economic opportunity for Dalit women.

The Indian government has declared this practice to be a grave violation of human rights. It is also, of course, a detriment to public health – the scavengers are at high risk for disease, and sludge from pit latrines threatens to contaminate water resources. The construction of dry pit latrines and the practice of human waste removal were outlawed in 1993 but the laws are rarely enforced because feasible sanitation alternatives have yet to be determined.

The objective of this project was to improve the scavengers’ living and working conditions by designing a sanitation technology that would preclude the need for manual scavenging and by analyzing the planning options that might make this technology work on the ground. The practicum consisted of a semester-long course conducted during the spring of 2006, fieldwork during the summer and the completion of a major report this fall to the NGO client, Navsarjan, a leading Dalit organization and social movement in India.

The classroom teaching in the spring introduced students to the political, social and historical aspects of the Indian caste system, the nature of manual scavenging and its causes and consequences. The course also covered the technical and institutional aspects of water and sanitation projects, the global policy and legal frameworks within which manual scavenging needs to be understood, and the legal, policy and institutional efforts by governments in India to tackle the problem so far...
MIT COURSE WORK EXAMPLES
Suggested courses related to Social Responsibility at MIT:
http://web.mit.edu/pugwash/www/srmit.html
http://web.mit.edu/idn/getinvolved.html

Being, Thinking, Doing (Or Not): Ethics and Your Life
http://web.mit.edu/tac/ethics/index.html

What is your responsibility to the global poor, the homeless, the disenfranchised? What sacrifices, if any, should we make to protect the environment? Should the government fund a space program? What constraints does the concept of “right to privacy” place on technological advances in intelligence gathering? Is nuclear energy worth the risk? We will address these questions and others in this new seminar that will give students tools to articulate, and to live, their values and convictions. The seminar will also introduce students to the concept of an ethics learning community and encourage them to help create such a community. This community would help students build relationships, investigate and solve ethical problems, share resources, and gain skills for clarifying their personal and vocational principles.

D-Lab
Amy Smith, Bishwapriya Sanyal

D-Lab is a year-long series of classes and field trips that provide a curriculum to educate students about technical, social, and cultural aspects of development work in selected countries, and then provides the opportunity for field work and implementation. D-Lab has already begun to address community needs in Brazil, Haiti, Honduras, and India.

D-Lab I: Development  D-Lab III: Dissemination  
D-Lab II: Design  D-Lab IV: Continuing Projects

“An a-maize-ing path out of poverty: D-Lab-developed device makes corn processing more efficient”
David Chandler, MIT News Office, October 1, 2008

Across Tanzania and elsewhere in Africa, processing the corn harvest is labor intensive: Families and friends gather to spend a day or two filling bags with the dried cobs, beating then to loosen the kernels, and then separating out the kernels from the cobs, or else simply removing the kernels by hand.

It would take one person about two weeks to complete the job alone, but thanks to a technology largely developed at MIT, there’s a better, faster way.

Jodie Wu, an MIT senior in mechanical engineering, spent the summer traveling from village to village in Tanzania to introduce a new system for processing the corn: A simple attachment for a bicycle that makes it possible to remove the kernels quickly and efficiently using pedal power. The
device makes processing up to 30 times faster and allows one person to complete the job alone in one day.

The basic concept for the maize-sheller was first developed in Guatemala by an NGO called MayaPedal, and then refined by Wu last semester as a class project in D-Lab: Design, a class taught by Department of Mechanical Engineering Senior Lecturer Amy Smith. Now, thanks to Wu's efforts, the technology is beginning to make its way around the world.

Wu developed the new version of the device after being inspired by the work of Bernard Kiwia, who teaches appropriate technology in Tanzania for an NGO called the Global Alliance for Africa. Kiwia visited MIT in the summer of 2007 for the first International Design and Development Summit and returned to Tanzania greatly inspired by the workshop, and immediately began producing a variety of devices to address local needs.

Among these were several bicycle-powered devices, including machine-shop tools like drills and bandsaws. A simple power-transfer system bolted onto the bicycle's frame allows the bicycle to be used normally for transportation, but then quickly converted by switching the chain so that it can be adapted for a variety of tasks -- making or repairing furniture, sharpening knives or processing corn. Thus, the owner of a bicycle, with a small extra investment, can travel from village to village to carry out a variety of useful tasks. A simple bike thereby becomes an ongoing source of income...

Design for Demining
Description: Design for Demining SP.776 is a spring semester class where the students and staff here at MIT apply our engineering and invention skills to develop technologies to help solve the landmine problem. Thousands of our tools are already in use around the world! This is a hard problem, and we go in-depth to solve it. We give you the information you need to apply your skills. The class includes a field trip to an Army base for demining training, and real deminers come from around the world to consult and speak to the class. Are you up to the challenge?

Sloan School of Management Course: Social Entrepreneurship
Andrew Wolk
Social Entrepreneurship develops skills and competencies for creating, developing, presenting, implementing and measuring the success of social innovations. This subject addresses those who want to: start an organization whose primary focus is social impact (education, healthcare, economic development, environment, the arts, etc.), support organizations involved with social change, or integrate social impact work into their private sector career.

Sloan School of Management Course: Developmental Entrepreneurship
Professor Alex (Sandy) Pentland
Developmental Entrepreneurship a Fall semester seminar lead by Professor Alex (Sandy) Pentland on building entrepreneurial ventures using the new generation of mobile information and communications technologies, with particular emphasis on technologies and ventures that can cause major social change throughout the world. We will explore a range business models and opportunities by examining case examples of businesses launched by MIT innovators, and consider the general problems of deploying and diffusing products and services through entrepreneurial action. By drawing on live and historical cases, especially from Asia, Africa, and
Latin America, we seek to cover the broad spectrum of challenges and opportunities. Students are asked to craft a business plan executive summary, worthy of submission in the MIT $50K Entrepreneurship Competition $1K Warm-Up (and possibly the preliminary round of the MIT IDEAS Competition) in the Fall of 2004. In previous years several teams have won in the $1K competition, and we have had a half-dozen actual spinoff ventures emerge from past seminars.

**Wheelchair Design in Developing Countries**

Description: The Wheelchair Design in Developing Countries class will give students the chance to better the lives of others by improving wheelchairs and tricycles made in developing countries. Lectures will focus on understanding local factors, such as operating environments, social stigmas against the disabled, and manufacturing constraints, then applying sound scientific/engineering knowledge to develop appropriate technical solutions. Multidisciplinary student teams will conduct term-long projects on topics such as hardware design, manufacturing optimization, biomechanics modeling, and business plan development. Engineering theory will further be connected to real-world implementation during guest lectures by MIT faculty, Third-World community partners, and US wheelchair organizations. Funded opportunities for summer travel to implement class projects into wheelchair workshops will be available.

**MIT EXPEDITING ACCESS TO STANDARD EDUCATION (MIT EASE)**


MIT Expediting Access to Standard Education (MIT EASE) works hand in hand with EASE Ghana to ensure that under-privileged children in some rural parts of Ghana, get basic education. The aim of the program is to improve access to basic education in Africa through sponsorship programs and the establishment of libraries in villages. We believe that education holds the solution to most of the world’s problems. Yet, many children are denied the opportunity due to financial constraints. We are convinced that a little effort on our part will go a long way to help.

Although the program has hopes of expanding to other African countries, the initial scope is limited to Ghana. The current focus is to sponsor underprivileged children through Junior Secondary School (JSS), which forms the core of basic education in Ghana and then tentative of the students performance, continue this sponsorship through Senior Secondary School (SSS). The general goals of EASE are to:

1. Provide funding for students to attend Junior Secondary School (JSS) and Senior Secondary School (SSS) who would otherwise not be able to do so
2. Help selected villages establish community libraries/stock existing ones
3. African awareness at MIT and in Cambridge schools
4. Expand our program to sponsor a greater number of students in the secondary level institutions-Senior Secondary School (SSS) to enable bright students being sponsored by the J.S.S. program to further their education.
5. Extend EASE Operations to other colleges besides MIT
6. Extend EASE Sponsorship and Operations to other African countries besides Ghana
The MIT Program in Developmental Entrepreneurship (DE) focuses on design and implementation of commercially sustainable products and services for low-income communities around the world. MIT's commitment to technology, entrepreneurship, and global diversity provides a uniquely qualified environment to develop innovative products, services and organizations that improve the lives of people in low-income communities...

DE helps students invent new technologies and organizations, increases their understanding of the challenges faced by low income communities, connects them to other resources at MIT and elsewhere that may help them design and implement sustainable enterprises, and conducts research that may be useful to entrepreneurs and enterprises. DE strives to provide scholarships for young entrepreneurs focused on low-income communities, providing travel and project funds to develop their ideas, along with a supportive network to help them grow and nurture their dreams.

The Program in DE—in conjunction with the Entrepreneurship Center at the Sloan School of Management, the Media Laboratory, and the MIT Design Laboratory —

- Offers instruction in development-oriented entrepreneurship,
- Works with all of the other development-oriented programs at MIT,
- Builds the Developmental Entrepreneurship Network (DEN) in partnership with the MIT Alumni Association, and
- Supports the new MIT $100k Competition in Entrepreneurship for Development.

Success:

**Cell Bazaar** ([www.cellbazaar.com](http://www.cellbazaar.com)): Provides localized eBay-type markets on cell phones in Bangladesh. The Economist reported that, “Cell Bazaar will have the effect of making price information more transparent and more widely available.

**Way Systems** ([www.waysystems.com](http://www.waysystems.com)): Adding a card reader and banking network to convert existing cell phones into low-cost point-of-sale devices. Their goal is to enable the world’s 100M village entrepreneurs to participate in a credit economy and provide banking.

**United Villages** ([www.unitedvillages.com](http://www.unitedvillages.com)): Delivers voice messaging and email to rural areas using ultra-low-cost WiFi technology. Reports the Wall Street Journal: ‘The Village Area Networking Kit is a fraction of the cost of the electricity and communications infrastructure that would otherwise be necessary to deliver e-mail to the villages.

**Dimagi** ([www.dimagi.com](http://www.dimagi.com)): Provider of health systems using PDAs and cellular phones to help deliver healthcare services around the world. Their product line provides rural healthcare workers with up-to-date medical information and creates aggregate databases to help in the management of global disease. (Vikram Kumar, co-founder of Dimagi was featured on Nature.)
blueEnergy (www.blueEnergy.org): Provider of low-cost, sustainable energy to underdeveloped communities in Central America using locally-made micro wind turbines. blueEnergy’s efforts provide local jobs, boost local economies and provide those in need with critical basic energy services.

EPROM (web.mit.edu/eprom): EPROM, part of the Program for Developmental Entrepreneurship within the MIT Design Laboratory, aims to foster mobile phone-related research and entrepreneurship. Key activities include: the development of new applications for mobile phone users worldwide, academic research using mobile phones and the creation of a widely applicable mobile phone programming curriculum.

Howtoons (www.howtoons.org): Producer of cartoons that show kids of all ages ‘How To’ build things. These ‘Tools of Mass Construction’ inspire kids everywhere to think about hopeful futures while developing the practical skills and creative savvy to solve real problems.

SAFE WATER FOR 1 BILLION PEOPLE: GLOBAL WATER & SANITATION PROJECTS http://web.mit.edu/watsan/ 

MIT Civil and Environmental Engineering (CEE) web portal on water and sanitation projects in developing countries. Over the past eleven years, students, staff, and faculty have been working on issues of water and sanitation in developing countries, primarily through the Master of Engineering (M.Eng.) Degree program offered in the CEE Department. This website contains information and links to student theses, project reports, photos, WHO Household Treatment Network, and other useful resources focused on the development and improvement of water and sanitation in many countries.

The 9-month M.Eng. program is intended primarily for students planning to enter or re-enter professional practice; however, a few students continue for additional studies, including their Ph.D. The program involves coursework, group project work and a thesis. For students in the environmental engineering tract, the thesis is typically based on project work completed in the field during January.

Motivation: The global community faces a tough challenge: to halve the number of people without access to improved water supply and sanitation by the year 2015. This bold objective, also known as one of the Millennium Development Goals, was again committed to by governments from around the world during the 2002 World Summit on Sustainable Development in Johannesburg South Africa. UNICEF and the World Health Organization estimate that 884 million people lack access to improved drinking water supplies and 2.5 billion lack access to improved sanitation facilities, including 1.2 billion people who have no sanitation facility whatsoever - click here for more information. Considering the Millennium Development Goals for water and sanitation, this works out to delivering improved water supply at a rate of ~100,000 people per day and improved sanitation facilities at ~200,000 people per day between the years 2000 and 2015. Can governments alone realistically meet these ambitious goals by the year 2015 through conventional centralized water supply and sanitation systems?

New approaches to delivering water and sanitation services, such as household water treatment, are gaining recognition within international development organizations. The World Health
Organization, for example, recently published a report on Combatting Waterborne Disease at the Household Level and UNICEF sponsored an online virtual forum on Household Water Security in cooperation with WHO and the Network for Cost-effective Technologies in Water Supply and Sanitation. A recent statement issued by the United Nations Committee on Economic, Cultural, and Social Rights goes one step further by declaring water as a human right, which, taken into the context of the Millennium Development Goals, puts pressure on governments to live up to their commitment to halve the number of people without access to improved water supply and sanitation services by the year 2015.

**SPECIAL INTEREST GROUP IN URBAN SETTLEMENT (SIGUS)**

Reinhard K. Goethert, Principal Research Associate in Architecture


The Special Interest Group in Urban Settlement (SIGUS) links housing and community interests in the Department of Architecture and Department of Urban Studies, focusing on developing areas worldwide. SIGUS explores the new professionalism emerging for architects and planners, and concentrates on service, participation and non-traditional client groups. We offer workshops and short courses, and carry out research and outreach programs stressing participatory methods in promoting affordable and equitable housing. Established in 1984, SIGUS grew out of the rethinking of method, practice, and teaching driven by the rapidly expanding informal sector in both developing and developed countries.

SIGUS benefits from its extensive international links with practitioners, professionals, and faculty in governments, research institutions, NGOs, professional firms, and other academic institutions. These strong connections provide access to state-of-the-art practice, and support collaborative engagement in a wide range of activities...

SIGUS research is focused in four areas:

**DESIGN AND PLANNING.** This includes research on 'The Good Squatter' (since squatting - or quasi-legal development - is so common, how can it be directed toward a win-win end?); and Rapid ePlanning (how to approach the two key issues of today in the peripheral areas: speed and scale of development).

**DISSEMINATION OF INFORMATION.** This includes development of participatory tools, and CD/internet sites of information.

**SUSTAINABILITY.** Focus in part is on the key role of children, and research includes 'Children, Heritage and Development'.

**ROLE OF THE PROFESSIONAL.** Where and how can architects and planners best contribute? How can their unique skills be utilized?
SPECIAL PROGRAM FOR URBAN AND REGIONAL STUDIES (SPURS)
Bish Sanyal
http://web.mit.edu/spurs/www/

The Special Program for Urban and Regional Studies (SPURS) is a one-year program designed for mid-career professionals from newly industrializing countries. SPURS was founded in 1967 as part of MIT’s Department of Urban Studies and Planning (DUSP), which has a long-standing commitment to bringing outstanding individuals to MIT to reflect on their professional practice in the field of international development. The program is designed to nurture individuals, often at a turning point in their professional careers, to retool and reflect on their policy-making and planning skills. SPURS Fellows return to their countries with a better understanding of the complex set of relationships among local, regional, and international issues. SPURS has hosted over 550 women and men from more than 90 countries in Latin America, Asia, Africa, the Middle East, and Eastern and Central Europe. SPURS alumni/ae hold senior level positions in both the public and private sectors in their countries.

Most SPURS Fellows are drawn to DUSP by its large, world-renowned faculty of practitioners interested in urban and regional issues. Participating in SPURS allows Fellows to step back from their day-to-day struggles in the developing world and provides them with a critical opportunity for reflection, learning and renewal. While at DUSP, SPURS Fellows immerse themselves in a supportive academic environment where they can freely exchange ideas with colleagues who are expert in and sympathetic to issues facing developing countries. They are exposed to new theories and approaches from other Fellows, faculty and other practitioners, which they can later apply at home. In addition, the experience helps them to develop strong, positive connections with North American institutions.

SERVICE & COLLABORATIVE INITIATIVES

AFRICA INFORMATION TECHNOLOGY INITIATIVE (AITI)
http://aiti.mit.edu/index.html

AITI is a student-run organization of MIT that promotes development in Africa through education in appropriate information and communication technologies (ICTs). During MIT’s summer recess, AITI sends MIT students to Africa to teach African undergraduate and high school students. AITI partners with local African institutions to offer classes focused on mobile phone application development with an emphasis on independent research, problem-solving, and entrepreneurship. Since its inception in 2000, AITI has been highly effective:

• Nearly 100 MIT student/teachers have instructed over 1000 African students.
• Over the years, AITI has run programs in Kenya, Ethiopia, Ghana, and Zambia.
• The MIT AITI diploma has grown to become recognized by local employers as a mark of excellence.

AITI strives to leave its African students with the attitude that they can positively affect their community through hard work and unfltering determination. Furthermore, AITI's MIT
student/instructors gain invaluable international experience in a dynamic and challenging environment. An experience which is often life-changing.

COMMUNITY INNOVATORS LAB @ MIT (COLAB)  
Department of Urban Studies & Planning  
http://colab.mit.edu/

CoLab is a center for community-engaged research and practice within MIT's Department of Urban Studies and Planning. We work with low-income/low-wealth communities in putting their assets to work to help strengthen civic life and use the market as an arena for achieving social justice.

We work to develop living examples that improve ecological, social and economic sustainability in cities. CoLab supports the development and use of knowledge from marginalized communities to build cooperation, deepen civic engagement, improve community practice, inform policy, support creative problem-solving, mobilize community assets, and generate shared wealth. We also support students to be practitioners of our approach to community change and sustainability. We work in three areas:

- Democratic Engagement
- Shared Wealth Generation
- Urban Sustainability...

Projects:  
Black Intensive Civic Engagement Project (BICEP): Deepening democracy in African American communities  
GainShare: Shared wealth generation  
Green Hub: Social inclusion and equity in green  
New Orleans: Participatory neighborhood rebuilding

Community Problem-Solving @ MIT  
http://www.community-problem-solving.net/

The Community Problem-Solving Project @ MIT, a learning space for people and institutions worldwide. The users of this site work in all three sectors--public, nonprofit (or non-governmental), and private--and across them. They work on a wide variety of issues, from housing and health care to education and the environment, from labor and economic development to crime and public safety and "comprehensive" community change. They are managers, organizers, supporters, investors, educators and trainers, evaluators, everyday citizens, and more, working in cities and rural communities around the globe to tackle important social problems and seize opportunities to promote change.

Here you can access, at no cost, information to support your learning and effectiveness, including useful tools for problem-solving in your community or field. The two main resources for learning here are:
Strategy Tools to help you approach issues and work with other stakeholders more effectively. This is the main section of the site in terms of original materials available only here.

Program Tools for responding to specific, substantive problems by learning what works and what doesn't in a given area (housing, health, education, etc.), often through the clearinghouses and exchange sites available online.

There's also a Creator's Log, where the site creator journals ideas on problem-solving and responds to questions posed by users of the site. Use the main buttons to explore or to find something specific, or use our Search feature to scan the site.

Note for instructors: No permission is required for any and all educational use of the strategy tools, as long as they are provided free or at cost of reproduction.

The tools here won't answer all your questions, of course, but you'll get some useful answers, plus leads on other advice--more and more of it available on the web or in print but widely scattered. And we just might make you think about some new questions, too.

What does "problem-solving" include? In the broadest terms, it takes both "will" and "way" to improve a project, an organization, or an entire community or region. That is, it takes both support and commitment from stakeholders ("will"), as well as the needed productive capacity ("way"), to make an impact on conditions in the world.

At the core of this work is strategy—the set of ideas or insights that help us act smarter on hard problems, in a world of changing needs and changing rules. This site will help you be more strategic about who you work with and how, which problems you decide to tackle, how you tackle those problems, and how you learn from your work and that of others...

**Working Smarter in Community Development Project**

http://web.mit.edu/workingsmarter/

This Working Smarter in Community Development website is a tool for self-directed learning, created to improve the effectiveness of community development practice, broadly defined—to help committed people and institutions work smarter, not just harder. It is for those who engage directly in community development activities (of many kinds) at the local level, as well as the funders, educators and trainers, evaluators, advisers, students, and others who also "practice" in ways that shape the field and its future. The site is for those who need to develop creative strategies and get them funded, design better assessment or tracking efforts, make important public or private investment decisions, recruit and train staff, prepare students to enter the field or complete a project, or complete other tasks vital to the growth and performance of the field. "Working Smarter" is a companion to The Community Problem-Solving Project @ MIT, which focuses more globally on civic processes such as partnering, negotiating, organizing civic action, leading participatory planning, and more.

The Working Smarter in Community Development Project is based in the Department of Urban Studies + Planning at the Massachusetts Institute of Technology, where community development and learning from practice have been central foci of our teaching, research, and public service for
over 40 years. MIT professor Xavier de Souza ("Xav") Briggs created the project, and many others contributed to the site's development as an online resource for the field. This is one of many projects that reflect MIT's pioneering "open courseware" effort to democratize learning worldwide, bringing powerful ideas and global approaches into reach at no or low cost to the learner.

This project was made possible by a grant from the John D. and Catherine T. MacArthur Foundation, which invited Xav to run a series of workshops that would bring together practitioners and researchers to reflect on fundamental questions about community development's goals, values, strategies, and impact. Working with the Local Initiative Support Corporation's Chicago office (LISC-Chicago), the Foundation aimed to make a major, ten-year commitment to community development in selected neighborhoods in Chicago, the foundation's hometown. That multi-faceted initiative is called the New Communities Program. Foundation staff wanted to help push the field as a whole forward through the effort to address the complex questions facing the Chicago initiative: How would we know whether the investments were worth it? How might diverse and ever-changing neighborhoods with diverse interests define "success" in community development? And more.

GLOBAL POVERTY INITIATIVE
http://gpi.mit.edu/index.php

Occasionally we find headlines describing the misery of poverty, imploring the public to consider the misfortunes occurring elsewhere in the world. People may spend a few minutes to express pity, or perhaps even to donate to a charity. It is rare, however, to find one stirred up enough to take action and make real, sustainable change; this gap feeds the continuation of poverty.

To be able to fill this gap, we need to reach our peers and draw out not only the willingness to care about the issue, but the motivation to act on it. Poverty is not just the problem of a small village in Africa, nor just the problem of the celebrity or non-profit that talks about it on TV. It is a global problem; it is our problem and we need to do our part to solve it.

Our team approaches this vision with the following goals:

- To instill awareness about global poverty issues
- To teach about the factors that play into the poverty cycle, including the role of the international community in economic collapse
- To engage students in creative and in-depth thinking about the problems and potential solutions for poverty
- To connect our peers into networks that work towards the goals of poverty relief
INNOVATIONS IN INTERNATIONAL HEALTH (IIH)

Amy Smith, Founder
Jose Gomez-Marquez, Program Director

The Innovations in International Health innovation platform aims to accelerate the development of global health technologies in a multidisciplinary research environment addressing the needs of patients and physicians in resource-poor settings.

IIH-directed collaboration between researchers, users, and health practitioners launched a growing portfolio of inventions that are at different stages of deployment in less than 11 months. These include inhalable vaccine and drug delivery technology, RFID-enhanced disease surveillance systems, medication compliance systems and low-cost incubators for rapid tuberculosis detection.

IIH enhances sustainability of its technologies by bridging the gap between the invention, funding, and clinical trial stages of products aimed at the patients not served by current medical technology. This allows our research community to explore and develop products aimed specifically at developing world settings.

Our model for collaborative research is Agile, Open and Focused to create high quality products that are appropriate and affordable to base of the pyramid patients. Our innovation model began in the summer 2007 after launching a successful meeting of 17 investigators, from 6 different institutions and 6 countries...

Our partners' global footprint allows us to launch devices and research studies in the United States, Nicaragua, Honduras, Peru, Tanzania, India and Pakistan.

**Fields of Research:**

Vaccines  
Tech for disabilities  
Mom and baby health  
Diagnostics  
Telemedicine  
Therapy enhancements

Surgical tools  
Personalized medical devices  
Chronic conditions  
Appropriate Lab Instrumentation  
Information Systems

**Technologies:**

The following is a sample list of technologies under devolvement at IIH.

**The Vaccine Wheel**

The Vaccine Wheel is a simple yet effective paper craft application that provides parents with an interactive way of tracking their children’s immunizations. Using a concept that was first invented in 1630, IIH has leveraged the popular form-factor into a computer program that can print out customized a Vaccine Wheel tailored to the baby’s name, age, gender, and background. Parents operate the Vaccine Wheel by turning it to appropriate points along a timeline and sliding pre-selected tabs to mark the progress of vaccines. Pre-printed facts are revealed at each stage of the immunization schedule that provides useful health information and tips on what to expect during each developmental stage. The cost per Wheel is around $0.24 and the program can be accessed
through the internet or in a stand alone format. Alternatively, the wheels can be produced in generic blanks to be filled out by a healthcare worker.

**PortaTherm**
PortaTherm is a portable incubator designed to be lightweight, affordable, and usable where electricity is unavailable and unreliable. PortaTherm exploits the fact that materials maintain a constant temperature as they change phase from liquid to solid. The current version of the phase-change incubator is suitable for water quality testing and uses a material that, with insulation, changes phase and maintains a temperature of 37.5°C over 24 hours. The incubator uses plastic pouches that are filled with the phase-changing material. For incubation, the pouches are heated with hot water or by placing them in the sun, until the material inside melts. They are then placed in an insulated container and are ready to incubate samples. This simple and revolutionary design eliminates the need for both electricity and skilled maintenance. In addition to water quality testing, PortaTherm is being tested for sample transportation and diagnostic applications.

**Disposable Dermatomes**
Dermatomes are surgical instruments for harvesting skin grafts in burn patients. Traditional dermatomes require expensive blades and complicated cam systems and soon become dull and fail. IIH is working on redesigning traditional dermatomes that work by using disposable plastic cartridges that serve as motors and regular razor blades for cutting. By using a contrarian design approach that goes the opposite direction of endurance and instead relies on affordable disposability, the IIH surgical design team is hoping to make life-saving skin graft surgery more available to patients in developing countries. The project is being advised by the chief of Surgery at Shriners Hospital for Children.

**RespiRescue**
The RespiRescue is a stand-alone emergency unit design to treat sudden high-risk asthma attacks in remote populations far from emergency medical care. 1 in every 250 deaths worldwide is attributed to asthma. In rural areas, this figure is higher and could be counteracted by a distributed network of RespiRescue breathing and drug delivery units in the same way that Automatic External Defibrillators have treated patients undergoing heart attacks far from appropriate medical care. Novel, easy to use respiratory cartridges produce life-saving aerosol therapy (beta-2 antagonists that open up bronchial airways) using a non-electric pneumatic propulsion systems designed to operate under extreme conditions. The respiratory technology can operate as stand-alone emergency units as well as in-pharmacy/rural clinic response units.

**GlucoVend**
GlucoVend is a self-service patient kiosk for checking glucose levels. The machine can safely dispense a credit card sized tester that integrates a single-use lancet and glucometer strip. Upon providing a finger prick sample and introducing the tester into a designated slot in the machine, a digital output of the glucose level along with patient history is displayed. If the glucometer reading displays a level that warrants glucose pills, the patient is given the option of buying them through a dispenser in the machine. According to the WHO, 80% of the 1.1 million annual diabetes deaths occur in low and middle income countries. GlucoVend aims to have an important impact in reducing the burden of diabetes in developing countries.
X out TB
A new penny-a-day test is ensuring adherence to Tuberculosis medications using a smart combination of mobile phones, diagnostics, and creative incentives. X out TB seeks to reduce the necessity of daily health worker monitoring of TB patients by offering patients incentives for compliance. Patients in the program are given monthly supplies of urinalysis test strips that are dispensed every 24 hours out of a special dispenser. The strips, developed by the X out TB team, contain four printed numbers and embedded chemicals that turn a certain combination of numbers a new color when they react with the urine of patients who have taken TB medication. Patients then send an SMS to a database reporting the numbers on their strip, which is monitored by health care workers and doctors.

HLab | Inventing the future of Global Health
IIH network of HLabs are an important part of our ability to produce world-class medical technologies for developing world countries. Our access to rapid prototyping facilities, micro-machining, biomedical labs, software development clusters combined with the talented developers who run them make HLabs the new Menlo Park for Global Health.

Our commitment to agility allows any of our members to send us a paper napkin sketch with a product idea and receive a design review, technology matrix analysis, and if required, an initial rapid prototype. This gives IIH Labs and important advantage in quickening the iterative product development cycle. HLabs allow us to get our designs out of lab and into the field faster. This fast pace of innovation marks the difference between a good device and a great one. It may also mark the difference between saving some lives 5 years from now, and saving some lives today.

HLab MIT Cambridge
HLab MIT Cambridge is equipped with a number of rapid prototyping equipment, conventional and computer controlled machine tools. HLab enjoys high tech manufacturing tools such as laser and water jet cutters, photolithography equipment, as well as product and biological testing and validation facilities.

HLab Karachi
HLab Karachi is a pioneer in the development of mobile health technologies and advanced epidemiological research tools. HLab Karachi focuses on mobile software innovation, medical device validation, and constitutes an IIH SafeTrial Center of Excellence for the design and implementation of clinical trials.

HLab Managua (coming soon)
IIH is currently developing a long-term collaboration with the Nicaraguan Center of Investigational Health Sciences. This will allow IIH to have a product development site about 6 hours away from our main HLab at MIT. In addition, we have taken a number of steps to develop state-of-the-art clinical trial strategies for future product testing and SafeTrial rollout.
INTERNATIONAL DEVELOPMENT DESIGN SUMMIT (IDDS)
Amy Smith, Founder
http://www.iddsummit.org/

The International Development Design Summit is a month-long collaboration that brings together people from around the globe to build technologies for communities in the developing world. The program is the brainchild of MIT Senior Lecturer and D-Lab founder Amy Smith, a past winner of the MacArthur “genius” grant.

IDDS is a diverse group. We come from more than 20 countries around the world—from Asia, Africa, Europe, North America, South America, and Central America. We are students and teachers, we are professors and pastors, we are economists and engineers; we are masons and mechanics; we are doctors, welders, farmers, and community organizers. One of the things that makes IDDS a special conference is this richness of backgrounds. It is a conference about innovation, and we believe that innovation thrives in the intersections of disciplines that come from bringing together such an eclectic group...

We believe very strongly in the idea of co-creation: the concept that it is better to provide communities with the skills and tools to become innovators and develop new technologies themselves than to simply provide the technologies. We believe that developing the capacity for innovation and creativity is critical for long-term sustainable improvements in the quality of life in a community...

But not all of our participants are from communities in the developing world. More than half of the our participants are students, and we hope to inspire them with the opportunity to interact with field practitioners and to see that inventiveness is not restricted to those with formal education. IDDS also provides a forum where they can meet with like-minded people who are driven by the same desire to make an impact in the world. It is our hope that by creating a diverse global network we can empower individuals and their communities to tackle the tough problems that reside in the developing world.

IDDS 2009 in Ghana

We are excited to announce that from 8 July through 12 August 2009, IDDS will be hosted at the Kwame Nkrumah University of Science and Technology (KNUST) in Ghana. KNUST faculty John Quansah and Crossman Hormenoo attended the first IDDS in 2007, returned to help organize IDDS 2008, and are now prepared to lead the summit in Ghana. IDDS 2009 participants will work with villages and develop prototypes in the workshops at KNUST and Suame Magazine. Suame Magazine is an informal manufacturing cluster of 80,000 artisans, a haven of metalworking micro-enterprises. However, IDDS will continue to include projects for a variety of communities and countries, and the projects will not be solely focused on implementations in Ghana.

“How improving people’s lives, one device at a time: International workshop looks for simple solutions to big problems”
MIT News Office, August 8, 2008
“A hands-on approach to Third World aid: Month-long IDDS workshop targets development through design”
MIT News Office, July 10, 2008

LEGATUM CENTER FOR DEVELOPMENT & ENTREPRENEURSHIP
Director: Iqbal Z. Quadir
http://legatum.mit.edu/

The Legatum Center for Development and Entrepreneurship was founded on the belief that economic progress and good governance in low-income countries emerge from entrepreneurship and innovations that empower ordinary citizens. The Center was founded at MIT in 2007 through a structured gift of $50 million from Legatum, a global investment firm.

The Center administers programs and convenes events that promote and shape discourse on bottom-up development. Led by Iqbal Z. Quadir, founder of GrameenPhone and Emergence BioEnergy, the Center runs a highly competitive fellowship program for MIT graduate students who intend to launch enterprises in low-income countries. In addition, the Center convenes an annual conference, hosts lectures, and supports teams of enterprising men and women at MIT who are passionate about starting viable businesses in the developing world.

Sustainable Enterprise Solutions
Transformative innovation, entrepreneurial leadership and grassroots development are the forces that drive the Legatum Center’s programs, combining to create a solid platform for sustainable development and prosperity. By promoting enterprises that engage local human resources, our programs encourage broad-spectrum innovation and competition in the very places where development is most urgently needed.

The Legatum Center's programs aim to commercialize new technologies, while exploring the application of practical, enterprise-based solutions to address deep-rooted problems in low-income countries...

MIDDLE EAST EDUCATION THROUGH TECHNOLOGY (MEET)
http://meet.csail.mit.edu/

MEET is an innovative educational initiative aimed at creating a common professional language between Israeli and Palestinian young leaders. Working together with the Massachusetts Institute of Technology (MIT), MEET enables its participants to acquire advanced technological and leadership tools while empowering them to create positive social change within their own communities.

Middle East Education through Technology (MEET) is founded on the belief that Israeli and Palestinian youth need to develop common ground between them, where they can meet and discover their cultures, their similarities, their differences — their humanity. Though only a few miles separate most Israelis and Palestinians, their views of each other are largely based on propaganda, politics, and tragedy — rarely through personal interaction. MEET facilitates that common ground through an innovative educational environment, for Israeli and Palestinian high
school students to learn to look at one another not only as fellow individuals, but even as potential partners...

MIT @ LAWRENCE
Department of Urban Studies and Planning

MIT@Lawrence is an example of sustained civic engagement between faculty, students, and staff of MIT and civic leaders, residents, and community-based organizations in Lawrence, Massachusetts. MIT@Lawrence advances the idea of equity by supporting locally-led collective asset-building projects and research in three functional domains: Affordable Rental and Homeownership Housing Production; Asset-Building as an Economic and Community Development Strategy; and Youth Pathways to Education, Careers, and Community. Projects have included: Strategic Plan for the Development of Affordable Housing, and Holistic Revitalization in Small Industrial Cities: Ideas and Tools for Urban Housing Development.

“Lawrence project puts MIT on U.S. service honor roll”
Sarah H. Wright, MIT News Office, March 4, 2008

The Corporation for National and Community Service has named MIT to the President's Higher Education Community Service Honor Roll for exemplary service efforts and service to disadvantaged youth. The Honor Roll recognizes colleges and universities that support innovative and effective community service programs.

The Honor Roll designation was granted in recognition of the success of MIT@Lawrence, a partnership between the Institute and a growing network of community-based organizations in Lawrence, Mass.

Initiated and administered by the Department of Urban Studies and Planning, MIT@Lawrence focuses on affordable housing development, community asset-building and youth pathways to career and education. Participants from MIT work with Lawrence community leaders and residents.

"We are honored to receive this recognition and will continue to work as a team with the Lawrence community to make a true difference. Grounded in the Institute’s motto, mens et manus (mind and hand), MIT@Lawrence is an ongoing experiment in linking rooted institutions in Lawrence to MIT with the aim of relating academic knowledge to the needs of the larger society," said Lorlene Hoyt, program director of MIT@Lawrence and assistant professor of urban studies and planning.

Students and faculty from departments, schools and groups across the Institute have provided more than 20,000 combined service hours to Lawrence residents and organizations through the MIT@Lawrence partnership, according to Honor Roll materials...
MIT Public Service Center
Sally Susnowitz, Assistant Dean and Director
http://web.mit.edu/mitpsc/

As part of MIT’s Division of Student Life and Department of Student Life Programs, the main goal of the PSC is to enrich the educational and life experiences of students through leadership and service opportunities.

We believe the best way to accomplish this goal is to welcome all members of the MIT community to participate with those students, so undergraduates can enjoy associating with graduate students, faculty, staff, alumni, and other members of the MIT community. To that end, we provide the guidance, resources, and support to find or create fulfilling service experiences, locally and around the world.

We model and encourage entrepreneurship and innovation, facilitate partnerships, integrate service with education and research, celebrate excellence, and cultivate confidence and imagination.

Through innovative service learning curricula, the IDEAS Competition, our international fellowships program, and local and international grant-funded service opportunities, we attract and educate MIT students through reciprocally valuable community service work worldwide. As well, the MIT PSC has begun to develop an international reputation for innovative program models and research strategies through collaborative work with the Edgerton Center, the Department of Mechanical Engineering, and the Department of Urban Studies and Planning, among others. We have established the groundwork for important studies in engineering education, and we are working to expand our assessment and research capabilities to match future opportunities as well ...

"Record of service earns MIT top ranking"
Sasha Brown, MIT News Office, August 9, 2006

For the second year in a row, MIT has been named the No. 1 university in the country, according to Washington Monthly's annual ranking of universities based on their service to the world.

"While other guides ask what colleges can do for students, we ask what colleges are doing for the country," Washington Monthly said in unveiling its rankings for the first time in August 2005. Washington Monthly is a political magazine based in Washington, D.C.

"Isn’t it important for taxpayers to know whether their money -- in the form of billions of dollars in research grants and student aid -- is being put to good use?" Washington Monthly asked.

"When colleges are doing what they should, they benefit all of us. They undertake vital research that drives our economy. They help Americans who are poor to become Americans who will prosper. And they shape the thoughts and ethics of the young Americans who will soon be leading the country," the magazine editors said.

With this in mind, the magazine used three central criteria in determining the rank of a
university: "how well it performs as an engine of social mobility (ideally helping the poor to get rich rather than the very rich to get very, very rich), how well it does in fostering scientific and humanistic research, and how well it promotes an ethic of service to country."

Harvard and Princeton universities, which tied for first this year in the well-known U.S. News & World Report rankings, placed 28th and 43rd in the Washington Monthly rankings. U.S. News ranked MIT seventh in 2006. MIT and Stanford were the only schools to break into the top 10 on both lists.

"MIT earned its No. 1 ranking not because of its groundbreaking research (although that didn't hurt), but on the basis of its commitment to national service," said Washington Monthly last year.

"MIT leading the Washington Monthly rankings for a second year is phenomenal," said Sally Susnowitz, assistant dean and director of the MIT Public Service Center.

"The first ranking helped MIT to gain recognition for its institutional priorities; this year publicly celebrates MIT's consistent commitment to inclusiveness, practical research, social mobility and public service," Susnowitz said.

**MIT OPENCOURSEWARE (OCW)**

http://ocw.mit.edu/OcwWeb/web/home/home/index.htm

MIT OpenCourseWare (OCW) is a web-based publication of virtually all MIT course content. OCW is open and available to the world and is a permanent MIT activity.

A fundamental part of MIT OCW's mission is to extend the reach and impact of MIT OCW materials throughout the world. Much of MIT OCW's efforts have focused on developing regions of the world, where MIT OCW materials are largely underutilized due to limited Internet connectivity. Outreach activities include the "MIT OCW in a Box" program, support of various localization efforts, and awareness-building partnerships with various IGOs/NGOs.

In 1999, MIT Faculty considered how to use the Internet in pursuit of MIT's mission—to advance knowledge and educate students—and in 2000 proposed OCW. MIT published the first proof-of-concept site in 2002, containing 50 courses. By November 2007, MIT completed the initial publication of virtually the entire curriculum, over 1,800 courses in 33 academic disciplines. Going forward, the OCW team is updating existing courses and adding new content and services to the site.

**“MIT FACULTY OPEN ACCESS TO THEIR SCHOLARLY ARTICLES”**

MIT News Office, March 20, 2009


In a move aimed at broadening access to MIT's research and scholarship, faculty at the Massachusetts Institute of Technology have unanimously voted to make their scholarly articles available to the public for free and open access on the Web.
The new policy, which was approved at an MIT faculty meeting on Wednesday, March 18 and took immediate effect, emphasizes MIT's commitment to disseminating the fruits of its research and scholarship as widely as possible.

"The vote is a signal to the world that we speak in a unified voice; that what we value is the free flow of ideas," said Bish Sinyal, chair of the MIT Faculty and the Ford International Professor of Urban Development and Planning.

Under the new policy, faculty authors give MIT nonexclusive permission to disseminate their journal articles for open access through DSpace, an open-source software platform developed by the MIT Libraries and Hewlett Packard and launched in 2002. The policy gives MIT and its faculty the right to use and share the articles for any purpose other than to make a profit. Authors may opt out on a paper-by-paper basis.

MIT's policy is the first faculty-driven, university-wide initiative of its kind in the United States. While Harvard and Stanford universities have implemented open access mandates at some of their schools, MIT is the first to fully implement the policy university-wide as a result of a faculty vote. MIT's resolution is built on similar language adopted by the Harvard Faculty of Arts & Sciences in 2008.

"Scholarly publishing has so far been based purely on contracts between publishers and individual faculty authors," said Hal Abelson, the Class of 1922 Prof. of Electrical Engineering & Computer Science and chair of the Ad-Hoc Faculty Committee on Open Access Publishing. "In that system, faculty members and their institutions are powerless. This resolution changes that by creating a role in the publishing process for the faculty as a whole, not just as isolated individuals... http://web.mit.edu/newsoffice/2009/open-access-0320.html

MIT SLOAN NET IMPACT
http://web.mit.edu/netimpact/www/

Net Impact's National mission is to improve the world by growing and strengthening a network of leaders who use the power of business to make a positive net social, environmental, and economic impact. The MIT Sloan Net Impact Chapter focuses this mission on our community here at MIT to give Sloanies the best education, experience, and connections to improve the social and environmental consciousness of tomorrow's businesses and communities.

Strategy for 2007-2008:
1. Build a socially responsible community at MIT Sloan.
2. Increase awareness and Social Responsibility literacy.
3. Develop practitioners of social responsibility.
4. Open career doors and form networks.
MIT STUDENT PUGWASH
http://web.mit.edu/pugwash/

MIT Student Pugwash is a chapter of Student Pugwash USA. The mission of Student Pugwash USA is to promote social responsibility in science and technology. We prepare science, technology, and policy students to make social responsibility a guiding focus of their academic and professional endeavors.

SAVE
http://web.mit.edu/save

Description: From rising sea levels in Pacific Islands, to more and harsher droughts in Africa, from chemicals in the water systems, to pollution in the air and soil, our energy consumption and styles of living create a negative impact on the livelihood of other people. We work in creating awareness on how our ways of living affect the environment and others, and how we can help reduce that impact. We make reused-paper notebooks and organize Earth Day events, and run recycling, energy and paper-saving awareness campaigns.

SLOAN ENTREPRENEURS FOR INTERNATIONAL DEVELOPMENT (SEID)
http://web.mit.edu/seid/

Sloan Entrepreneurs for International Development (SEID) that seeks to drive sustainable global development through entrepreneurship by raising awareness of the challenges faced by emerging economies and empowering students to take action.

Sloan Entrepreneurs for International Development (SEID) is a student-led club at MIT Sloan School of Management that believes positive long-term change to communities can best be enacted by the entrepreneurial spirit. SEID’s goal is to create ways to connect graduate level students at MIT Sloan and elsewhere with entrepreneurial projects taking place in emerging countries.

This goal is realized through three main devices:

1. Projects: SEID connects students with projects in which they can add their expertise to assist entrepreneurs.
2. Career opportunities: SEID works with the MIT Sloan Career Office to connect students with international projects and consulting firms.
3. Speakers: SEID regularly brings in speakers from around the world to discuss the challenges of entrepreneurship abroad.

A Market Approach to Clean Water
In 2007, three MBA students partnered with Pure Home Water, a start-up company in Northern Ghana specializing in home water filtration devices, to help the company determine how to optimize its value chain...
PROJECT PRAKÄSH
Sinha Laboratory for Vision Research
Prof. Pawan Sinha
http://web.mit.edu/bcs/sinha/prakash.html

‘Prakäsh’ in Sanskrit means light.

Project Prakäsh was launched in 2003 by Prof. Pawan Sinha. Since that time, Prof. Sinha and his graduate students, Yuri Ostrovsky, Ethan Meyers and Aaron Andalman, have worked with ophthalmologists at the major eye-hospitals in India and have conducted several studies with individuals who gained sight late in life.

The base for Project Prakash in India has been set up at the Shroff Charity Eye Hospital (SCEH) in New Delhi. Collaborating investigators at SCEH are: Dr. Suma Ganesh MS, Dr. Umang Mathur MS, Ms. Sachu Rajasekharan and Ms. Iyerish.

Founded over 75 years ago, SCEH provides world-class eye care. It has treated over 4.4 million patients and performed over 250,000 eye surgeries. A significant proportion of SCEH’s patients come from the economically weak sections of society where the prevalence of childhood blindness is especially high. Over the past few years, the hospital has maintained an active outreach program that brings in thousands of patients from villages in Delhi, Uttar Pradesh and Rajasthan for sight restoring surgery.

Project Prakash is supported by funds from the Alfred P. Sloan Foundation, the John Merck Scholars Award and the National Eye Institute (NIH).

India is home to nearly 30% of the entire blind population of the world. Many of India’s blind are children with congenital anomalies of the eye. In over 50% of these cases, the blindness is treatable or preventable. However, most children never receive medical attention. The challenges of poverty, compounded by the visual handicap, exact a grim toll. Orbis International estimates that 60% of India’s blind children die before reaching adulthood.

The reason for children’s poor access to ophthalmic facilities is the profound imbalance in the latter’s distribution. Most hospitals are located in India’s major urban centers. 75% of the population, however, lives in remote villages, effectively cut off from modern medical care. Poverty, ignorance and lack of simple diagnostic tools in rural areas deprive children of the chance of early treatment. There is a clear humanitarian need for treatment and awareness of childhood blindness.

Project Prakash seeks to address this need. In conjunction with collaborating hospitals, the Project has launched outreach initiatives that screen children in villages and identify those whose blindness can be treated. To date, over 700 children have been screened and treatment provided to several of them. The transportation, treatment, hospital stay and follow-up examinations are entirely free of charge for the children.

While the magnitude of the problem of childhood blindness in India is daunting, we are encouraged that Project Prakash has begun to serve as a nucleus for bringing together the resources, expertise and commitment needed to mount an appropriate response...
WESTERN HEMISPHERE PROJECT
http://web.mit.edu/hemisphere/

The MIT Western Hemisphere Project includes students, alumni, faculty, and staff. Our goal is to bring the diverse MIT community together to examine and better understand the relationships among peoples, governments, and corporations in the Americas. We encourage discussions that are country-based—we might look at the culture and politics of a particular nation in the hemisphere—as well as discussions that transcend national borders: e.g., environmental degradation and climate-change; national identity and the rights of indigenous peoples; or migration, technology transfer, and the debate surrounding "globalization" and "free trade."

COMPETITIONS

MIT IDEAS COMPETITION
http://web.mit.edu/ideas/www/index.htm

The IDEAS Competition provides an opportunity for members of the MIT community to develop their creative ideas for projects that make a positive impact in the world. Participants work in teams to develop designs, plans, strategies, materials and mechanisms that benefit communities, locally, nationally or internationally.

Using more than $50,000 in cash awards, as well as additional development grants, IDEAS teams can take an effective step toward resolving pressing individual and community challenges. The IDEAS Competition highlights MIT’s commitment to public service and demonstrates its support for student enterprise. It provides a chance for students to be creative, recognizes their ability to do important work for the public good, and provides an opportunity to have others recognize it as well.

The IDEAS Competition has sparked projects that have grown far beyond MIT. Since 2001, IDEAS participants have leveraged more than $1.3 million in follow-on funding. IDEAS projects have been carried out in more than 20 countries, serving the needs of thousands of people.

The idea for a public service competition was developed by Amy Smith of the MIT Edgerton Center and Sally Susnowitz of Public Service Center in 2001. Funding for the first year of the competition was secured from a d’Arbeloff grant provided by the MIT Corporation.

THE MIT $100K ENTREPRENEURSHIP COMPETITION
http://mit100k.org/

The MIT $100K Entrepreneurship Competition is a year-long educational experience designed to encourage students and researchers in the MIT community to act on their talent, ideas and energy to produce tomorrow’s leading firms. Now in its 20th year, the Competition has awarded hundreds of thousands of dollars in cash and business startup services to outstanding teams of student entrepreneurs who submitted business plans for new ventures showing significant business potential. The refinement process of the Competition, its network of mentors, investors
and potential partners, and the cash prizes awarded have helped many of these teams to act on
their dreams and build their own companies and fortunes.

Students from all five schools at MIT (Sloan, Engineering, Science, Humanities, and Architecture)
at the undergraduate and graduate levels have entered and been successful in the Competition.
Multi-disciplinary teams that combine members from technical disciplines with members from
the Sloan School have proven the most successful competitors. These teams bring together the
pieces necessary for making the bridge between technology and the marketplace. Their business
plans are judged by a panel of experienced entrepreneurs, venture capitalists and legal
professionals.

Real Ideas, Real Companies....
As the world leader among university entrepreneurship competitions, the Competition has
facilitated the birth of over 120 companies with aggregate exit values of $2.5 billion captured and
a market cap of over $10 billion. These companies have generated over 2,500 jobs and received
$700 million dollars in Venture Capital funding.

Many of these companies have been extremely successful. Recent IPOs have included Akamai
(AKAM), net.Genesis(NTG), and C-Bridge Internet Solutions (CBIS). Recent acquisitions include
Brontes Technologies (by 3M), Direct Hit (by Ask.com), Silicon Spice (by Broadcom), WebLine
Communications (Cisco), and Harmonix (MTV). Other success stories include Zipcar, Actuality
Systems, Frictionless Commerce, SensAble Technologies, Stylus Innovation, Virtmed, and Virtual
Ink.

20 Years of $100K
The MIT $100K was born in 1989, when the MIT Entrepreneurs Club and the Sloan New
Ventures Association teamed up to create a competition that would take advantage of the winning
combination of engineers and business students. In the spring of 1990, 54 teams competed in the
first competition with the winner receiving $10K, and $3K and $2K going to the runners up. The
original sponsors included the deans from the MIT Sloan School of Management and the School
of Engineering as well as Thermo Electron and Price Waterhouse. The MIT $10K has run every
year since its inception, and in 1996 it evolved into the $50K with $30K going to the winner and
$10K each to two runners up. In 2006, the $50K doubled in size with the incorporation of the
Development Track, and became the MIT $100K Entrepreneurship Competition.

Today’s competition is the nation’s premier business plan competition, with three separate
contests, each focused on different skill sets: Elevator Pitch Contest, Executive Summary Contest,
and finally, the Business Plan Contest. There are six distinct tracks, allowing students to
concentrate on their specific areas, while learning how to turn their ideas into companies.

2009 Business Plan Contest Semifinalists in the Development Track:

- Global Cycle Solutions: Transforming the bicycle into a vehicle of innovation
- MobaSola: Solar power for off-grid applications
- One Earth Designs: Disseminates appropriate technologies to rural populations that
depend on biomass fuel sources.
• Sustainable Health Enterprises: Will unleash girls’ and women’s economic potential by starting up female-run franchises that manufacture and distribute affordable, high-quality, and environmentally friendly sanitary pads for global consumption.
• WaveWater: Builds cost-effective, localized, scalable desalination systems powered by wave energy for installation in developing countries, making it profitable to create fresh water where it is critically needed.