## Chair of the Faculty

## **Faculty Policy Committee**

The Faculty Policy Committee (FPC), chaired by professor Thomas A. Kochan, started the year with several overarching agenda items: the Institute's strategy and philosophy in assessing the value and prudence of new international opportunities, ensuring proper governance and review of an anticipated increase in interdisciplinary degrees, planning for the campus of the future and embracing new pedagogical opportunities, and strengthening the ties between the faculty, students, and administration. Among its guests during the course of the year, the committee met with the president, the chancellor, the provost, the associate provost, the vice president for Research, and the chairman of the corporation.

The theme of international strategy dominated many of FPC's discussions. With an increasing number of international opportunities arising, both through the departments and from the central administration, the faculty have raised questions and concerns about how these initiatives are assessed within the grand scheme of MIT's interests, principles, and values. The committee engaged the leadership of the International Advisory Committee to ensure that the long-term international initiatives that MIT chooses to pursue fit with the Institute's research, educational, and moral objectives. Stemming from this discussion and others at the monthly faculty meetings, Professor Kochan and Provost Reif co-hosted a meeting of the faculty in February to encourage faculty participation and dialogue with the provost about international activities. Strong faculty participation and leadership is crucial to the success of all these initiatives.

The committee provided input to the president as she conducted her search for the next chancellor, composing a letter to president Susan Hockfield outlining the qualities it hoped the next chancellor would embody, most notably a commitment to building strong connections and trust with the student body. FPC was extremely pleased with President Hockfield's selection of professor Eric Grimson and looks forward to a strong working relationship with him.

The committee engaged in planning discussions for the future of the MIT campus and Kendall Square. In several meetings with key leaders, FPC discussed the topic of MIT 2030, a tool for envisioning the future of the physical campus and innovation district in Kendall Square. The committee hopes to ensure an ongoing collaboration between the administration and faculty as plans move forward and the vision becomes more concrete. Faculty in the School of Architecture and Planning, in particular, are eager to provide valuable input.

During the spring semester, FPC faculty members embarked on a listening tour, visiting their colleagues in academic departments to solicit feedback about faculty interests and concerns and—given the ongoing fundraising discussions—seeking input from the faculty perspective as to the Institute's greatest financial needs. This proved to be a successful exercise in demonstrating the committee's commitment to working closely with its constituents and in gathering important feedback that Professor Kochan shared

with the Academic Council, the president, and ultimately the faculty at large through the MIT Faculty Newsletter. Below is a list of the most recurrent themes:

- Infrastructure. In addition to the need for improved space, faculty noted the need for resources that will encourage new collaborations with colleagues in other disciplines.
- Basic research. Due to shrinking government funding, faculty are concerned about a decline in resources allocated to curiosity-based research. At its core, MIT must remain committed to demonstrating and communicating the importance of scientific discovery to the world.
- Interdisciplinary research and testing. Faculty expressed an interest in allocating funding to support bridging activities and developmental opportunities needed to invest in new, often mid-career ventures. These opportunities would allow faculty to transition to new research and/or teaching areas.
- Faculty life. During the course of the faculty lifecycle, from recruitment through retirement, faculty interests and needs change. It is important to provide faculty the resources necessary to encourage growth and development throughout their careers.

The committee reviewed, discussed, and approved proposals to create two new bachelor of science (SB) degrees, one in computer science and molecular biology and one in mechanical engineering. The proposals were approved at the December and May faculty meetings, respectively.

Professor Samuel M. Allen will begin his tenure as chair of the faculty beginning July 1, 2011; professor Mary Fuller will serve as the associate chair, and professor J. Chappell Lawson will serve as secretary of the faculty. New members of FPC for 2011–2012 will be professors Richard Locke and Roy Welsch.

#### **Committee on the Undergraduate Program**

During 2010–2011, the Committee on the Undergraduate Program (CUP) made decisions or recommendations on a number of matters, heard updates, and provided input on a range of issues that cut across faculty and institutional governance. Professor Steven Hall chaired the committee for the third and final year of his membership term.

At its first fall meeting, CUP revised the charge to its Subcommittee on the Communication Requirement (SOCR) to specify that group's direct oversight of Communication Intensive in the Humanities, Arts, and Social Sciences (CI-H) subjects, changes to membership that ensure the appropriate expertise to assume that responsibility, and updates to the workflow that reflect what has evolved in the decade since the Communication Requirement (CR) became a General Institute Requirement (GIR). Later in the year, CUP recommended changes to its own charge to add the Subcommittee on the HASS Requirement (SHR) and to update the language regarding SOCR's role. These changes, which affect section 1.73.2 of Rules and Regulations of the Faculty, were approved by the Faculty in March.

CUP worked closely with the Committee on Curricula (CoC) on a variety of matters throughout the year. These included efforts to form a joint subcommittee on external credit policy, an effort that was ultimately postponed. Picking up on discussions and consultations from the previous year, CUP worked in conjunction with CoC over the course of several months to revise policies related to minors. CUP approved a revision to the policy for the review of interdisciplinary minors that extends the mandatory review cycle for such programs from three to five years. It worked with CoC to formulate a recommendation to revise the existing minor policies to limit overlap in the major and minor programs of individual students. The two committee chairs, accompanied by staff, met with the undergraduate officers as well as with representatives of a number of programs in which students might be more significantly affected by a limit. Unfortunately the committees were unable to achieve consensus for their recommended policy clarifications or for an alternative compromise. As a result, work on this issue will continue in the coming academic year.

CoC also reviewed and endorsed the committee's proposal to renumber subjects offered by the Experimental Study Group (ESG) and Concourse freshman learning communities and forwarded to the Faculty a motion to add several of these renumbered subjects to the list of science GIRs included in section 2.84 of Rules and Regulations of the Faculty. However, due to concerns raised by various constituencies late in the process, this motion was withdrawn to allow for further discussion on how best to manage these subjects. In the meantime, an interim arrangement will allow the renumbered subjects to count towards the GIRs for students who complete them in 2011–2012.

Continuing from the previous year, CUP remained active in discussions regarding undergraduate advising. The committee heard reports on a pilot program involving an advising center for first-year students and provided input into the assessment of the pilot and plans for its future. In other areas, CUP was pleased to review and endorse proposals to establish an SB in computer science and molecular biology and an SB in engineering as recommended by the Department of Chemical Engineering.

At various times during the year, the committee heard updates or provided input on activities such as planning for an increased undergraduate class size and the search for the next chancellor. CUP met with leadership from the School of Humanities, Arts, and Social Sciences (SHASS) to formulate plans for the reorganization of several units with the goal of providing input on issues related to undergraduate education and on a process for consultation with CUP and its subcommittees.

Finally, CUP provided recommendations to President Hockfield on the roles and qualifications of the new chancellor. Subsequent to Eric Grimson's appointment as chancellor, CUP met with him to discuss his vision for education and student life. CUP and the chancellor agreed to resurrect the practice of meeting together annually.

## Subcommittee on the Communication Requirement

During 2010–2011, CUP's Subcommittee on the Communication Requirement was cochaired by professors Caspar Hare and John Ochsendorf. The subcommittee engaged in a number of activities in its oversight of the undergraduate Communication Requirement at MIT. At the start of this academic year, the review and approval of CI-H subjects moved from the HASS Overview Committee to SOCR. This shift allows for more comprehensive and cohesive oversight of the requirement as a whole. SOCR now reviews all proposals for CI-H subjects and Communication Intensive subjects in the Major (CI-M). To provide the subcommittee with the appropriate amount of SHASS expertise without significantly altering the current balance and composition of its membership, the subcommittee moved permanently to a co-chair model with one co-chair from SHASS and one from the School of Engineering or the School of Science. This structure allows the subcommittee to effectively manage the increased level of responsibility. As part of this shift in oversight, SOCR developed revised descriptions for CI-H and CI-HW subjects and criteria for their review. SOCR then reviewed the criteria together to be certain they complement one another.

SOCR reviewed and granted approval of the CI-M program for the new SB in computer science and molecular biology. The subcommittee also reviewed and granted provisional approval of the CI-M program for the new SB in engineering as recommended by the Department of Chemical Engineering. The review of this CI-M program called the subcommittee's attention to the challenges presented in designing CI-M programs for flexible degree programs.

In April, SOCR hosted an event to kick off the start of a celebration of 10 years of the Communication Requirement. The event, "Innovations in Communication Instruction: Lessons from Ten Years of the Communication Requirement", brought faculty together to discuss the challenges and successes of teaching Communication Intensive (CI) subjects. This activity was part of the subcommittee's ongoing work to inventory best practices in teaching communication skills and to share this information with CI instructors and the MIT community. A link to a video of the event is available on the CR website.

Finally, SOCR expanded its inclusion of three questions related to students' CR experiences on the MIT online subject evaluation forms. The subcommittee agreed to include these questions on the subject evaluations of all CI subjects evaluated online (109 subjects in the fall term and 104 in the spring term). These questions are meant to assess students' overall CR experiences in the course. It is SOCR's hope that these data will prove useful in assessment activities.

SOCR also conducted extensive ongoing business, such as the review of student petitions and attendant policy issues; the approval of CI-H and CI-M subjects; and planning for the future of the Cambridge-MIT Exchange CI Credit program. Finally, SOCR provided input to SHASS on the proposed reorganization of four units.

# Subcommittee on the Humanities, Arts, and Social Sciences Requirement

This year the CUP Subcommittee on the HASS Requirement was extremely busy with oversight activities as well as assessing the experimental First Year Focus (FYF) Program and drafting an interim report to share its findings with the community. SHR members met weekly at the beginning of each semester and then every other week.

In the fall, the subcommittee met with representatives from Music (21M) and Foreign Languages and Literatures (21F), two of the most popular areas of concentration, to check on the general health of those programs. Additionally, the subcommittee discussed several proposals for new concentrations and revisions to existing ones. The subcommittee approved a revision to the Economics Concentration, the renaming of Visual Arts and several concentrations included in the Regional Studies umbrella, a new Concentration in Portuguese, and the removal of the Physical Imagination Concentration. Through these discussions, the subcommittee reaffirmed their expectation that faculty members are involved directly in both oversight of the concentrations and advising students, with the goal of ensuring consistency and sustainability for the programs.

As part of its oversight of concentrations, the subcommittee discussed how to encourage students to meet with advisors and plan early for their concentrations, and considered the role of the administrative process in supporting these goals. As a result of these conversations, the subcommittee decided to change the process to allow students more time prior to submitting a proposal, and to ensure that this form is submitted in a timely manner by imposing a late fee. In the spirit of creating a digital MIT, SHR discussed its expectations for online concentration proposal and completion forms and student advising via messaging.

In addition to the aforementioned policy discussions, SHR discussed how external credit should be applied towards fulfillment of the HASS Requirement. In the context of the revised requirement, the subcommittee revised the policy and procedure to include a petition process. SHR also endorsed the SHASS Education Council proposal to remove the constraint on the amount of overlap between HASS minors and the HASS Requirement and to list HASS minors with minors from other schools.

In its effort to understand and assess the FYF Program, SHR continued conversations with instructors of the pilot subjects, looked at data from the Teaching and Learning Laboratory surveys, investigated programs at peer institutions, and worked with the Teaching and Learning Laboratory to create downstream student and faculty experience surveys. After much discussion, and incorporating feedback from preliminary discussions with the CUP and SHASS School Council, SHR released its Interim Report on the First Year Focus Program. The subcommittee found the experiment successful in creating a small number of interesting subjects and proposed a modification of the structure and goals of the program—now known as the HASS Exploration Program—as well as more aggressive efforts in encouraging development of new subjects. The final assessment and report is due to come out in fall 2014.

#### **Committee on Academic Performance**

#### **Petitions and Academic Actions**

The Committee on Academic Performance (CAP) reviewed 282 petitions this year. Last year CAP reviewed 302 petitions, averaging 289 petitions annually for the past five years. Of this year's petitions 233 (83%) were approved and 47 (17%) were denied. Two petitions were incomplete at the end of the year and eight were withdrawn by the student.

In 2010–2011, CAP issued 281 academic warnings. Last year CAP issued 329 academic warnings, averaging 307 academic warnings annually for the past five years. This year 51 students were required to withdraw; 44 students withdrew last year, averaging 43 student withdrawals annually for the past five years. Details of this year's actions are given below:

CAP End-of-Term Action Summary, 2010–2011

Year	Fall 2010		Spring 2011	
	Warnings	Required withdrawals	Warnings	Required withdrawals
Freshmen	29	1	28	6
Sophomores	48	6	44	6
Juniors	42	12	38	7
Seniors	33	8	19	5
Total	152	27	129	24

### **Policy Issues**

CAP discussed two policy issues this year: single-deficiency degrees and readmission processes, both of which were follow-ups from 2009–2010. Details of these discussions appear below.

Reviewing Late Drop petitions, the committee several times affirmed a principle that instructors are under no obligation to provide test scores or other evaluation to students before Drop Date.

Internally, the committee's website was streamlined and a new, searchable Policies and Procedures document created. At the suggestion of Christopher Terman, Course 6 Undergraduate Officer, the committee restructured its end-of-term meetings to review all of each department's students at one grades meeting, rather than separating fourth-year students from second- and third-year students. Beginning in June 2012, the period between spring grades meetings and deferred action meetings will be shortened to five business days, with an intervening weekend. This still allows time for communication among advisors, departments, students, and deans, but lets all concerned begin summer activities earlier.

Review of the Institute academic calendar, supported by CAP and other committees in 2009–2010, did not proceed beyond committee level in 2010–2011.

## **Details of Policy Issues**

### Single-deficiency Degrees

The committee asked the Office of Faculty Support, which maintains the *Academic Guide for Undergraduates and Advisors*, to omit the single-deficiency degree section of the *Guide* and to clarify that these requests are an internal matter between departments and CAP. The Office of Faculty Support did so, therefore language describing this possibility now appears only in CAP's internal Policies and Procedures document. Four degrees with a single deficiency in departmental requirements were approved in June 2011.

#### Readmission Process

Withdrawal and readmission policies and procedures were significantly revised during spring 2010 and ratified by CAP in June 2010. Associate dean David Randall from Student Support Services presented reports on fall 2010 and spring 2011 readmissions to CAP at its September and February meetings. For both terms, the new processes worked smoothly; the readmission committee reached consensus on every case but one. The new requirement that students prepare a detailed plan for completing the degree garnered praise from students, advisors, and departments alike. Student Support Services will use a planned new database in 2011–2012 to improve tracking of readmitted students.

#### **Membership**

CAP faced several membership challenges this year.

A Sloan faculty member elected in May 2010 resigned in early August. The Nominations Committee began working to appoint a replacement in September but was unable to identify one until December. That member agreed to serve but did not attend a meeting and was replaced by a third Sloan faculty member in February 2011. The manager of Sloan Dean's Office Operations agreed at that time to look into the high turnover rate.

Also in September 2010, a student member suffered a life-altering accident and withdrew from MIT for the term. The Undergraduate Association nominated a senior who joined the committee in October and served through the rest of the year. Unfortunately, disarray in the Undergraduate Association meant that only one name has so far been presented to CAP for the two student positions open in 2011–2012.

## **Committee on Curricula**

The Committee on Curricula (CoC) acts on proposals to create, revise, or cancel undergraduate subjects; to create, revise, or terminate undergraduate curricula; on student applications for double majors; and on petitions for second SB degrees and substitutions for the General Institute Requirements. During 2010–2011, the committee was chaired by professor Adam Albright. The voting members consisted of six faculty (including the chair) and four student members. The committee met seven times during the fall term, five times during Independent activities period, and eight times during the spring term. During the academic year, the committee acted upon 906 subject proposals, including proposals for 139 new subjects, and approved numerous minor changes to degree charts. The committee also approved the following major curricular changes:

Course 4 Approved changes to both undergraduate programs, including new

names. The name of the Course 4 SB program was changed from Art and Design to Architecture; the Course 4-B SB program (as recommended by the Department of Architecture) was renamed Bachelor of Science in Architecture Studies. In addition, the name of the Visual Arts discipline stream, HASS concentration, and minor was changed to Art, Culture, and

Technology.

Courses 6 and 7 Approved a new joint major in Computer Science and Molecular Biology.

Course 7 Approved a change in name for the 7-A SB program (as recommended by

the Department of Biology) to Bachelor of Science in Biology.

Courses 10 Approved a new flexible SB program in Engineering (10-ENG), which

will operate within the administrative structure developed by the School of Engineering during the previous academic year, with the launch of the

16-ENG program.

Course 11 Approved a new HASS minor in International Development.

Course 21 Approved the termination of the major departure in Psychology. Students

interested in that field will continue to have the option of pursuing a minor in the field, or choose a psychology-focused major in Brain and Cognitive

Sciences.

Course 21H Approved a renumbering plan for the entire curriculum.

Course 21W Approved a renumbering plan and new subject descriptions for the first-

year writing program.

The sponsors of a proposal to establish a new interdisciplinary, inter-school minor in environment and sustainability met with the chair during the last week in April to develop a timeline and strategy for reviewing the proposal during AY2012.

#### **Other Actions**

CoC, together with the Committee on the Undergraduate Program, resumed its efforts to clarify how much overlap should be permitted between majors and minors. The issue remained timely in light of the emergence of new flexible and interdisciplinary SB programs. The committees actively engaged with key stakeholders throughout the Institute to discuss a draft that was designed to clarify existing policy, a process that will continue into 2011–2012 in consultation with the chair of the faculty.

In keeping with its responsibility to review periodic reports on the status of interdisciplinary minors, CoC received a detailed report from the School of Humanities, Arts, and Social Sciences regarding its interdisciplinary minors. CoC also reviewed a report from the sponsors of the Energy Studies minor that summarized the program's first year of operation. In the coming year, CoC will invite another follow-up report on the Energy minor and will consider whether to request assessments from the sponsors of the interdisciplinary minors in Astronomy and Biomedical Engineering.

In consultation with CUP, the Committee on Graduate Programs (CGP), and the Faculty Policy Committee, CoC approved amendments to the Term Regulations to clarify policy and procedures with regard to end-of-term assignments and examinations. CoC also endorsed a CGP recommendation to standardize the regulations for graduate and undergraduate subjects. However, that recommendation would have required a change

to Rules and Regulations of the Faculty, and proposed amendments along those lines were not adopted by the Faculty when presented for a vote in April 2011.

In consultation with CGP, CoC approved a new definition of and numbering conventions for special subjects and adopted new catalog designations for subjects offered by the following programs:

WGS Women's and Gender Studies

ES Experimental Study Group

EC Edgerton Center

CC Concourse

Together with CUP, CoC engaged in discussions with key stakeholders concerning the new subject numbers for science subjects taught through ESG and Concourse. Those discussions will continue into the 2011–2012 academic year.

CoC approved new procedures for managing both general undergraduate seminars and freshman advising seminars, and it defined the criteria for considering unique catalog designations for subjects, including those that are offered by non-academic units. It also clarified its operating guidelines to be explicit about the requirement that undergraduate majors and minors be designed exclusively around an undergraduate curriculum.

## **Committee on Discipline**

Acting in accordance with its purpose of adjudicating cases of alleged student misconduct that are brought to its attention, the Committee on Discipline (COD) held five hearings involving five students, with an additional complaint involving one student that will not be heard by COD before year's end. The cases involved issues of sexual misconduct and academic misconduct. Of the respondents, two were graduate students and two were female. In cases where the student was found responsible, sanctions included suspension, formal probation, and a delay in granting a degree. In addition there were approximately 58 disciplinary warning letters created by or forwarded to the Office of Student Citizenship.

The majority of the reported incidents this year were academic misconduct cases. The number of reported incidents remains high, but the Office of Student Citizenship anecdotally reports that there are still numerous cases which do not get reported. Many of the cases of misconduct involve students who have committed acts in the past. The more we know about acts of academic misconduct, the better we can respond. The committee continues to work to increase the transparency of the process and, in partnership with the Office of Student Citizenship, will make available online more information regarding the process as well as tools for faculty. The COD continues to participate actively in current efforts to address the issue of academic integrity at MIT.

There are many faculty changes this year since three members have completed their terms of service and one will go on sabbatical. One member has agreed to serve an additional three years so there will be a total of three new faculty members, two new dean's representatives, and two new students on the committee. The current chair of the committee, professor Robert P. Redwine, will continue as chair for AY2012.

## **Committee on Graduate Programs**

The Committee on Graduate Programs, chaired by professor Stephen Graves, consulted on a broad array of issues impacting graduate education. Christine Ortiz, who took on the role of graduate dean as of August 1, 2010, greeted the committee at the first meeting of the academic year, discussing new and ongoing initiatives of the Office of the Dean for Graduate Education as well as policies regarding academic warning and denial of registration letters sent on behalf of the Graduate Academic Performance Group under the authority of the CGP. The committee continued to receive summaries of the graduate administrators' roundtables throughout the year.

CGP reviewed and approved a motion that was later brought before the Faculty on the subject of amending end-of-term regulations to provide more specificity around the timing and length of take-home finals and oral presentations. CGP also reviewed a request from the Sloan Fellows flex-time program to approve a redesigned schedule that would allow students to participate in on-campus coursework for a total of four residential modules of six to nine days, plus 26 weekends. Although CGP had concerns about this adjustment of the Institute residency requirement for graduate students, as well as concerns about the program's violation of academic calendar restrictions, the committee decided that the program merits an exception to these rules so long as it continues to work with both the registrar and the chair of the faculty to approve annual schedules.

The committee approved the termination of two existing degree programs with very low enrollments in the Department of Materials Science and Engineering: the Master of Engineering, and the Master of Science/Sloan Leaders for Global Operations Master of Business Administration dual degree. The committee also approved the official termination of Heath Science and Technology's Biomedical Informatics (BMI) masters program, which has been moved to Harvard University. In addition, a draft proposal by the biophysics community to establish a graduate certificate in this field was presented to CGP and met with constructive feedback for moving forward. CGP also approved a change in the name of the Master of Science in Visual Studies degree granted by the Department of Architecture to the Master of Science in Art, Culture and Technology, which reflects the new program name.

Along with representatives from the Committee on Curricula, CGP continued to examine the treatment of H-level graduate subjects and the question of constructing a formal definition that meets the needs of all departments and programs. As background for the current discussion, CGP reviewed survey data that was gathered from departments in October 2009. A proposed definition was shared with departments in April and feedback was requested. Due to concerns from both CoC and several departments regarding the proposed definition (especially with regard to "meets with" subjects in the undergraduate catalog), the H-level description was not revised for the 2011–2012 Bulletin. The complexity of this issue demands greater consideration and it will be an agenda item for the committee in fall 2011. CGP also approved two requests from CoC, the first regarding the managing of Special Topics and a proposal to change the name to Special Subjects, and the second to assign letter descriptors to courses in the Special Programs group, namely Women's and Gender Studies and Edgerton Center courses.

As a follow-up from the previous academic year, CGP was briefed on the work and recommendations of the task force that examined a unified graduate admissions system during spring 2011. A request from representatives from the MIT Libraries to eliminate the second "use" copy of theses was approved upon strong argument that these additional hard copies are not necessary when electronic copies are so easily available and perused. The committee unanimously approved a proposal from Writing Across the Curriculum to change the format of the Graduate Writing Exam to an online test that more accurately gauges students' writing abilities.

#### **Committee on Student Life**

In a new development, the Committee on Student Life will try to hold one meeting per month after the Institute Faculty Meeting. Key issues are listed below.

- Dining
- Domestic violence
- Health and fitness
- The next dean of engineering
- Undergraduate advising
- Graduate advising
- Lesbian, gay, bisexual, and transgender topics
- MIT student body size increase
- Women's topics and women of color topics
- Men's topics and men of color topics
- If students were running MIT, they would...
- International students
- Legal issues

Meeting minutes were kept and posted online, including some video logs. Fall meetings focused on dining and spring discussions revolved around the proposal to repurpose the Walker Memorial building. In general, students felt that the administration asked for their input after changes had already been decided upon, leading either to confrontation or feelings of apathy.

#### **Initiatives**

The Committee on Student Life accomplished a great deal this past year. CSLwas successful in obtaining the URL "csl.mit.edu" (and is currently pursuing the URL "web. mit.edu/csl/"), making the committee's website easier to find. CSL also adopted the use of video blogs (vlogs), short video logs summarizing meeting activities. Ad hoc feedback from students has been very positive.

The committee's initiative to build a sense of community and engagement by holding CSL meetings after Institute Faculty meetings in various dorms on a rotating basis

met with mixed results. The committee held two such evening meetings in the dorms, but struggled to attract interested parties at other times; next year CSL will return to the practice of meeting on the second and fourth Friday of each month at noon in 12-196. CSL was successful in having a positive impact on the decision-making process of identifying the next dean of the School of Engineering.

## **Committee on the Library System**

The work of the Committee on the Library System (CLS) in the past year was dominated by four issues: the state of the MIT Libraries following budgetary cuts, the reorganization and subsequent partial reinstatement of funding, agreements with the Harvard Libraries, and the implementation of an open access policy.

The MIT Libraries have completed their reorganization. For faculty and student users, the transition seems to have passed fairly unnoticed, and we have heard no complaints about services offered.

FY2011 saw a return to "normal" budgetary practices and procedures going forward, a very gratifying development for the committee. The library staff, in consultation with CLS, decided to increase opening hours based on past use information (gathered through surveys and questionnaires of library users).

The Harvard-MIT Libraries cooperation agreement was signed by the respective provosts of both universities and aims to foster seamless access to collections, advance digital preservation collections practices, collaborate on wider access to electronic information, and advance scholarly communications initiatives. Harvard University and MIT are the first two large universities to institute open access policies. A similar underlying architecture of the two libraries' catalogs will help to enable cooperation.

CLS is charged with the oversight of MIT's groundbreaking open access policy, which has become a large part of the committee's work. The infrastructure needed for the implementation of the policy is now in place: DSpace@MIT has been adopted and is well integrated into Google Scholar. As a result, downloads of MIT papers have increased tremendously. The committee's work has been focused on obtaining more faculty papers, overcoming publishers' resistance, and encouraging other universities to also adopt open access policies.

At the moment, the MIT Libraries are obtaining slightly less than three percent of papers published by faculty, and the committee is seeking to improve these numbers by encouraging departments that compile an annual report to simultaneously submit faculty papers. The committee is hoping to begin work on a pilot project with SHASS this coming year. Although the Harvard and MIT open access policies are important, they will only have real impact if other universities pass similar policies. Members of the committee have been involved in trying to encourage such moves and in offering to share their expertise.

#### **Committee on Nominations**

The Committee on Nominations nominated 31 faculty members to fill openings on Institute committees, including the positions of secretary and associate chair of the faculty. The slate was unanimously approved at the May Faculty meeting.

## **Committee on Undergraduate Admissions and Financial Aid**

The Committee on Undergraduate Admissions and Financial Aid (CUAFA), chaired by professor Jaime Peraire, considered a range of issues related to admissions and financial aid policies. The committee recommended that international students who attend a high school in the United States be considered in the same applicant pool as domestic students. One of the main reasons for this recommendation is to avoid the inequities that arise when two students from the same US high school apply to MIT and end up receiving different treatment based on their citizenship status. This policy was implemented beginning with the past admissions cycle. The committee recommended that the effects of this policy on the financial aid budget and on the total number of international students on campus be closely monitored.

Over the past year, the committee was chiefly concerned with gauging the effect on students of the increase in student self-help contributions (due to changes in financial aid policy). CUAFA expects that the financial pressures and concomitant stress on students who need to borrow money and/or find jobs on campus will continue to increase. The committee voiced concerns about the effect of these financial aid changes on the Institute's population of underrepresented minorities. At this point in time, no negative effects on yield have been noted in next year's incoming class. The committee recommended that student reaction to financial stress and pressure be monitored through the use of timely surveys.

The committee noted that at present there is little feedback connecting a student's performance at MIT to the criteria employed for admission. CUAFA recommended that a process be initiated to discuss and identify the desired incoming class target composition, and stressed the importance of determining mechanisms to measure, assess, and validate the admission criteria employed to achieve the desired mix. This process should involve the Admissions Office along with faculty, staff, and students.

## **Edgerton Award Selection Committee**

The Edgerton Award Selection Committee received 11 nominations and announced their decision at the Institute's April Faculty meeting. This year's award was presented to two winners: Jonathan Kelner, the Kokusai Denshin Denwa assistant professor of Mathematics, and Rebecca Saxe, assistant professor in the department of Brain and Cognitive Sciences.

Professor Jonathan Kelner is an extraordinarily energetic scholar, a theoretical computer scientist whose research applies techniques from pure mathematics to problems in algorithms and complexity theory. He is "leading a revolution in the theory of graph algorithms," introducing a new set of techniques to graph theory, a fundamental tool in the physical, biological, and social sciences. His work has developed new algorithms

for the solution of maximum flow problems, for sampling random spanning trees in graphs, and for transmitting information quickly in sensor networks even with bad conductance—a measure of connectivity previously thought to bound performance. In these instances and more, Professor Kelner's extraordinary work has resolved questions that have been open for decades, led to improvements in areas with long-standing barriers, and produced significant breakthroughs even in areas that have been extensively studied by others. Professor Kelner is also a gifted teacher. His survey course of advanced techniques in algorithm design attracts students from several disciplines, and he is responsible for a rejuvenation of the Math department's Probability subject, notable for its large enrollments and extremely high student evaluations. Students rave about the clarity and accessibility of his lectures and about his considerable devotion to them and their understanding both inside and outside the classroom. With his ground-breaking research and strong commitment to learning, Professor Kelner exemplifies the traits this award seeks to uphold.

Professor Rebecca Saxe is a brilliant scholar of cognitive neuroscience, who has utilized functional magnetic resonance imaging, which maps the computational functions of the human brain onto its anatomy, to explore profoundly important questions about how the mind works. Researchers have long known that basic functions like perception and motor control are carried out by specialized neural mechanisms in specific regions of the brain. Through a ground-breaking series of experiments, Professor Saxe has shown that higher-level cognitive functions are carried out in specialized brain regions as well—a matter of debate in the field for two centuries. Indeed, she has located the region of the human brain that is specifically engaged in thinking about what other people are thinking. It is found in a different region than long thought to be the case, and its discovery suggests a number of lines of research, in which she is currently engaged. For example, she is connecting her work on brain imaging with infant- and social cognition, examining how this region that is engaged in higher-level cognitive functions develops in children, and whether and how it may function differently with autism and in the congenitally blind. She has also studied the cognitive and neural substrates of intergroup conflict, with field studies among Israelis and Palestinians. She is recognized not only by neuroscientists but also by those in neighboring fields as an international leader in "social neuroscience" and "the social brain." As a teacher, Professor Saxe has inspired many students, particularly in her lab course in which she identifies a number of newly published empirical findings, preps experiments so that students can replicate them, and devises further experiments to extend each finding in a new direction. Students say that not only should this course be required for all majors, but that a version should be created for every department. A star in cognitive neuroscience and a creative and inspirational teacher, Professor Saxe personifies the very best MIT has to offer.

#### **Killian Faculty Achievement Award Selection Committee**

The 2011–2012 Killian Award Selection Committee, chaired by Professor Susan Silbey, announced its selection at the May Institute Faculty meeting. The award went to JoAnne Stubbe, Novartis professor of Chemistry and professor of Biology. Professor Stubbe is a superb scientist, internationally known for her research on the mechanisms and regulation of the enzymes ribonucleotide reductase, polyester synthase, and natural product DNA cleavers, for which she has garnered a number of important awards

and prizes in her long career as a biochemist. In the last few years, she has received the National Academy Prize in Chemistry, the National Medal of Science, the Franklin Institute Award in Chemistry, and the Welch Award in Chemistry.

Professor Stubbe is perhaps the top mechanistic biochemist of her generation. More than any other scientist in the world today, she has pioneered our understanding of the role of radicals in biology. Using a number of novel biochemical and spectroscopic methods, she uncovered the basic principles by which radicals are generated, transported to active sites, and implemented to drive enzymatic function.

Professor Stubbe is the quintessential MIT faculty member: in all aspects of her research and teaching, her approach is packed with energy, meticulous in the attention to detail, and displays uncompromising standards. Her *tour-de-force* discoveries are the result of elegant experimental design, deep chemical and biological insight, and a remarkable degree of focus, fueled by her scientific curiosity and desire to decipher nature's secrets.

Thomas A. Kochan Chair of the Faculty George Maverick Bunker Professor of Management

Aaron R. Weinberger Human Resources and Faculty Governance Administrator