

## Dedication to honor pioneering Dean <br> <br> By ROBERT C. Di

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## Holiday notes

Mark your calendars for:
The Tech Community Women's Christmas Crafts Faire which will be bigger and better than ever this year Community members will be selling handmade crafts in Lobbies 10 and 13 8:30am-4:30 pm.
You can expect to find jewelry, stained glass, needlework and quilting, pottery and, of course, edibles, all at reasonable prices.
President and Mrs. Gray's Holiday Open House will be held Wednesday, Dec. 11, $4: 30-6: 30 \mathrm{pm}$ at the President's House, 111 Memorial Drive. All members of the community, including chi
least eight years old are invited.
The MIT Women's League Holiday Party is scheduled for the Rogers Lobby The traditional hot cider and cookies will The traditional hot cider and cookies will be served and Shirley Brown and the
Concord Bell Ringers will provide seaConcord Bell Ringers will provide
The Annual Christmas Concert by the MIT Women's Chorale will be presented Sunday, Dec. 15, at 3pm in presented Sunday, Dec. 15, at 3pm in
Huntington Hall (Rm 10-250), open to the community free of charge. The Chorale, under the direction of Nancy K. Wanger, will perform works by Bach, Mozart, Brahms, Reger, Butler, and others, followed by traditional carols and songs of the season and refreshments.

## Careers cancelled

Careers at MIT, a Personnel Development Seminar scheduled for Thursday, Dec. 5 , noon- $1: 30 \mathrm{pm}$, has been postponed. 1986. Tech Talk and fliers will announce
the new date in time for you to put it on the new date in
your schedule.

## Good skate

Children's skating lessons will be offered Saturdays beginning December 7 through January 19 (plus Tuesday, Dec 31) by the Department of Athletics. Classes for beginners will be at 10 am and for advanced skaters at 11am

Children 6-14 are eligible and classes are limited to 30 children. There is a $\$ 20$ fee (with a valid athletic card). Parents are urged to pay careful attention to proper fitting skates, which may be single blade hockey or figure skates. Registraequipment desk.

## IAP look

The Guide for Independent Activities Period ' 86 has arrived, filled with almost 700 activities. Open one up and find laser shows, Voyager to Uranus, Henry V, job possibilities, geothermal energy, chemistry in art, the Mexican crisis, French grand opera, social conflict, innovations in high-strength steel, talks on topology, a naval architect's tour of the Constitution, films about music, the inflationary universe, espionage in the 80 's, tax planning, a Chinese chess tournament, plus trips, tours, workshops, labs, films, sem nars, and. . much, much, more. IAP: Experience the challenge and joy of self-education. January 6-28, 1986. PS-Hang on to your IAP Guide; it's the only one there will be this year and only limited copies will be available when IAP begins.

Staff Writer
Brown, who
Dr. Gordon S. Brown, who in the 1950s and 1960s led MIT across new frontiers in research and instruction in electrical engineering, will be honored by his alma mater December 6 Brown Building
The building houses MIT's newest research facilities-a sophisticated complex of laboratories devoted to pushing back the presentday frontiers in microelectronics. The laboratories form the cornerstone of MIT's education and research program in very large scale integration-VLSI-a field synonymous with modern electronics.
In connection with the dedication, the Microsystems Research Center, which coordinates the VLSI program at MIT, will sponsor a symposium, "Diamonds in the Sand," from $9 \mathrm{am}-1 \mathrm{pm}$ in the EG\&G Education Center, Rm. 34-101. Professor Paul Penfield Jr., director of the Microsystems Research Center, said MIT faculty members speaking at the symposium "will describe some of the most exciting recent achievements in MIT's microsystems reseach program.'
The MI'T' community is invited to join the celebration for the building dedication. Events include an open house and building tours on Thursday, Dec. 5 , from 3-5pm; the symposium on Friday, Dec. 6, and the dedication ceremony itself, which begins at 3pm in the Edgerton Lecture Hall, Rm. 34-101.
Dr. Brown, 78 , is Institute Professor Emeritus and professor of electrical engineering, emeritus, in the Department of Electrical Engineering and Computer Science. He has head of the Department of Electrical Engineering from 1952-59 and as dean of the School of Engineering from 1959-68, he placed great emphasis on interdisciplinary approaches to research problems, a concept that influences MIT and the department to this (continued on page 8)


Building 39, at the center of this photograph made with a "fisheye" lens, will become the Gordon Stanley Brown Building Friday, Dec. 6, when the Institute honors the former head of the Department of Electrical Engineering and former dean of the School of Engineering. program. program.

Photo by Calvin Campbell

## Seven to speak at VLSI symposium Friday

"Diamonds in the Sand," a symposium whose title reflects the glittering accomplishments and the humble origins of the integrated circuitry which drives the computer age, will be held Friday, Dec. 6, from 9am to 1 pm as Gordon Stanley Brown Building.

The MIT community is invited to attend the symposium, which will be held in Edgerton Hall in the EG\&G Education Center, (Rm 34-101).
The symposium is sponsored by the Microsystems Research Center, which coordinates MIT's broad and growing very large seale integrated (VLS) research program. Professor Paul Penfield Jr. is director of the center an
will open the symposium with an overview.

VLSI,"Professor Penfield said. "No university that strives for excellence in electrical engineering and computer science can neglect this
fast-moving field." fast-moving field."
The cornerstone of the VLSI activities is the new chip fabrication faclity, the Microsystem Technology Laboratories, housed in the Brown Building. Professor Dimitri A. Antoniadis is director of the MTL which supports research in many areas, including electronic materials devices, processes, models, manufacturing and circuits. Elsewhere on campus, other research programs focus on computer-aided design, VLSI theory, highly parallel computing and signal processing systems.

Seven MIT faculty members, in individual talks, will describe some of the most recent achievements in MIT's microsystems research program.

## Space construction began here

When David L. Akin was a student during the late 1970s he spent more time in the MIT swimming pool than he did in some of his swimming pool than he did in some of his
classes. His professors didn't mind because the swimming pool was where one of his the swimmi
These days, David L. Akin is Rockwell These days, David L. Akin is Rockwell
International Assistant Professor of AeroInternational Assistant Professor of Aeronautics in the Department of Aeronautics and Astronautics at MIT and principal investithat was aboard the space shuttle Atlantis.
The construction techniques the shuttle crew The construction techniques the shutliecrew
used and the structures built were conceived used and the structures buil were conimming pool and refined over the years at MIT and at NASA's Marshall Space Flight Center in Huntsville, Ala. Working under water simuHuntsvile, Ala. Working under wates

The experiment was the first in-space construction project. Data developed by Professor Akin's group indicates that humans can be more productive in space than on earth in such tasks. The success of the experiment may shorten the time schedule for building a permanent space station.

Experimental Assembly of Structures in Extra vehicular Activity.
On hand for the launch last week were about 20 MIT students and two senior MIT faculty members from the Department of Aeronautics and Astronautics-Dr. James W. Mar, the Jerome Clarke Hunsaker Professor of Aerospace Education-and Dr. Rene H.
Miller, the H.N. Slater Professor of Flight Miller, the H.N. Slater Professor of Flight MIT Space Systems Laboratory where Professor Akin studied and did research as a student.

Professor Akin's research group, the Laboratory of Orbital Productivity (LOOP, referred to as the LOOP group), is part of the Space Systems Laboratory.
The laboratory was begun with seed funding from NASA to tap the creativity of students to develop innovative experiments to fly on the space shuttle. As a doctoral candidate, Professor Akin was one of the three original students in the laboratory. Their studies of space industrialization led them to consider the questions of human productivity in space. This led to underwater tests, first using scuba
(continued on page 8 )

The symposium schedule:
9am-Introductory remarks by Professor Penfield.
9:15-A UV Write-Enabled PROM, Professor LanceA. Glasser.
9:45-SCHEMA: Knowledge Based CAD,
Professor Richard E Zippel Professor Richard E. Zippel
10:15-Logic-Level Simulation of VLSI Circuits, Professor Christopher J. Terman. 11:15-Low Temperature Processing for Microelectronics, Professor L. Rafel Reif. 11:45-New Ceramic Processes for Micro-
electronic Packaging, Professor H. Kent electronic Packaging, Professor H. Kent
Bowen.
$12: 15 \mathrm{pm}$-Submicron Structures and
Quantum-Effect Devices, Professor Henry I Smith.
12:45-Electron Velocity Overshoot in Ultrashort Channel MOSFET Devices, Professor Dimitri A. Antoniadis.

## Help wanted

The MIT Army ROTC Department is seeking faculty and administrative staff to serve on institutional nomination boards that select ROTC scholarship recipients.
The boards will meet December through April, Captain Jeffrey Welch, technical instructor in Military Science, said. Selected volunteers will interview poten tial scholarship winners from MIT Harvard University and Wellesley College for one hour. Each board member will then write a short narrative and quantitative critique of the applicant's potentia for service as an Army officer. Board members may volunteer for as many, or as few meetings as desired.
An anticipated 40 to 50 students are expected to apply this year.
Interested persons may call either Captain Welch or Lieutenant Colonel James Hassett at x3-4471, or send their name and telephone number to the Army ROTC office ( $20 \mathrm{E}-126$ ) with times which participate.

## INSTITUTE NOTICES

Open to public
Opento
MIT Community only
Open to membera only

## Announcements

The Advisory Committee on Shareholder Responsibility,
(ACSR) - will meet in the Maclaurin Room (10-300) at 4 pm , Dec 11 for a disceusion of issaes related to MITs investments
in corporations with activities in South Africa. For further in. in corporations with activities in South Africa. For further in-
formation, contact the secretary of the ACSR, Walter Milne, 5-208.

International Students - If planning to go home for the
holidays, or taking a trip outside of the US, remember to re-
quest your travel uesenter the US you will need a passport valid for six months in. the future, a valid consular visa stamp (entry visa obtained
from a US Embassy or Consulate) and a Form 1-20 and $1-20$ ID
 Project Athena Survey - If you have returned the survey,
thank you. If not, please do so as soon as possible. We need your
returns. Karen, Rm E40-443. Project Contact - Undergraduates interested in com-
municating with high school students and guidance counselors about what it's like to be an MIT student are encouraged to join Career Planning and Placement Company Recruitment
Presentations ${ }^{\circ+t}$ - Apple Computer, Inc, Dec 4, 5.7pm, Rm Presentations ${ }^{\bullet *}$ - Apple Computer, Inc. Dec 4, 5.7pm, Rm
4.153. Management Analysis Center, Dec 5, 4.6pm, Rm 4.370.
Morgan Stanley \& Co, Dec 5, 7.9pm, Rm 4.149. Free Museum of Science Admission for MIT Students -
With MIT student ID. provided by MIT chapter of Tau Beta Pi,
he Engineering National Honor Fraternity. Also, reduced adMIT Hunger Drive Food Drive - We need non-perishable, unopened foods for Boston's less fortunate. Ongoing collection
all day and night at drop-off boxes in Lobby 7, Walker, Arts Hotine - Recorded information on all arts events at MIT
may be obtained by dialing $x 3$-ARTS. Material is updated every Nightline***-a student-run hotline open every evening of
he term, $7 \mathrm{pm}-7 \mathrm{~mm}$. If you need information about anything or you ujust want to chat, give us a call. Were here to listen.
$\times 3-7840$.

Faculty Members - Technology Review would like to hear
about books beeng published dy MIT faculty members. Please
notify us, as far in advance as possible, of your upcoming book. about books being published by Mri fate
notify us, as far in advance possibe,
Technology Review, $10-140, \times 3-8250$.

## Club Notes

WMBR.* is looking for tudents interested in radio and
MrT Sudent Cable Programming Group: - Loding for


MrT Student for Induridual Freedom*- Topic preentation

Mrr, Student Duphicate Brage Cubb - Bride ganee every








 Jef Tollakeen, 247.0568 or $\times 3.3157$. . 1 .



 Conter






## Religious Activities

## the Chapel is open for private meditation $7 \mathrm{am}-11 \mathrm{pm}$ daily.

 Moravian Christmas Serrice.*- Sponsared by Baptist Stu-dent Fellowship, Sun Dece $8,7 \mathrm{pm}$, MIT Chapel

Christian Science Organization at MITT* - Weekly Testi-




MIT Hillel Shabbat Services* - Fri, Dec 6: ConservativeReform, 5:30pm, Hillel. Shabbat Dinner, $6: 45 \mathrm{pmm}$. Kosebher Kit
chen; dinner reservations due Thurs, $\$ 6.50$. Fri, Dec 13: chen; dinner reservations due Thurs, 86.50 . Fri, Dee 13:
Conservative-heform Services, $5: 30 \mathrm{pm}, \mathrm{Hillel}$. Shabbat Dinner, 6:45pm, Kooher Kitchen, dinner reservations due Thurs, s6.50.
The Kosher Kitchen will serve dinners through Thurs, Dec 19;
utheran Ministry and Episcopal Ministry"* - Weekly service of Holy Communion: Wed, $5: 10 \mathrm{pm}$, MT Chapel. Supper
following at 312 Memorial Drive. For further info, call

Baptist Chapel* - Baptist Student Fellowship Services, Sun
Islamic Society* - Daily prayers, Ashdown House (basement)
5 times a day. Call x5.-9749 dorm, for schedule. Friday prayer, shdown House 1-1:45pm, Khutba starts at 1 pm, congregation

Meditation and Discourse on the Bhagavad Gita ${ }^{\circ}$ Swami Sarvagatananda, MIT Vedanta Society, head hrough Dec 13, 5:15pm, MIT Chapel.
United Christian Fellowship** - MIT Chapter of Inter Vorship and sharing from God's word, Fri, 7pm, Student Ctr Rm y1; small group meetings for Bible Study and support, week-
y at different times. For more info, call Chiu-Oan, x5-6123

IT Graduate Christian Fellowship* - Come meet oth hristian faculty, staff and grad students, Tech Sq Prayer
Meeting, Tues, $1.30-2 \mathrm{pm}$, Rm NE43-3688, weekly lunch gather inss, Weds, $11: 55-12: 55$, Student Ctr Twenty Chimneys. For in
Cormation contact Burt Kaliski, $x 3.5866$ or Roz Wright, $x 3.8926$. formation contact Burt Kaliski, $x 3-5866$ or Roz Wright, x3-892
fellowship group also meets Weds, $7: 30 \mathrm{am}, \mathrm{Rm}$ E51-307.

MIT Seekers Christian Fellowship** - Park Street Church Seekers Teaching and Worship Time, Sundays, 9:15am, enjoy our biblical teaching, worship and sharing at Park Street
Church, right in front of the Park Street T stop. MIT Seekers
leave from McCormick at $8: 30$ am. Come join us.
Campus Crusade for Christ** - Family time, 7:15pm, Fri ing, refreshments \& fun. Tues, pripturer teaching, prayer, sing
tudent Center. Call $x 5 \cdot 9153$ dorm. Call $\times 5$-9153 dorm.

Lincoln Laboratory Noon Bible Studies* ${ }^{*}$ - Tues
Kiln Brook III, Rm 239. Annie Lescard, x2899 Linc.
Morning Bible Studies - Fri, $7: 30-8: 30 \mathrm{am}$, L-217. Ed Bayliss
Noon Bible Study* - Every Wed, Rm E17-109, bring lunch.
Ralph Burgess, x ${ }^{3}-2422$ (Since 1965)
Edgar Cayce Study Group** Tuesdays, 6:30.9pm, Edgar group discuassion \& meditation. For info: Douglas MeCarroll,
$876-713412.9 p \mathrm{~m}$ or Scott Greenwald, x $\mathbf{x}$.7423.

Graduate Studies
Unless otherwise indicated, contact Dean Jeanne Richard at
the Graduate School Office, $R m 3-136, x 3-4869$ for further
Fulbright Collaborative Research Grants, 1988-87. De signed for teams of 2.3 graduate students or recent post-grad
uate researchers to perform joint research abroad. Applicants must be US citizens, hold a BA or equivalent before the begin ning date of the grant. Those with a PhD at the time of applica-
tion may have obtained the degree no earlier than June 1983 . tion may have obtained the degree no earlier than June 1983
Applicants are expected to have writter and spoken proficien
cy in the language of the host country. Application deadline cy in the language of the host country. Application deadline
December 20, 1985. For more information, oontact Dean Eugene National Graduate Fellowships in the Arts, Humanities
and Social Sciences. The Dept of Education announces the
availability of applications for the $1986-87$ National Graduate Fellow Prof apm. Eligiviility open to seniors who will begin
graduate studies by September 1986 or currently enrolled grad uate students "with expressed intent of obtaining a doctorate in the following fields of study: architecture, dramatic and
creative arts, fine arts, music, the humanities, or the social
sciences. Applicants must be US citizens or permanent residents sciences. Applicants must be US Citizens or permanent residents
or persons in the process of becoming citizens or permanent
residents. Awards are made up to $\$ 10,000$ based on need and residents. Awards are made up to $\$ 10,000$ based on need and
the institution in which the fellow is enrolled may receive up to
$\$ 6,000$ to cover costs associated with tuition and fees. Applications must be postmarked by December 20, 1985. Application
can be obtained by writing to: US Dept of Education. Nationa can be obtained by writing to: US Dept of Education, National
Graduate Fellows Progra, PO Box 44367 , LEnfant Plaza StaGraduate Fellows Program, PO Box
tion, Washington, DC 20026-4367.
Fulbright Scholar Awards 1986-87. The Council for International Exchange of Scholars (CIES) has announced the opening
of competition for the 1896.87 Fulbright scholar awards in
research and university lecturing abroed The basic eligibility research and university lecturing abroad. The basic eligibility
requirements for a Fulbright award are US citizenship, PPD or comparable professional qualifications, university or colleg
teaching experience, and for selected countries, proficiency in teaching experience, and for selected countries, proficiency in a
foreign language. Application deadlines Des 311,195 for NATO
Research Fellowships; and Feb 1, 1986 for the seminar in Ger Germany travel-only awards. For more information,
Dean Eugene R. Chamberlain, $\operatorname{Rm} 5-106, \times 3-3795$.
The Business and Professional Women's Foundation's
Lena Lake Forreest Fellowship Program and the BPW
BW Lena Lake Forrest Fellowship Program and the BPW
Foundation Research Grant Program. T support research
pertaining to economic, educational, political, social or pertaining to economic, educational, political, social or
psychological factors affecting working woman. Awards range
from 8500 to $\$ 3,000$ Applicants must be doctoral candidates or postdoctoral scholorars whose proposal for research has been ap-
proved by an accredited graduate institution. Only US citizens Bell Laboratories Graduate Researeh Programs for
Women. Provides financial support for outstanding women
students pursuing full time doctoral studies in the following students pursuing full time doctoral studies in the following
fields: chemistry, omputer science, economics, electrical engi.
neering, experimental human psychology, materials science, mathematics, operations research, physics, and statistics. The
Fellowhip P Program provides full tuition and fees plus a sti

## Basketball trek: fun but.

## By KEN CERINO

MIT's men's and women's basketball team ach lost a pair of games at the University of Thanksgiving holiday weekend
The men lost to day weekend
The men lost to Chicago in the opening game Friday, $72-62$, then dropped the consola ion game to the University of Rocheste Saturday, $78-63$. The women, meanwhile, lost Washington University (Mo.) Saturday, 81-42. Chicago won both championship game with the men downing Washington 69-53, and he women knocking off Rochester, 69-61. It was a nice weekend for MIT junior Mik McElroy of Watsonville, Calif. The $6^{\prime} 6^{\prime \prime}$ for ward was named to the all-tournament team fter scoring 38 points with 25 rebounds in th wo contests. He also shot 57 per cent from the field (16-for-28). On Friday, McElroy wa mentioned as one of the top Division II players in the East by the national newspaper USA Today.
Despite MIT's lack of success on the court nembers of the two teams enjoyed partici pating in the tournament.
绪 hompson, senior guard. "It gave us a chanc Senior forward Craig Poole added that

## as a good experience. It was nice traveling

 and meeting some alumni.'Martha Beverage, a junior forward, noted the tournament strengthened the friendship mong the two teams. "When you practice for only two hours a day, you sometimes don have an opportunity to know your teammates

## allowance for books, fees and related travel expenses. The Grant Program provides an annual award of $\$ 1,500$ which the recipient may use during the academic y year in any way that benefits her professional development. Fellowships and benefits her professional development. Fellowships and grants will be renewed on a yearly basis for the duration of the grad uate program, provided the student maintains satisfactory pro- gress toward the doctoral degre. Applications must be received gress toward the doctoral degree. Applications must be receive by January 15, and all supporting material by January 31 . 1986 . Two fellowships and four grants are awarded annually in late March for graduate study beginning in September. Applica tions are usually submitted during the candidate's senior year

The Josephine de Karman Fellowship Trust of Pasadena,
Calif. Twelve fellowships of $\$ 3,000$ each for the regular academic year (fall and spring semesters, or the equivalen
where the quarterly system prevails) paid through the office the university in which the candidate will be enrolled for study in the US. Study must be carried out in the US and all funds must be expended only within this country. Students in an
discipline who are entering their senior undergraduate year or graduate students entering their third year or after of graduate school in the fall of 1986 are eligible. Postdoctorate students ar not eligible. Special consideration will be given to applicants in
the humanities. Foreign students already enrolled in a univers ity located in the US are eligible. Tenure is for one academic For information and application forms, write to: Fellowshi Committee, ATTN Miss B.J. Brown, Secretary, Josephine de
Karman Felloswhip Trust, PO Box 446 , La Verne, CA 91750 on
or before January 15, 1986. Announcement of awards will be be 15,19

US Navy Office of Naval Research Graduate Fellowships. Approximately 45 three year Fellowships available for 1986-87 plines electrical engineering computer fillowing nine disc ture and ocean engineering, materials science, applied physica aerospace/mechanical engineering, life sciences and mathe matics.
and pay plicants must be US citizens who will receive their bac calaureate degree in 1986. Deadline: January 31, 1986. For ap-
plications, write: American Society for Engineering Education,

Walter S. Barr Fellowships. Awarded by the Horace Smit limited to residents of Hampden County, MA, who have been or about to
graduate from college. Candidates should be preparing fo careers of definite social usefulness, such as careers in politic or scientific research. The GRE Aptitude or other appropriat professional school aptitude test is required of applicants. Min-
imum award is $\$ 1,500$. Deadline: February $1,1,1985$ Apply to:
The Secretary, The Horace Smith Fund, Box 3034, Springfield, The Secretary
MA 01101 .

Howard Heinz Endowment Office Research Grants on
Latin American Issues. To interdisciplinary teams with at
least one political scientist andior economist. Also, one team least one political scientist and/or economist. Also, one team
member must be based at an institution located within the Commonweatlh of Pennsylvania. Information and applications:
Marty Muetzel, Howard Heinz Endowment, 301 Fith Ave,
Pity Pittsburgh, PA 15222, $412-391-5120$. All applications must be
submitted no later than February 44, 1986; awards announced submitted no
by July 1,1986 .
Armenian General Benevolent Union (AGBU) Hirair \& An na amount of $\$ 3,000$ given annually to assist Armenian-America students specializing in government, international affairs, or in.
ternational law. Applicants must be graduate students with high academic standing. Written requests for application forms
must e submitted to the Armenian General Benevolent Union,
585 Saddle River Rd, Saddle Brook, NJ 07662 (tel:
201. Sad 201.797.7600) by February 15 .
to the applicants during July

Other Opportunities
Mellon Fellowship Program, 1986. The Program in Science,
Technology and Society at MIT invites proposals from scientists, on the relationships of science, technology, or medicine with
society. PhD or equivalent in science or engineering is desirable. society. PhD or equivalent in science or engineering is desirable
partial or full stipend. For more information write: Deboral
Wikes, Mellon Fellowship Committee, Rm E51-128. Deadline February 1, 1986.
Department of Energy-Sponsored Activities, Administere
by Oak Ridge Associated Universities: Faculty Research Par ticipation Program - summer appointments which provide support for collaborative participation in ongoing energy
research and development at designated DOE facilities. Stipends or salaries are based on the university salary of the ap-
plicant. Undergraduate Student Research Participation Program - summer appointments to participate in ongoin energy research at designated DOE facilities. Participants pa
on a weekly stipend. Graduate Student Research Participa
tion Program on a weekiy stipend. Graduate stude
tion Program - supports summerch in fossil energy
technologies at the Pittsburgh, Pern . and Morgantown W. Vy technologies at the Pittsburgh, Penn. and Morgantown W. Va,
Energy Technology Centers for beginning graduate students. A Energy Technology Centers for beginning graduate students. A
weekly stipend will be provided. Applications for the above are weekky stipend will be provided. Applications for the above are
due January 20, 1986. Magnetic Fusion Energy Technology
and Magnetic Fusion Science Fellowhhipe and the Nucler and Magnetic Fusion Science Fellowshipe and the Nuclear Engineering, Health Physics, and Radioactive Wast
Management Fellowships - Competitive fellowships awarde Management foelowships - Competitive fellowships awarde
to students for graduate study and research at designate universities in magnetic fusion energy technology, applie
plasma physics, nuclear engineering, health physics, an
radioactive waste management. The practicum is at a DOE
that well. Being together for four days gave us a chance to know one another a little better. Overall, Chicago officials did a fine job in meeting the needs of the eight teams in th tournament.
"We were very privileged to host this tourna ment and have these fine student-athletes from such strong academic institutions," said Department of Physical Education and Athletics.

Next year, MIT will host the second Coed Basketball Tournament with Chicago Rochester, and Washington visiting th One of the of Rockwell Cage One of the highlights of the trip was an Club.

Approximately 75 persons-including sev eral pre-frosh and their parents who braved slippery road conditionsin the area-attended the event which was coordinated by Webb Elkins, Midwest Regional Director of the
Alumni Association, and Lanier Leonard ' 80 Alumn Association, and Lanier Lernard 8 Chicago Bill Hecht Executive Vice Prident Chich Bill A. Exiation Serve as of the Alumni Associ

Matthew Deady (PhD, MIT Physics ' 81 ) gave a demonstration on the physics of basketball. Others attending included Karin Lohman ' 85 and Jill Porter ' 85 , graduate students at the University of Wisconsin and Purdue University, respectively. "This was my first MIT basketball game and it was a lot of fun," remarked Ms. Porter.
research facility. The basic student stipend for both fellowships
is 812,000 annually plus fees and tuition The deadline for these
fellowships is January 27, 1986. To request application materifellowships is January 27, 1986. To request application mater als or more information, oontact the University Programs Divi
sion, Oak Ridge Associated Universities, PO Box 1127, Oak
Ridge, TN $37831-0117$, (615) $5765-3255$ International Opportunities The following is a list of opportunities available to foreign na.
tionals. For more information on these, please see the Interna-
tional Jobs notebook in the Office of Career Services, $R m$ 12-170.

## Internships

The following is the list of internships reeived this week For
in the Office of Career Services, Rm 12-170.

## Volunteer internships

## Student Jobs


Research assistant to help professional writer. Working book
title: The Power of Information Technology Systems Applican should be able to communicate to author who lives in New Yor City via Electronic Bulletin Board System using an IBM-PC
with WordStar. Should have excellent writing skills with strong interest in business application systems such as "ust-in
time" inventory. Hours: flexible. Wage: $\$ 5.50 / \mathrm{hr}$. Contact Pamela R. Pfair, Coopers and Lybrand, 1252
Americas, New York, NY 10020, 212.903-3146.

Part time typist needed, must be experienced, local area a
Grolier Bookstore, approximately $16 \mathrm{hrs} / \mathrm{wk}$, 2.6 pm . Salary Grolier Bookstore, approximately $16 \mathrm{hrs} / \mathrm{wk}$, 2.6 pm . Salary.
$\$ 4.50-85$ after 3 months. Contact Management, 6 Plimpton St, Cambridge, MA 02139, 547-4908.
MIT Press Computer Graphics Dept seeks student with good text entry with CRT terminal. Only interested in students who will work throughout school year. $10.20 \mathrm{hrs} / \mathbf{w k}$, F.F betw 8:30am $4: 30 \mathrm{pm}$. Salary:
x $3.6119, \mathrm{Rm}$ E $38-1000$.

Help clean up hazardous waste dumpsites. Join the holiday
season staff of MassPRG, the state's leading public interest group. We will work to pass the Emergency Clean. Up bill in the group. We will work to pass the Emergency Clean-Up bill in the
state legisiature. Hours: 2.1 pm, M-F, flexible. Salary: $\$ 185-225$
wk. Contact Leslie, 29 Temple Pl, Boston, MA,

## UROP

 uate Research Opportunities Program's bulletin boards located
in the main corridor of the Institute and in the UROP Office Faculty supervisors wishing to have projects listed should send
project descriptions to the UROP Office Questions? Contact us $x 3-5049, R m 20 B-141$.

Language Learning Project needs UROPers to work on inten tive video system of educational system. Some programming ex
perience necessary, and if possible, French and or German. PAY
or credit. IAP and spring. Faculty supervisor: Janet

Writing and Computers. Programmers with experience with "C" wanted for design and implementation of new compositional
environment on Athena. Experience with GNU emacs and in environment on Athena. Experience with GNU emacs and in
terest in extending emass with elisp helpful. PAY or credit
IAP and spring. Project Director: Janet Murray, x3-2094, Rn IAP and
$20 \mathrm{~B}-231$.

## TECH TALK



December 4, 1985 Tech Talk is published 35 times a year by the New Office, Massachusetts Institute of Technology. Assis
tant Directors: China Altman, Charles H. Ball
Robert C. Di Iorio, Joanne Miller, Tech Tall editor, and Calvin D. Campbell, photojournalis
Editorial Assistant: Sharon Davis; Reporter: Lynn Editorial Assistant: Sharon Davis; Reporter: Lynn
Heinemann (Institute Calendar, Classified Ads, Insti Heinemann.
tute Notices.
Address new
Address news and editorial comment to MIT News
Office, Room 5-1111, MIT, Cambridge, MA02139. Tele Mheil subscriptions are $\$ 18$ per year by first class
mail Checks should he made payable 0 MT and
mailed to Rusiness Manager., Room 51113 . MIT
Cambridge. MA 02139 .

# Here \& There 

Do you know that standard statement in he characters to persons living or dead is coincidental? Well, consider that inopera tive in the case of Palmer Joss, a minister in Carl Sagan's best-selling novel, Contact. Sagan consciously modeled the character after MIT physics professor Paul C.Joss. Dr. Joss came to know Sagan both personally and professionally at Cornell University about 15 years ago, where he the faculty. But Professor Joss isn't about o sue, or anything like that. In fact, he's pleased and honored, he said, and appreciative of the fact that the famous astrophysicist asked his permission while writing the book. "Boy, that was OK by me," said Dr. Joss. "You don't get a chance like that every day.'


The story is about the receipt of the first signal from an extraterrestrial civilization, and its impact on the world's scientific, religious and political communities. The television evangelical minister with set, conservative views on religion. But he has an open mind, and allows himself to re examine his beliefs as new information becomes available.
And how does that relate to Professor Joss? "I also came from a religiously conservative background," he explained, "and I went through a similar transition myself as I was exposed to physics and astronomy, It was the same kind of transformation. Dr. Joss, a theoretical astrophysicist who ives in Burlington, said he is now actively involved in the Unitarian Universalist denomination.
And what happens to Palmer Joss, the ictional minister? "To be honest," Professor Joss said, "I haven't gotten to the end of the novel yet."

Fundamental Neuroanatomy by Walle J. H. Nauta, Institute Professor, and Michael Feirtag, an editor at Scientific American magazine, has just been puba physician, is professor of neuroanatomy a physician, is professor of neuroanatomy
in the Department of Psychology. The in the Department of Psychology. The "legendary, inspiring approach to the teaching of neuroanatomy" and says the book is a"lively, authoritative and highly readable journey through the central nervous sysat Technology Review.

Dr. Alexander H. Levis (SB '65, SM $65, \mathrm{ScD}$ ' 68 , mechanical engineering), senior research scientist with the Laborahas been elected president of the IEEE Control Systems Society. He will serve as president-elect in 1986 and as president in
1987 . 1987.

Herbert Lin, a postdoctoral research fellow in the Center for International Studies, has an article in the December
issue of Scientific American magazine on issue of Scientific American magazine on The Development of Software for Ballis-
tic-Missile Defense." Developing reliable tic-Missile Defense." Developing reliable
software for a "Star Wars" defense-which software for a "Star Wars" defense-which
would depend on computers to control an would depend on computers to control an
unprecedentedly complex array of weapons unprecedentedly complex array of weapon

When Dr. Irwin W. Sizer, professor of biochemistry, emeritus, and president of
the Whitaker Health Sciences Fund, climbd to the pagoda overlooking the Summer Palace on a recent visit to the People's Republic of China, who should he meet but Professor Gerald N. Wogan, head of the Department of Applied Biological Sciences. Dr. Sizer was in China for an international conference on the sterilization of medical
products. Dr. Wogan and two researchers products. Dr. Wogan and two researchers
from his department, Paul R. Donahue and John D. Groopman, were visiting colleagues at two universities.

The Harvard Medical Area newsletter Focus, devoted much of a recent edition to a tribute to Dr. Irving London on his
retirement after 15 years as director of the retirement after 15 years as director of the Harvard-Mrology. Dr. William S. Beck, Harvard Medical School professor of mediHarvard Medicalschool professor of medi-
cine and chairman of the admissions committee, called Dr. London "an extraordinary successful founding director." Specifically, he said Dr. London had "high standards and a sense of the first rate; a broad approach and interest, not only in scientific medicine, but in the development of students' ethical and cultural resources a great sense of fun and adventure; and he genuinely cared about each student and faculty member." Dr. London continues his association with HST as a Harvard Medical School professor of medicine, MIT professor of biology and as Grover M.
Hermann Professor of Health Sciences and Technology.

A US News and World Report survey of college presidents- 788 out of 1318 respond-ed-named Stanford University No. I
among 192 major universities in the nation (Harvard and Yale were tied for second (Harvard and Yale were tied for second,
with Princeton close behind). MIT didn't make it into the top 10 , but was listed immediately below them under a "Noteversity of Michigan, Wesleyan and the University of Virginia. The magazine said the respondents had given "special attention to strong, broad-based studies." In another survey conducted by Forbes maga-
zine to determine the colleges and unizine to determine the colleges and uni-
versities that have graduated the largest versities that have graduated the largest Four Hundred" wealthiest Americans, MIT ranked third with 10 graduates, trailing Yale (25) and Harvard (12)

Which headline do you believe? Or putting it another way, is the glass half papers, reporting on a speech by David $L$ papers, reporting on a speech by David L. Laboratory of Architecture and Planning, to the Vermont Industrial Development Authority, came away with different mes sages. The Burlington Free Press, empha sizing Dr. Birch's conclusion that the rate of startup businesses in Vermont is below New England averages, headlined its story "Vermont Lags New England in Business Starts." The Rutland Herald, focusing on Dr. Birch's statement that the state's business climate has many positive factors,
used the headline, "MIT Professor Says used the headline, "
Future Very Bright."

If you find yourself in the Detroit area sometime and lonesome for Tech Talk 8 on a Sunday night and listen to its four-year-old call-in program called Tech Talk ye learned of the program when its producer called the News Office to check a story lead. We know about USA Today's like to hear about other publications that share our name.

## PRESS CLIPPINGS:

-A Boston Magazine article on expert witnesses in court cases asks, "Who rates?" and answers, "MIT scientists, Harvard scholars and honchos from think tanks like Arthur D. Little. . in short, virtually anyone who has carved out an area of expertise and can communicate that knowl-
edge to a court." An example, the magazine edge to a court." An example, the magazine
says, is MIT associate professor of mechanisays, is MIT associate professor of mechanical engineering Igor Paul "whose knowledge of product design makes him number one when it comes to
-MIT's Haystack Observatory played an important role in making possible what appears to be the first measurement of distance between earth and a faraway galaxy using straightforward trigonometry, according to The New York Times. The measurement was made through an analysis of observations of a star explosion, or supernova, maps of which were produced at the observatory in Westford, Mass.,
through computer processing of observa through computer processing of observaomy sites in the US, Spain, Sweden and West Germany. The achievement also has been reported in Nature in an article co authored by several scientists, including
Alan E. Rogers, assistant director at Alan E.
Haystack
(Do you have something to contribute to
Here \& There? We're on the lookout for short items, preferably of a personalnature. They can best to Here \& There, New

Kleppner named to 2nd Wolfe Chair
Dr. Daniel Kleppner, recognized widely for
 physics, has beennamed the first holder of the ship. He is a member of the Department of Physics.

Mr. Wolfe, who died in 1983, declared his intention to establish the in 1979, he established the Lester Wolfe Professorship in Molecular
Biology which is held
by Dr. Maurice S. Fox, by Dr. Maurice S. Fox,
head of the Department

## of Biology.

The new Wolfe Professorship will focus on teaching and research in physics and its
holder will be appointed by the Dean of the holder will be appointed by the Dean of the School of Science. Professor Kleppner's ap-
pointment was announced by Professor John pointment was announced by Professor of the School of Science when the chair came into existence. Professor Deutch said Dr. Kleppner's selection reflected his demonstrated ability to teach and do research in spectroscopy.
Mr. Wolfe, a member of the Class of 1919 at
MIT, was former president of William J, MIT, was former president of William J Rountree Co., Inc., a New York holding company which was involved in the revolu-
tionary changes in the shipping industry tionary changes in the shipping industry
brought on by containerization. Mr. Wolfe

## Tanaka wins prize for polymer work

Physics, recognized internationally for his pioneering work on poly-
mer gels, has been
named the 1985 recipient named the 1985 recipient
of the Nishina Memorial Prize given by the
Nishina Foundation in Japan, the highest award given in the Physi cal Society of Japan. ment cited his discovery of phase transition and polymer gels, and estapolymer gels, and esta
 of the phenomena. His discovery has led to more general and unified understanding of this important material. It also has opened a door to a wide variety of technological applica tions of polymer gels.
Brass Ensemble to play rare Hindemith work
Pianist Myron Romanul will join the MIT Brass Ensemble, under the direction of Greg Hopkins, to present Hindemith's rarely per Harps. The free concert is at $4: 30$ pm Sunday, Harps. The free concert is at 4
Dec. 8, in Kresge Auditorium.
Dec. 8, in Kresge Auditorium.
The Hindemith work, Opus 4
The Hindemith work, Opus 49, was described by Mr. Hopkins as a "20th century style
Brandenburg (concerto)" with a contrapuntal Brandenburg (concerto)," with a contrapunta
style drawn heavily from the baroque com style drawn heavily from the baroque. Com-
missioned in 1930 for the influential music missioned in 1930 for the influential music
patron, Elizabeth Sprague Coolidge, the work patron, Elizabeth Sprague Coolidge, the work tion of the sonoriti
grouped together.
The two harps in the Hindemith piece will be played by guest musicians, Martha Moore making their first appearance with the MIT Brass.
Guest pianist Romanul is principal con onductor of Boston Ballet and pianist and active orthe Stuttgart Ballet. He has had since he won the Harry Dubbs Memoria Award at the the Harry Dubbs Memorial ances with orchestras, including the Boston Pops, head his list of performance credits. Hi chamber music apperances ince credits. His with the Boston Symphony Chamber Players, the Chamber Music Society of Lincoln Center and the Romanul Chamber Players, a pian quartet he formed with his three brothers
Ragtime lovers will note that he is the
pianist of the New England Conservatory pianist of the New England Conservatory
Ragtime Ensemble featured on Angel's Grammy Award winning record, Scott Joplin: The Red Back Book.
The program also will include Florent Schmitt's Fanfarefor Anthony and Cleopatra,
Gabrielli's Canzona Primi Toni, Perci Grainger's Australian Up-Country Tune tions, and Greensleeves arranged by E tions, an
Howarth.
Following is the Brass Ensemble roster fo this concert. Trumpets: Lee S. Tavrow ' 86 , Richard A. Berg '89, Scott I. Berkenblit ' 86 Steven H. Kroft '86, Christopher R. Sklari Joseph Staubenav of the Berklee College o
Music. Trombones: graduate student Crais Petty, Craig A. Jungwirth '88, plus Michael I. Silverglate, Laura E. Baldwin and Curt Jones,
all '89. Tuba: graduate student Douglas J all '89. Tuba: graduate student Douglas J

## armed forces in World War II, among them

 the Sono-buoy, a radio device that helped find enemy submarines, and the Radiation Fuel Quality Gauge, which measured the mass of any homogeneous substance, solid or liquid, place of a fuel gauge in fighter planes.place of a fues gauge in fighter planes.
His interest in biology was stimulated His interest in biology was stimulated by where he was a Council member and where Professor Fox ass once a faculty member Professor Kl ppner's research includes his Professor Kleppner's research includes high constants, atomic and molecular scattering processes, spin-polarized hydrogen and the physics of highly excited atoms. He is coinventor of the hydrogen maser, a device that serves as an atomic clock for relativity experiments and in radio astronomy for the global very long baseline interferometry system. His recent research on the spectroscopy of highly excited atoms has centered on problems of atomic dynamics and quantum optics. Several lines of his research in these areas have been taken up by research groups around the world. Professor Kleppner is the author of two text-
books and is active in teaching in both the undergraduate and graduate programs. He has served as chairperson of the Division of Electron and Atomic Physics of the American Physical Society, and on numerous advisory panels.
Professor Kleppner received the BA in 1953 from Williams College, the BA in 1955 from in 1959 from Harvard University. He joined in 1959 from Harvard University. He joined
scientificalal physics and related areas." The award is named after Yoshio Nishina, one of the founders of modern physics in Japan. Although Professor Tanaka's work is not in nuclear physics or related areas, it has been recognized as a fundamentally important contribution to physics. The prize cond $\$ 3,000$.
The finding that a polymer gel, consisting of polymer network and liquid, undergoes a discontinuous volume change (up to 1,000 times) upon infinitesimal changes in temperafield has raised a great interest among a wide field has raised a great interest among a wide
variety of scientists, medical doctors and technological engineers. It indicates that gels can function as switches, memories, display units, selective absorbants and mechanical actuators for robots and artificial muscles. Since his discovery, more than a score of groups have been formed to carry out research along this line of applications.
Professor Tanaka, 39, has been a member of the Department of Physics and also of the Center for Materials Science and Engineering since 1975. Graduated from the University of Tokyo in 1968 with a BS and in 1972 with a DSc in physics, he came to MIT as a research
associate of Professor G.B. Benedek. He was associate of Professor G.B. Benedek. He was
appointed assistant professor in 1975 and professor of physics in 1982. He was Joint Visiting Professor at Universite Louis Pasteur and Center de Recherches sur les Macro-
molecules in Strasbourg, France, on his sabmolecules in Strasbourg,

## batical year in 1980-81. Dr. Tanaka and his w

Dr. Tanaka and his wife, the former Tomoko Tahira, live in Newton. Their son, Kazunori, is a student at Newton South High School,
and their daughter, Ayako, attends Memorial Spaulding School.

## Richardson named

Margaret S. Richardson, since 1979 execu
 port in the Office of the Dean for Student Af-
fairs, has been named assistant bean for numer graduate education. The appointment, ef fective December 1, was announced by Professo Vicar, dean for under graduate education. "Ms. Richardson's broad knowledge of the
Institute's undergradu ate curriculum and her wide acquaintance with faculty from all of MIT's academic depart ments will be a great help to me and my
office," Professor MacVicar said. "Her in depth knowledge of the freshman-year ex perience is especially welcome. She has the
right combination of personal and professional right combination of personal and professiona strengths to be effective."
In her new position, Ms. Richardson will be the dean's key link with department and
Institute undergraduate education officers and academic committees. She will work wit faculty to develop programs to support under developing and maintaining the office's net Ms. Richmardson will and collaborations Ms. Richardson will also provide an im
portant tie to the Office of the Dean for Student Affairs.
Ms. Richardson came to MIT in 1970. She and her husband, Robert Enders, live in


December 4－15
Freehmen are enouraged to attend departmental letures and
seminers．Even when heese
students students one means to
department and field．

MISS THE TECH TALK DEADLINE？
Put your announcement on the MIT Cable System．＂To
day at the Institute＂runs 24 hours a day and can be view－ day at the Institute＂runs 24 hours a day and can be view
ed in Lobby 7，Lobby 10 and anywhere the cable i connected．
Simply submit announcement in writing to Rm 9030．We prefer a day＇s warning，but faster acction may be possible．
Useful also for correcting errors，notifying about cancellations，and dealing with emerrencies．
Note：If you have met the Tech Talk deadline，your an nouncement is automatically put on cable
hibits and some multimeetings programs）

Events of Special Interest
UNICEF Card Sale＊＊－Technology Community Association
Sale of Chanukah，Christmas and note cards，through Dec 6 ，
10am－3pm，Lobby 10．All proceeds donated to UNICEF． Community Menorah Lighting＊－Hillel＇s special test tube
menorah，lit Mon，Dec $9,4 \mathrm{pm}$ ，Lobby 7 ． Winter Crafts Fair＊－Tech Community Women Sale，Dec
10．11，Lobby 10 ．

Holiday Open House＊＊－sDol President and Mrs Gray in－ vite you and your family to join them，Wed，D．
4：30－6：30pm，President＇s House（111 Memorial Dr）．
Holiday Party＊＊－Women＇s＇s League／Lobby 7 Committee hot
cider and cookies，Dec 12，12．1pm，Lobby 7 ．Shirley Brown and
the Concord Bell－Ringers provide seasonal music． Pottery Sale⿻日禸－Student Art Association annual Christmas
sale，Dec 12．13，10am 4：30pm，Lobby 10.

Seminars and Lectures Wednesday，December 4
The Twin－Core Fiber Optic Sensor and Applications＊＊－
J．Dunphy United Technologies，EECSRRLLE Seminar on Op－
tics and Quantum Electronics， $11-12$ noon，Rm $36-428$ ． Effect of Temperature and Morpholoty on the Crack
Propagation of the Semi－Crystalline Polyester－Poly 1，4－dimethylene－trans－cyclohexyl Suberate）＊－J．M． Pochan，S．C．Johnson \＆Sons，Inc，Program in Polymer
Science and Technology Polymer Seminar， 11 am， $\mathrm{Rm} 66-319$ ．
Info：Prof Week，x3．5291，Rm 15.5094 Trans Critical Forcing of Long Nonlinear Internal Waves＊
－Ken Melville，MIT，Oceanography Sack Lunch Seminar， Ken Melvilie，MI

Residential Photovoltaic Systems Development at MIT＊
Ed Kern and Miles Russell，research engineers，MIT Northeast Residential Experiment Station，Joint Program for Energy Efficient Buildings and
Rm 1．214．Bag lunches welcome．
Control of PWRs Using Moderator Displacement and Fuel
Assembly Reconstitution＊＊－Galal Abu－Zaied，Seminar in Auclear Engineering， $3-4 \mathrm{pm}, \mathrm{Rm} 24-213$ ．
Paleogeographic Evolution of China＊＊－Prof Alfred
Ziegler，Dept of Geophysical Sciences，University of Ziegler，Dept of Geophysical Sciences，University of
Chicago，Dept of Earth，Atmospheric，and Planetary Sciences
Colloquium，4．5pm， $\mathrm{Rm} 54 \cdot 915$ ．Tea served，3pm，Rm 54－923． Photophysical Studies of Polymer Morphologies＊＊－Prof
Curtis Frank，Dept of Chemical Engineering，Stanford University，Program in Polymer Science and Technology Polymer Seminar， $4 \mathrm{pm}, \mathrm{Rm} 66-360$ ．Refreshments served，
3：30pm．Info：Prof Suter，x 3 3 4590 ，or Ms．Allen， $\mathbf{x} 3-3115$ ．

Failure in Welded Structures＊＊－Prof Masubuchi，MIT
Dept of Ocean Engineuring，Constructed Facilities Division Dept of Ocean Engineering，Constructed Facilities Division
Seminar， $4-5 \mathrm{pm}, \mathrm{Rm} 1-350$ ．Refreshments served， $3: 30 \mathrm{pm}$ ．
Molecular Dynamics of Water＊＊－Jon Anderson，PhD
candidate，Radiation Science and Technology Doctoral candidate，Radiation Science and Technology Doctoral
Seminar， $4 \mathrm{pm}, \operatorname{Rm} 24-121$ ． Modeling of Acid Deposition in Eastern North America＊＊
－Subramanyam Kumar，doctoral candidate，Mechanical Engineering Doctoral Thesis Presentation，4pm， $\mathrm{Rm} 1-150$ ． Nehemiah：Affordable Housing in the Big Cities＊＊L．D． Robbins，general manager，Nebemiah Plan Homes，How a
program to rebuild one of the nation＇s worst slums in Brooklyn
with affordable homes for families with annual incomes of 20,000 can be implemented elsewhere．Sponsored by Urban

Thursday，December 5

Corporate Planning for a US Domestic Airline in $1985^{*}$－
William Swan，manager，Strategic Planning，American William Swan，manager，Strategic Planning，American
Airlines，Inc，Flight Transportation Laboratory Seminar，
2．3：30pm， Rm 33－319．
The Sinking of the Ekofisk Field＊＊－Dr．F．G．Nielsen， Norsk Hydro，Bergen，Norway，Depts of Civil
ing／Ocean Engineering Seminar，3pm，Rm 48.316 ．
Self Similar Shock Reflections in Two Dimensions＊＊＊－Dr．
P．Collela，Courant Institute of Mathematical Sciences and Lawrence Berkeley Lab，Special Applied Mathematics Collo－
quium， $4 \mathrm{pm}, \mathrm{Rm} 2.338$ ．Refreshments served， $3: 30 \mathrm{pm}, \mathrm{Rm}$ 2.349 ．

The Cosmos According to IRAS Infrared Astronomical
Satellitite＊－Dr．Michael Hauser，Groddard Space Flight
Center，Physics Colloquium，4pm，Rm 26－100．Refreshments can

Aging of Polyurethane Foams＊＊－Aleksandar Ostrogor
sky，doctoral candidate，Mechanical Engineering Doctoral sky，doctoral candidate，Mechanical
Numerical Simulation of Charged Particle Rings＊＊－Dr．
Galen Gester，Los Alamos National Laboratory，Plasma Fu－ Galen Cester，Los Alamos National Labor
sion Center Seminar，4pm，Rm NW17－218．
Peace Movements in Israel：Voices from the Religious
Left＊－Debbie Weissman，Hebrew University and Shalom Left＊－Debbie Weissman，Hebrew University and Shal
Hartman Institute，Hillel Seminar，4pm，Rm 8－105．
Gene Replacement in P．aeruginosa＊＊－Dr．Sunial
Kadam．Dept of Applied Biological Sciences Seminar，4．5pm，
Rm E25．202 ${ }_{\mathrm{Rm} \text { E25－202．}}$
High－Definition Television•＊－Robert Hopkins，National
Association of Broadcasters；Kerns Powers，RCA；Edward Assaciation of Broadcasters；Kerns Powers，RCA；Edward
Horowitz，Home Box Office，MIT Communications Forum
Seminar，4．6pmenmen

The Individual Context and a Macroeconomic Model of Internal Migration＊－Prof Jerome Rothenberg，
Economics Dept，MIT－Harvard Research Seminar on Migra－ Economics Dept，MITTHarvard Research Seminar on Migra－
tion and Development，4－6pm，Harvard Ctr for Population
Studies， 9 Bow St Studies， 9 Bow St．
Prediction of Functional Motor Performance＊－Michael J．Rosen，PhD，principal research seientist and lecturer，
MIT Dept of Mechanical Engineering，HST 590 Biomedical
Engineering Seminar，4：10－5：30pm，Rm E25－117．

Using Articles（a，an，the ${ }^{\text {o＊＊}}$－Writing and Communication
Center English as a Second Language workshop，4：15－5：15pm， Center Engli
$\mathrm{Rm} 14 \mathrm{~N} \cdot 317$

An Application of Knowledge－Based Expert Systems to
Detailed Routing of VLSI Chips＊＊ Detailed Routing or
Carnegie．Mellon University，Pittsburgh PA， V
$4 \mathrm{pm}, \mathrm{Rm} 34$ ．101．Refreshments served， $3: 30 \mathrm{pm}$ ．
Pump Limiter and Edge Physics Experiments in the TEX
TOR Tokamak and their Physical Interpretation＊ Robert W．Conn，eo－director，Center for Plasma Physics and Nuclear Engineering Dept，Plasma Fusion Center and Nuclear Engineering Dept，
Seminar Series， 4 pm ，Rm NW17－218．
Calculation of Linearized Unsteady Transonic Flows in
Turbomachines Aurbomachines＊－Mr．K．Hall，Dept of Aeronautics and
Astronautics，Gas Turbine Laboratory Seminar， $4 \mathrm{pm}, \mathrm{Rm}$
31－161．Refreshments served．

Islamic Fundamentalism in Egypt Under Sadat and
Mubarak Cairo and author of The Place of Jihad in Islamic His－
tory，Emile Bustani Middle East Seminar tory，Emile Bustani Middle East Seminar，4：30pm，Rm
E38－615．Prof．Philip Khoury，history faculty，will chair． Conceptual Change in Childhood＊－Prof Susan Carey，
MIT Dept of Psychology，Cognitive Science Seminar Series Program $44,7: 30 \mathrm{pm}$, Rm 34401 ．Commentary：Prof Thomas
Kuhn，MIT Dept of Philosoophy：Prof Elizabeth Spelke，Dept of
Psychology，University of Pennsylvania．

Wednesday，December 11 Review of Short Wavelength Laser Prsogress at LLNL＊＊
P．M．Hagelstein，Lawrence Livermore National P．M．Hagelstein，Lawrence Livermore National
tronics，11－12noon，Rm $36-428$ ． Fourth Generation Microcomputer Loads and Annual
Energy Estimation Programs
Wright Associates，Inc，and MIT Architecture Dept lec． Wright Associates，Inc，and MIT Architecture Dept lee－
turer，Joint Program for Energy Efficient Buildings and
Systems Seminar，1－2pm， Rm 1－214．Bag lunches welcome．

One－Dimensional Kinetics Equations Based on Nodal
Theory＊＊Antonio F．V．Dias，Seminar in Nuclear Engineering， $3-4 \mathrm{pm}, \mathrm{Rm} 24-213$ ．
Is Finite Time Thermodynamics Different From Infinite Time Thermodynamics？＊＊－Proor Elias Gyttopoulos，Mr $4 \mathrm{pm}, \mathrm{Rm} \mathrm{1.114}$. Coffee served， $3: 30 \mathrm{pm}$ ．
Fracture Mechanics based Criteria for Assessing Pipeline
Girthweld Defects＊－Dr．Peter Hilton，Arthur D．Little， Girthweld Defectso－Dr．Peter Hilton，Arthur D．Little，
Inc，Construted Facilites Division Seminar，4．5pm，Rm 1－350
Refreshments served， $3: 30$ pm．

Computer Calculations of Solute Excess Free Energy in PhD candidate，Radiation Science and Technology Doctora Andreas Kridiotis，Chemical Engineering Seminar，2pm，Rm


A photo exhi Student Art Gallery in the Student Center．Mr．Agranat，a Technique photographer， received his SB in aeronautics and astronautics．His photographic essay about the women＇s field hockey team was created during last year＇s fall term．The exhibition will be at the Wiesner until December 21

Limitation of Microbial Growth Rate by Two Complemen－
tary Nutrients ${ }^{\text {tary Nutrients }{ }^{\circ * *} \text {－Prof Arnold Fredrickson，University o }}$

A Collage of Design Experiences and Their Underlying
Philosophies Philosophies
Dept of Mechanical Engineering，Mechanical Engineering
Den Den Hartog Aw
follow， $\operatorname{Rm} 1-114$
Transient and Accident Analysis of Nuclear Power Plant with the Modular Simulation Language：the DSNP＊
Prof David Saphier，Nuclear Engineering and Healt Prof David Saphier，Nuclear Engineering and Health
Physics Program，Goorgia Institute of Technology，Nuclear Engineering Seminar， $3-4 \mathrm{pm}, \mathrm{Rm}$ 24－115．
On the Wind and Buoyancy－Driven Ventilated
Thermocline Thermocline＊＊－Joseph Pedlosky，Woods Hole
Oceanographic Institution，Center for Meterology and Ceesiographic Institution，Center for Metee
Physical Oceanography Seminar， 4 pm ， $\mathrm{Rm} 54-915$ ，

## Monday，December 9

The Design of Distributed Ingres＊＊－Prof Michael
Stonebraker，University of California－Berkeley，Information Systems Seminar，9：30am，
$9.9: 30 \mathrm{am}$ outside Rm 1.390 ．

Television Covrage of Weather，Environment，and
Science ${ }^{*}$－Bruce Schwoegler，meteorologist，WBZ－TV Science ${ }^{*}$－Bruce Schwoegler，meteorologist，WBZ－TV
Boston，Writing Program Lecture，1：30－3pm，Rm 5－232． Size－minimizing Curves＊- Mike McCutchan＇86，Dept of
Mathematics Geometry Seminar， $3-4 \mathrm{pm}, \mathrm{Rm} 2.143$ ． The Search for Randomness＊＊－Prof Persi Diaconis，
Stanford University，visiting MIT \＆Harvard 1985－s8，Ap plied Mathematics Colloquium， $4 \mathrm{pm}, \mathrm{Rm} 2.338$ ．Refreshment
served， $3: 30 \mathrm{pm}, \mathrm{Rm} 2.349$.

Flow and Dispersion in Spatially Periodic Porous Media ${ }^{\circ}$ －Howard Brenner，MIT Dow Professor of Chemical Resourc
48.316.

Tuesday，December 10
Depression：Problems and Research Directions＊＊－Dr．
Jerrold G．Bernstein，MD；Dr．Dermot A．ORRourke，MD，
Clinical Research Center Seminar，10：30－11：30am，Rm E25－401．
Laser Angiosurgery：A Study in Physics，Spectroscopy
and Medicine＊＊ and Medicine－Carter Kitrelch，MIT，Laser Research
Centerge Rerrison Spectrosopy Laboratory Research
Laboratory of Electronics Seminar on Modern Optics and Spec－
troscopy 11－12noon，Rm 37．252．Refreahhments served following troscopy，11－12noon，Rm 37－252．Refreshments served following
seminar．
Oscillatory Flow Around Marine Structures＊＊－Prof B
Pettersen，ocean engineering \＆Marine Institute Trond heim，Civil Engineering／Ocean Engineering Informa Hydrodynamics Seminar，3：30pm， $\operatorname{Rm} 5-314$

Thursday，December 12
Vocabulary Development and Word Formation＊＊－
Writing and Communication Center English as a Second
Language workshop
The Chassidic Bratslaver Movement in Israel＊－Gedaliah
Fleer，Hillel Seminar， $5: 30$ pm，Kosher Kitchen， Rm 50.007 ．Op－ tional dinner available for $\$ 5.75$ ．

Friday，December 13
Control of Enzymatic Selectivity Using Supercritical
Fluids $2 \mathrm{pm}, \mathrm{Rm} 66-110$ ． Plasma Enhanced Chemical Vapor Deposition of Epitax－
ical Silicon Films from Silane＊＊＊James Comfort，
Chemical Engineering Seminar，3pm，Rm 66－110． The Dynamical Processes in the Solar Winds＊＊Prof
Stanislaw Oltert，MIT Dept of Physics，Plasma Fusion
Center Seminar， $4 \mathrm{pm}, \mathrm{Rm}$ NW $17-218$ ．

## Readings

Toni Cade Bambara＊－author of The Salt Eaters， 1981
National Book Award winner，MIT Women＇s Studies
Freedom，Fiction，Family：Black Women Freedom，Fiction，Family
Dec $4,8 \mathrm{pm}, \mathrm{Rm} 34 \cdot 101$ ．

## Films

American Challenge＊－The intimate on－board story of seven solo sailors facing an ultimate challenge：the Obser
vor Singlehanded Trans－Atlantic Race，The Ditty Bag Serie of Maritime Evenings cosponsoored by the Me MT Oftsthore Sailing
Association，Dec 11，7pm，MIT Museum．Light refreshments

## Community Meetings

Al－Anon＊＊－Meetings every Fri，noon－1pm，Heaith Education
Conference Rm E23－297．The oonly requirement for membership is that there be a problem of alcoholism in a relative or friend
Call Ann， $\mathrm{x} 3-4911$ ． Alcohol Support Group＊＊－Meetings every Wednesday
$7: 30-9 \mathrm{am}$ ，sponsored by MIT Social Work Service．For info call Narcotics Anonymous＊－Meetings at MIT，every Mon
$1.2 \mathrm{pm}, \mathrm{Rm}$ E23－364（MIT Medical Dept）．Call 569.8792 ．

MIT Faculty Clube＊－The Club is open Mon－Fri．Luncheon
hours：noon－2pm；dinner hours： $5: 30$－8pm．For dinner and private party reservations，call $\times 3.48969$ amm． 5 pm daily． Commodore Users Group＊＊－meets
For more info，call Gil， $\mathbf{x 8 - 3 1 8 6}$ Draper．
Exercise Class＊＊－Tech Community Women class，Tues
$77.30-8: 30$ pm．Call 4944825 or $651-3697$ for information on
location．
Wives＇Group＊＊－Morning Group：Dec 4，New England
Aquarium，inc dolphin and sea－lion shows，and Caribbean Coral Aquarium，inc dolphin and sea－lion shows，and Caribbean Cora
Reef Exhibit－info：Catarina Bacos，723．3449 or Franine
Peytriget Peytrignet， 367.9141 ．For all trips，meet at $9: 15 \mathrm{am}$ ，Eastgate（ 60
Wadsworth St）Children welcome．Afternoon Group：Dee 4,
Alaska．A Sld Alaska：A Slide Presentation－Mrs Arthur Ippen，chairman
MIT Honorary Matrons．All meetings， $3-5 \mathrm{pm}$ ，Student Ctr R MII Honorary Matrons．All meetings， 3.5 pm ，Stude
491．Babysitting provided in Student Crr Rm 407 ．
Craft Group＊＊－sponsored by Wives＇Group，meets ever
Thurs， 24 pm，Student Ctr Center Lounge or Student Ctr Rm
407．Please call $\times 3$－1614 to check on location of meetings．
The Language Conversation Exchangee＊－sponsored by the Wives＇Group，seeks persons interested in practicing
languages with a partrer．Many international students and
spouses wish to prectie spouses wish to practice English with a native speaker．If you
are willing to help an international visitor practice English and／or interested in practicing or learning a foreigg language
with a native speaker，call the secretary to the Wives＇Group．

MIT Women＇s League Informal Needlework Group＊＊＊
Wednesday lunchtime gatherings， $9: 30 \mathrm{am} \cdot 1: 30 \mathrm{pm}, \mathrm{Rm} 10340$
Wednesday lunchtime gatherings， $9: 30 \mathrm{am}-1: 30 \mathrm{pm}, \mathrm{Rm} 10.340$
Bring sack lunch，projects，swap ideas．Coffee \＆tea served Meeting dates：Dec 11，Jan 8，22，Feb 12，26，March 12， 26
Apri1 23, ，May 14，28．For more info，call Lillian Alberty
（491－3689），Nancy Whitman（ $\mathbf{x} 3-6040$ ）or Beth Harling

MIT Activities Committee MITAC，the MIT Activities Committee offers discount movie
tickets for General Cinema $(\$ 2.50)$ ，Showcase and Sack Theaters （ $\$ 3.00$ ）．Tickets are good 7 days a week，any performance． Tickets may be purchased at MITAC Office， Rm 20A． 2033
（x 3 ．．790），10am－3pm．Mon through Fri and lobies 10 and E18 on Fri， 12.1 pm ．Lincoln Lab employees may purchase tickets in
Rm A－270 from $1-2 \mathrm{pm}$ ，Tuesday through Friday only．Check out our table of discounts for camping，dining，musical and cultural
events available to you through MTIAC and MARES（Mass

Messiah．Thurs，Dec 5，8pm，Symphony Hall mantel with holly and jaunt over to Symphony Hall to complete
the holiday trimmings．A Boston tradition since 1815，the Messiah is a holiday treat，this year performed in the 1753 ver
sion．Tickets：$\$ 23.50 / \mathrm{pp}$（reg $\$ 28$ ）and can be purchased in Rm 20A－023．
Tech Model Railroad Club Fall Open
2．5：30pm， $7: 30-10 \mathrm{pm}, \mathrm{Rm} 20 \mathrm{E}-214$ ．Free．
The Loon and Heron Theatre Presents What＇s Inside My
Magic Trunk？Sat，Jan 18， 1 pm，Rm 10－250．Bact by Magic Trunk？Sat，Jan $18,1 \mathrm{pm}, \mathrm{Rm} 10-250$ ．Back by popula
demand，the highly acclaimed acclaimed Loon and Hero Theatre presents this all－new play based on children＇s own
writings．Lively entertainment for children in grades K－3 Tickets：$\$ 2 / \mathrm{pp}$ ，available in $\mathrm{Rm} 20 \mathrm{~A}-023$ ．

Camping and Recreational Vehicle Show．Sat－Sun，Jan
18－26．Stock up on the trail mix and granola bars，load up the 18－26．Stock up on the trail mix and granola bars，load up the
backpack，tack the bikes onto the back of the Winnebago and gear up for this show of over 600 of the current year＇s model
in trailers，motor homes and vans，and a large representation of campgrounds and campsites．Show covers 205,000 square feem
of the Bayside
 6 free，available in $\mathrm{Rm} 20 \mathrm{~A}-023$ ．
Cat on a Hot Tin Roof．Thurs Jan 23，8pm，Lyric Stage．Ten nessee Williams＇explosive Pulitzer prize－winning masterpiec
Tickets：$\$ 6.50 / \mathrm{pp}$（reg $\$ 88$ ，availble in $\mathrm{Rm} 20 \mathrm{~A}-023$ ．
Dinner and Racing at Wonderland．Sat，Jan 25．No luck with Megabucks？Then try your hand betting on the dogs at
Wonderland．Evening begins with dinner featuring your choice of boneless stuffed breast of chicken or broiled Boston scroo．Th
fun starts at $6: 30$ pm．Wonderland is accessible by the MBTA Blue Line，or free parking is available next to the raceway in
Revere Cost：$\$ 11.25 / \mathrm{pp}$（chicken or $\$ \$ 12.25$ pp（scrod．）．Prices in
Rever Revere．Cost：$\$ 11.25 /$ pp（chicken）or $\$ 12.25$ pp（scrod）．Prices in
clude clubhouse admission，racing program，all meal taxes and
gratuities．Reserve your space now in $\mathrm{Rm} 20 \mathrm{~A}-023$ ．

Washington，DC Presidents＇Day Weekend．FriMon，Feb
14－17．Visit the Smithsonian，FBI，National 14－17．Visit the Smithsonian，FBI，National
monuments－FREE．Go to some of the best restaurants， monuments－FREE．Go to some of the best restaurants，
theatre，Georgeton，or go jogging or ice skating on the Mall．
We will be staying at the Best Western Convention Ctr－which is in walking distance to everything－and the Mertro，which
will get you everywhere．Naturally，there are the usual sur－ will get you everywhere．Naturally，there are the usual sur
prises．The bus leaves Wess Garage．Feb b4，7am；returns Mon
Feb 17，8pm．Cost：$\$ 118 /$ pp／dbl occupancy only（bus and hote fares inc in total cost）．Make your reservations now in Rm
20 A －．023．

Council for the Arts Museum Passes．On campus，there are 10 passes employees may borrow for free admission to the
Museum of Fine Arts．To check on availability，call $\times 3.5651$ ．At Lincoln Lab，passes are available in the Lincoln Lab Library，
$\operatorname{Rm}$ A－150．NOTE：The Renoir exhibit is a separate admission price and one must designate a day and time one wants to ser
the exhibit Please call the Museum of Fine Arts directly for more the exhibit Please call the Museum of Fine Arts direct
information．MITAC is not offering Renoir Tickets．
Museum of Science Tickets．Available for only $\$ 1$ ．Pay
another $\$ 1$ at the door，for a total savings of $\$ 33 / \mathrm{pp} /$ adult； another $\$ 1$ at the door，for a total savi
$\$ 1 / \mathrm{pp} /$ child（reg $\$ 5 / \mathrm{pp} /$ adult；$\$ 3 / \mathrm{p} /$ child）．
City Books are here！Only $\mathbf{8} .75$ ea．Great stocking stuffers．
Ski－Key Books．Containing valuable discount lift ticket
coupons for the greater New England area are here！Only $\$ 9$ ea．
Important！To avoid disappointment，purchase tickets and
make reservations early as we are limited by ticket availabili make reservations early as we are limited by ticket availabili
ty and transportation．All MITAC events and ticket purchases
are non－refundable due to the organization．

## Social Activities

 Tan， 494.8582 eves． Chanukah Party for Grad Students＊＊- Hille／GSS party
with live music and latkes，Tues，Dec $10,4: 30 \mathrm{pm}, \mathrm{Rm} 8.205$ ． Table Francaise＊＊－sponsored by Foreign Languages \＆
Literatures Section．Venez dejeuner avec nous et parler fran cais！＇otre hote：Christophe Lecuyer．Tous les Lundis，de 12：15
a $13: 45$ ，Muddy Charles Room a Walker Dining Hall a 13：45，Muddy Charles Room a Walker Dining Hall．
GAMIT Sunday Discussion Meeting ${ }^{\text {a }}$－Gays at MIT，Suns，
5pm，GAMT Lounge，Walker Memorial Rm $50-306$ ．Dinner 5Am，GAMIT LLunge，Walker Memorial Rm $50-306$ ．Dinner
served at $6: 30 \mathrm{pm}$ ．
GAMIT Study Break＊＊－Gays at MIT，Thurs，9pm，GAMIT
Lounge，Walker Memorial Rm 50.306 ．

## Movies

The Lavender Hill Mob＊＊－LSC Classic Movie，Dec 6，
7：30 pm， Rm 54－100．$\$ 1 \mathrm{MIT} \cdot$ Wellesley ID． Road Warrior＊＊＊LSC Movie，Dec 6， $789: 30 \mathrm{pm}$ ， $\mathrm{Rm} 26-100$
\＄1MIT－Wellesley D． And Now for Something Completely Different＊＊－LSC
Movie，Dec $7,7 \& 9: 30 \mathrm{pm}, \mathrm{Rm} 26-100$ ． 11 MIT－Wellesley ID．

## 1985-86 Committees of the Institute

## Standing Committees of the Faculty

Committee on Academic Performance
Committee on Curricula
Committee on Discipline
Committee on Faculty-Administration Faculty Policy Committee
Committee on Graduate School Policy
Committee on Industrial Liaison
Committee on the Library System
Committee on Nominations $\ddagger$
Committee on Outside Professional Activities Committee on Student Affairs
Committee on Undergraduate Admissions and
Financial Aid
Committee on the Undergraduate Program

## Special Faculty Committees

Harold E. Edgerton Faculty Achievement Award Selection Committee for 1985-86 James R. Killian, Jr., Faculty Achievement Award Selection Committee for 1986-87 Committee on the Writing Requirement Ad Hoc Committee on MIT's Military Involvement

## Committee Appointed by the Corporation

Corporation Joint Advisory Committee on Institute-Wide Affairs

## Committees Appointed by the President (and Reporting to Senior Officers)

$\dagger$ Committee on Animal Care
$\dagger$ Committee on Assessment of Biohazards
Athletic Board
Committee on the Center for Materials Science and Engineering
Classification Review Committee
Commencement Committee
Community Service Fund Board
Committee on Copyrights and Patents
Executive Committee of the Council for the Arts at MIT
Dining Advisory Board
Endicott House Board of Governors
$\dagger$ Institute Council on Environmental Health and Safety
Equal Opportunity Committee
Faculty Club Advisory Board
Committee on Foreign Scholarships
Committee on the Hobby Shop
IAP Policy Committee
Advisory Committee to the Institute Personal Assistance Program
Committee on International Institutional Commitments
Standing Committee on the Lincoln Laboratory
MIT Hospital Board
MIT Medical Management Board
MIT Press Editorial Board
MIT Press Management Board
Committee on the MIT Sea Grant College Program
MIT-Wellesley Upward Bound Joint Steering Committee
MIT Working Group on Support Staff Issues
Medical Consumers' Advisory Council
Committee on Operations Research
Prelaw Advisory Council
Premedical Advisory Council

Committee on Privacy
$\dagger$ Committee on Radiation Exposure to Human Subjects
$\dagger$ Committee on Radiation Protection
Committee on Radio Astronomy
$\dagger$ Committee on Reactor Safeguard
Committee on the Research Laboratory of Electronics
Committee for Review of Space Planning (CRSP)
ROTC Committee
$\dagger$ Committee on Safety
Student Activities Development Board
Technology Broadcasting Corporation
$\dagger$ Committee on Toxic Chemicals
Committee on Transportation and Parking
$\dagger$ Committee on the Use of Humans as Experimental Subjects
Committee on the Visual Arts
Wellesley-MIT Joint Committee
Advisory Committee for Women Students' Interests
Women's Advisory Board

## Ad Hoc Committees

Ad Hoc Committee on MIT and Intelligence Agencies
Ad Hoc Advisory Committee for the Secondary
Technical Education Project
Advisory Committee on Shareholder
Responsibility

## Standing Committees of the Faculty

Committee listings are preceded by a brief description of each committee function. The listings include regular members (appointed or elected), ex officio members (see footnotes below), and associate members who are members and/or who perform staff duties in support of the committee work. Student members are identified by undergraduate class numerals or G (Graduate Student status). The dates to the right, in parentheses, indicate the year in which the term of appointment expires. For the formal descriptions of the committee mandate, see Rules and Regulations of the Faculty.

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## Committee on Academic

 PerformanceThe Committee is concerned with the academic performance of undergraduates, and may make recommendations to the faculty on such matters as minimum scholastic standards, examinations, and grading. The Committee acts with power on petitions from individual undergraduate students relating to exceptions to established academic standards, and reviews the records of undergraduate students at the conclusion of each regular examination period. The Committee presents to the faculty its recommendations on candidates to be awarded bachelor's degrees.

Vernon M. Ingram (1986), Chairman
Dean for Student Affairs§ (Des. Rep. - Robert M. Randolph)
Registrar§ (Warren D. Wells)
Medical Director§ (Des. Rep. - Peter B. Jenney)
Director of Student Financial Aid§ (Des. Rep. - Dorothy L. Bowe)

Head, Undergraduate Academic Support Office§ (Holliday C. Heine)
Stephen C. Graves (1986)
Robert I. Hulsizer, Jr. (1987)
William T. Peake (1987)
Fred C. Schweppe (1988)
Brian H. Smith (1988)

## Students:

Ted C. Johnson, '86
Brian T. Miller, ' 86
D'Juanna O. White, ' 86
Staff to the Committee
Stephen M. Patterson

## Committee on Curricula

This Committee's activities center on the implementation of the General Institute Requirements and course curricula for undergraduates. They include: 1) considering proposals for changes in the Institute requirements, and making suitable recommendations to the faculty; 2) acting with power on proposals for Science Distribution and Laboratory subjects; 3) acting with power on requests from individual students for exceptions to the General Institute Requirements; 4) acting with power on proposals for changes in undergraduate subjects of instruction; 5) acting with power on proposals for new curricula and changes in existing curricula; and 6) reviewing reports by departments on individual students programs which include major departures from an approved curriculum, and summaries of all minor departures.

June L. Matthews, (1987), Chairman
Registrar§ (Warren D. Wells)
Head, Undergraduate Academic Support Office§ (Holliday C. Heine)
Judith W. DeCew (1986)
Ralph A. Gakenheimer (1986)
Jeffrey H. Shapiro (1987)
Edgar H. Schein (1988)
Jeremy M. Wolfe (1988)

## Students:

Alan S. Hilibrand, ' 86
John R. Kenny, '86
Christopher G. Saito, ' 88
Ronald P. Smith, Executive Officer

## Committee on Discipline

This Committee adjudicates cases of alleged misconduct by a student brought to its attention by the Dean for Student Affairs or by any other member of the MIT Community. The accused student has the right to be present at a hearing scheduled by the Committee. If the findings of the Committee include a recommendation that the student be suspended or expelled from the Institute, the recommendation is made to the President for approval or disapproval; otherwise, the Committee acts with power.

Elias P. Gyftopoulos (1986), Chairman
Dean for Student Affairs* (Des. Rep. - Leo Osgood)
Susan Carey (1986)
John G. Kassakian (1987)
William C. Wheaton (1987)
Amy Lang (1988)
Paul C. Joss (1988)

## Students:

Stephen W. Altes, G
Erik H. Bettez, '87
Kevin R. Foote, ' 87
Cynthia R. McIntyre, G
Sarbani B. Thakur, ' 87

## Committee on FacultyAdministration

This Committee considers issues involving relationships between Administration and Faculty and other academic staff with teaching responsibilities. The Committee develops ad hoc arrangements to ensure that academic staff not of Faculty rank are adequately represented in discussion and debate of issues with special impact upon their interests.

## Faculty

Arnoldo C. Hax (1988), Chairman
David Dollenmayer (1986)
Jeffrey H. Lang (1986)
Jane Betts (1987)
Bernard J. Frieden (1987)
James A. Fay (1988)

## Administration:

Gene M. Brown
Ann F. Friedlaender
Constantine B. Simonides
Kenneth A. Smith

## Faculty Policy Committee

The Faculty Policy Committee maintains a broad overview of the Institute's academic programs, deals with a wide range of policy issues of concern to the Faculty, and coordinates the work of the Faculty committees.

Chair of the Faculty* (Mary C. Potter) (1987), Chair Associate Chairman of the Faculty* (J. Kim Vandiver) (1988), Deputy Chair

Previous Associate Chairman of the Faculty* (Thomas J. Allen) (1986)
Associate Provost for Educational Programs and Policy§ (Samuel Jay Keyser)
Associate Provost§ (Kenneth A. Smith)
Vice President§ (Constantine B. Simonides)
Robert V. Whitman (1986)
Mark S. Wrighton (1986)
Irene Tayler (1987)
Alar Toomre (1987)
Alar Toomre (1987)
Phillip L. Clay (1988)
Peter Elias (1988)
Students:
Daniel J. O'Day, '86
Graduate Student to be appointed
David S. Wiley, Executive Officer

- Ex officio voting. The names of ex officio mem bers, or their designated representatives (Des. Rep.), are indicated in parentheses next to the listing of the ex officio position in all committees.
** Non-MIT member
§ Ex officio non-voting. The names of ex officio members, or their designated representatives (Des. Rep.), are indicated in parentheses next to the listing of the ex officio position in all committees.
$\ddagger \quad$ Appointed by the President
$\dagger$ Safety Committee


## Committee on Graduate School <br> Policy

Each member of this Committee representing a department or the Whitaker College shall be a member of the Committee on Graduate Students of the departmental or college faculty. The Committee exercises general overview of graduate programs and of students working for advanced degrees. It reports to the faculty recommendations on matters of policy in these areas requiring faculty action. The Committee acts with power on proposals for changes in graduate level subjects of instruction, on requests from graduate students for approval of minor departures from general requirements for advanced degrees, and in evaluating the academic performance of graduate students. The Committee makes recommendations to the faculty for the awarding of advanced degrees.

Dean of the Graduate School* (Frank E. Perkins), Chairman
Associate Dean of the Graduate School* (Jeanne E. Richard), Secretary
Associate Dean of the Graduate School and Assistant Provost* (John B. Turner)
Director of Admissions* Michael C. Behnk
Dean for Student Affairs* (Des. Rep. - Robert M.
Randolph)
Associate Chairman of the Faculty* (J. Kim Vandiver)
Registrar* (Warren D. Wells)

## Members for 1986:

Nesmith C. Ankeny
Glenn A. Berchtold
Robert L. Bishop
David Botstein
H. Frederick Bowman

Sylvain Bromberger
Paul E. Brown
Charles C. Counselman
William M. Deen
David J. Epstein
Merrill F. Garrett
Leon B. Groisser
Allan F. Henry
Charles D. Hollister
Gordon M. Kaufman
George F. Koster
Francois M. M. Morel
Alan C. Nelson
T. Francis Ogilvie

Harvey M. Sapolsky
J. Mark D. Schuster

Ain A. Sonin
Steven R. Tannenbaum
Harold Y. Wachman
Bernhardt J. Wuensch

## Students

Bernard L. Palowitch, Jr., G
Jonathan E. D. Richmond, G

## Committee on Industrial Liaison

The Committee is concerned with the relationship of the activities of the Industrial Liaison Program to the activities of the members of the faculty.

Lawrence E. Susskind (1986), Chairman
Director, Industrial Liaison Program* (James M. Utterback)
John B. Heywood (1986)
Robert S. Kennedy (1987)
Thomas B. King (1987)
Richard L. de Neufville (1988)
Malcolm L. Gefter (1988)

## Committee on the Library System

This Committee shall formulate policy for the administration of the Library System, with the advice of the Director of Libraries, consistent with the objectives of the Institute. It serves as a liaison between the libraries and their users. The Committee shall review budget allocations as prepared annually by the Director of Libraries.

Henry S. Marcus (1987), Chairman
Provost* (John M. Deutch)
Director of Information Systems*
(James D. Bruce)
Director of Libraries* (Jay K. Lucker)
David H. Friedman (1986)
Thomas B. King (1986)
Frederick D. Greene II (1987)
John C. Henderson (1988)
M. Roe Smith (1988)
ibrary Staff Members:
Shirley K. Baker
Micheline Jedrey

## Committee on Nominations $\ddagger$

This Committee consists of six faculty members appointed by the President. The President designates the chairman from among the membership. The Committee nominates the following officers of the faculty: a chairman, an associate chairman, and a secretary; it also nominates candidates for the elected membership of the Standing Committees. It circulates the list of nominees to all members of the faculty not later than the April meeting of the faculty. The Committee has the power to fill any vacancies that may occur during the year in the offices of chairman, associate chairman, and secretary, and in the elected membership of the Standing Committees.

Felix M. H. Villars, (1986) Chairman
Deborah A. Stone (1986)
Mary Lou Pardue (1987)
Leon Trilling (1987)
John G. Kassakian (1988)
Karen R. Polenske (1988)

## Committee on Outside Professional Activities

This Committee will inform itself of potential conflicts of interest, counsel the interested parties, and report periodically to the faculty. It will recommend appropriate modifications of policies and procedures to the faculty.

Robert A. Alberty (1986), Chairman
George W. Rathjens (1986)
Eugene E. Covert (1987)
Ira Dyer (1987)
J.D. Nyhart (1988)

Robert T. Sauer (1988)

## Committee on Student Affairs

This Committee is concerned with student life and the quality of the learning and living environment at MIT. The Committee is concerned with the range, availability, and effectiveness of Institute-wide support services to students and with the formal and informal relationship between the Institute and the student. The Committee serves as the standing faculty advisory body to the Office of the Dean for Student Affairs.

Alvin W. Drake (1987), Chairman
Dean for Student Affairs§ (Shirley M. McBay)
Suzanne H, Corkin (1986)
James Le Ellipt (1986) atrenti fryansmyact s as seet to ll
Michael E. Geisler (1986)
Marilyn Richardson (1987)
Isabelle de Courtivron (1988)
Richard K. Yamamoto (1988)
Sidney Yip (1988)

## Students:

Janet C. Desaulniers, '87
Tae J. Pak, ' 88
Simone J. Pottenger, ' 86
Carey M. Rappaport, G
Alec R. Rodney, ' 88
Finley R. Shapiro, G

## Committee on Undergraduate Admissions and Financial Aid

This Committee is responsible for formulating and $1 / 10$ reviewing policies on admission of all undergraduate students (including college transfers but not students applying for readmission) and on financial aid to students, including undergraduate scholarships, loans, students, including undergraduate scholarships, loans, and student employment. The Committee also exercise directed toward the prospective undergraduate student.

Kenneth R. Manning (1987), Chairman
Director of Admissions* (Michael C. Behnke)
Director of Student Financial Aid* (Leonard V Gallagher)
Head, Undergraduate Academic Support Office*
(Holliday C. Heine)
Lotte L. Bailyn (1986)
John W. Belcher (1987)
Leonard A. Gould (1987)
Leonard A. Gould (1987)
Kenneth N. Stevens (1987)
Kenneth N. Stevens (1987)
Claude R. Canizares (1988)
Richard M. Douglas (1988)
Harold Y. Wachman (1988)

## Students:

Michael D. Fox, '88
Yvonne Y. Mao, '86
Christopher G. Saito, ' 88

## Committee on the Undergraduate Program

This Committee is responsible for encouraging experimental innovation in undergraduate education and formulating proposals for changes in undergraduate educational policy. It exercises oversight responsibility for undergraduate education, including the freshman for undergraduate and other interdepartmental programs, giving special attention to long-term directions. The Committee special attention to long-term directions. The
exercises authority to approve and supervise limited exercises authority to ap
educational experiments.

Dean for Undergraduate Education* (Margaret L. A.
MacVicar), Chairman
ssociate Chairman of the Faculty* (J. Kim Vandiver) (1987)
sociate Provost for Educational Programs and Policy§ (Samuel Jay Keyser)
ean for Student Affairs§ (Shirley M. McBay)
auline R. Maier (1986)
ames R. Munkres (1986)
obert J. Silbey (1987)
Alan J. Grodzinsky (1987) ack L. Kerrebrock (1988) dward B. Roberts (1988)
dward B. Roberts (1988)
onathan H. Gruber, ' 87
avid S. Wiley, Executive Officer
hair, Student Committee on Educational Policy ${ }^{1}$ (Carl A. LaCombe, '86)

Official Interim Guest, Non-voting

## pecial Faculty Committees

## Harold E. Edgerton Faculty Achievement Award Selection Committee for 1985-86

ach year the Selection Committee chooses one dividual from among the junior members of the MIT aculty to be awarded the Harold E. Edgerton Faculty chievement Award
The Award, resulting from contributions by faculty ring the Leadership Campaign, was established in the 11 of 1982 as a permanent tribute to Institute Professor meritus Harold E. Edgerton for his great and enduring upport for younger faculty members over the years.

The purpose of the Award is to recognize exceptional istinction in teaching, in research, and in scholarship. he Selection Committee consists of four faculty nembers elected by vote of the faculty from a slate repared by the Nominations Committee.
homas A. Kochan, Chairman
. Rafael Reif
udith J. Thomson
ohn B. Vander Sande

## James R. Killian, Jr., Faculty Achievement Award Selection Committee for 1986-87

ach year the Selection Committee chooses one member the MIT faculty to be the Killian Award Lecturer for e following academic year. The Award was established the spring of 1971 as a permanent tribute to Dr. James Killian, Jr., President of the Institute from 1948 to 959 and Chairman of the MIT Corporation from 1959 o 1971. The purpose of the Award is to recognize extraordinary professional accomplishments by MIT extraordinary professional accomplishments aculty members and to communishments to members of the MIT community. he recipient of the Killian Award holds the title of illian Award Lecturer for one academic year and during he course of this year presents one or more lectures to e MIT community on his or her own professional ctivities. The Selection Committee consists of faculty embers elected by vote of the faculty from a slate repared by the Nominations Committee.

Nilliam L. Porter, Chairman
Bruno Coppi
avid H. Mark
ruce Mazlish
Edward B. Roberts

## Committee on the Writing Requirement

The Committee is concerned with the writing proficiency of MIT students. It oversees implementation of the Writing Requirement under the General Guidelines set by the faculty, specifies standards and criteria for satisfying the requirement, and promotes development and coordination of appropriate services and programs.

Kenneth M. Hoffman (1986), Chairman
Associate Provost for Educational Programs and Policy* (Samuel Jay Keyser)
Director of Writing Program* (Kenneth R. Manning)
Michael J. Driscoll (1986)
Suzanne Flynn (1987)
James C. Keck (1987)
Anthony P. French (1988)
John Van Maanen (1988)

## Students:

Ted C. Johnson, '86
Christopher G. Saito, ' 88
Staff to the Committee:
Bonnie J. Walters

## Ad Hoc Committee on MIT's Military Involvement

The Committee will advise the faculty regarding changes in military funding and influence at MIT and their effects on the education of our students. It will gather facts, organize them in a suitable form, and present them to the faculty for discussion. The Committee expects to report to the faculty during the 1985 fall term.

Carl Kaysen, Chairman
Herman Feshbach
Allan F. Henry
James L. Kirtley, Jr.
Vera Kistiakowsky
James R. Melcher
Students:
Louisa Koch, G
Daniel J. O'Day, '86

## Committee Appointed by the Corporation

## Corporation Joint Advisory Committee on Institute-Wide Affairs (CJAC)

CJAC was established in March 1969 by vote of the Corporation as a new special committee of the Corpora tion. Its purpose is to associate with the Corporation a broadly representative group at the Institute to which the Corporation can turn for consideration and advice on special Institute-wide matters requiring Corporation attention, such as the long-range planning of MIT's campus, the improvement of the institutional environment, and MIT's relations with Cambridge and metropolitan Boston. CJAC provides an additional means for bringing representatives of the student body, both graduate and undergraduate, and of the faculty into regular communication with the Corporation on matters of long-range importance to the entire Institute community. CJAC also serves to acquaint the MIT community more fully with the role and work of the Corporation, but it does not in any way modify the role of existing Corporation Visiting Committees.

Emily V. Wade, Chairman (Corporation) President, Alumni Association* (E. Milton Bevington) Chairman of the Faculty* (Mary C. Potter)
President, Graduate Student Council* (Janine M. Nell) President, Undergraduate Association* (Bryan R. Moser) Harl P. Aldrich, Jr. (1986) (Corporation) Harl P. Aldrich, Jr. (1986) (Corporation)
Elisabeth M. Drake (1986) (Corporation) Elisabeth M. Drake (1986) (Corporation (Faculty)
June L. Matthews (1986)
June L. Matthews (1986) (Faculty)
Michael Scott Morton (1986) (Faculty)
Arlene F. Roane (1986) (Corporation)
Stephanie L. Scheidler (1986) (Undergraduate Student)
Holly L. Williams (1986) (Undergraduate Student)
Ann M. Graybiel (1987) (Faculty)
Karen R. Polenske (1987) (Faculty)
Gregory Smith (1987) (Corporation)
Donald R. F. Harleman (1988) (Faculty)
Rhonda E. Peck (1988) (Corporation)

## Committees Appointed by the President (and Reporting to Senior Officers)

Committee listings are preceded by a brief description of each committee function. The listings include regular members (appointed or elected), ex officio members (see footnotes below), and associate members who are members and/or who perform staff duties in support of the committee work. Student members are identified by undergraduate class numerals or $G$ (Graduate Student status). The dates to the right, in parentheses, indicate the year in which the term of appointment expires.

## Committee on Animal Care $\dagger$

The Committee's purpose is to monitor the provision of proper care and humane treatment to animals used as experimental subjects, and to ensure the protection of human health as it might be affected by animal experimentation.

John M. Moses (1986), Chairman
Clinical Veterinarian* (Christian E. Newcomer)
Paul F. Barrett (1986)
Herman N. Eisen (1986)
James G. Fox (1986)
Padmakar P. Lele (1986)
Paul M. Newberne (1986)
Adrianne E. Rogers (1986)
Gerald E. Schneider (1986)
Carol E. Van Aken (1986)
David J. Edell (1987)

## Committee on Assessment of Biohazards $\dagger$

The Committee will review investigations involving potential health and safety problems associated with biological research.

Michael A. Marletta, Chairman
James G. Fox
Bernice Joyal**
Daniel F. Liberman
Harvey F. Lodish
John M. Moses
Michael P. Paskind
William G. Quinn
Robert Sweeney**
Annamaria Torriani-Gorini

## Student:

Nancy J. Gorelick, G

## Athletic Board

The Athletic Board, composed of faculty members alumni, students, and ex officio members of the administration, is appointed by the President to advise on matters of policy and procedure related to the Institute's athletic program.

Thomas J. Allen (1986), Chairman
Vice President* (Constantine B. Simonides)
Director of Athletics* (Royce N. Flippin, Jr.)
Assistant Director of Athletics* (John G. Barry)
Assistant Director of Athletics* (Jane Betts)
Dean for Student Affairs* (Shirley M. McBay)
(Des. Rep. - Peter H. Brown)
Chief of Student Health Programs* (Mark A. Goldstein)
Director of Planning* (O. Robert Simha)
Dorothy L. Bowe (1986)
William F. Brace (1986)
J. Karl Hedrick (1986)

William P. Reynolds, '49 (1986)**
Lisa A. Steiner (1986)
David R. Wilson, '73 (1986)**
David G. Jansson (1987)

## Students:

Carolyn E. Beer, '86 (Intramural Council Chairman) Leo F. Casey, G
Corey L. Kerstetter, ' 87 (M.I.T.A.A. Secretary)
Joseph K. Lo, '86 (M.I.T.A.A. President)
Michael C. Murphy, G
Craig N. Poole, '86 (Undergraduate Member at Large) Megan J. Smith, '86 (Undergraduate Member at Large) Stacy A. Thompson, '86 (Varsity Club President)

## Committee on the Center for Materials Science and Engineering

This Committee advises the director of the Center on matters of policy and reviews past performance.

David Litster, Chairman
Associate Provost and Vice President for Research*
(Kenneth A. Smith)
Richard B. Adler
Jonathan Allen
William F. Brace
Gene M. Brown
Merton C. Flemings
erome I. Friedman
ack L. Kerrebrock
David H. Marks
Joel Moses
Neil E. Todreas
Christopher T. Walsh
James Wei
Gerald L. Wilson
Peter A. Wolff
David N. Wormley

## Classification Review Committee

This Committee was established in 1975 to work in conjunction with a subgroup of the Academic Council in reviewing the Staff Salary Administration Program to ensure that equity in salary administration is maintained. This Committee and the subgroup of the Academic Council will serve as an appeal route to any decision made by the Compensation Office regarding staff classification.

Nelson C. Lees
Kathryn W. Lombardi
ohn P. Leonard
Marilyn A. McMillan
Evelyn L. Perez
Thomas L. Wilding
Staff Support:
Susan A. Lester
Kerry B. Wilson

## Commencement Committee

This Committee, composed of members of the faculty, administration, and student body, has charge of the arrangement and conduct of commencement exercises.

Donald R. F. Harleman (1986), Chairman
Mary L. Morrissey,* Executive Officer for Commencement
Dean for Student Affairs* (Des. Rep. - Judith M. Douglis) John C. Berlinguet, Jr.*
Dorothy L. Bowe*
Royce N. Flippin, Jr.*
William J. Hecht ${ }^{\prime}$
Walter L. Milne*
Constantine B. Simonides*
Warren D. Wells*
Martin Schlecht (1987)
John H. Slater (1987)
Richard de Neufville (1988)

## Students:

Senior Class President* (Vivienne Lee, '86)
President, Graduate Student Council (Janine M. Nell)
William M. Hobbib, ' 86

## Community Service Fund Board

The Community Service Fund Board provides financial support to charitable organizations in which MIT student/employee/faculty volunteers participate. The Board solicits contributions from all members of MIT and outside sources, and then reviews requests for help from projects utilizing MIT volunteers. The Board consists of representatives from the Corporation, faculty, students, administration, support and service staff, alumni, Technology Community Women, the MIT Women's League, and Lincoln Laboratory.

Gregory Smith (1986), Cochairman (Corporation) Woodie C. Flowers (1986), Cochairman (Faculty)
Ronald P. Suduiko, Secretary
Raymond A. Battistelli (1986) (Lincoln Laboratory)
Sherry L. Capano (1986) (Technology Community Women)
Bonny S. Kellermann (1986) (Alumna)
Nelson C. Lees (1986) (Administration)
Carla Lele (1986) (MIT Women's League)
Lease A. Plimpton (1986) (Lincoln Laboratory)
Robert A. Sherwood (1986) (Administration)
Charles J. Sbuttoni, Jr. (1986) (Union)
Carmen N. Besterman (1987) (Administration)
Thomas H. Farquhar (1987) (Alumnus)
Robert S. Langer, Jr. (1987) (Faculty)
Louis Menand III (1987) (Administration)
Joanne Miller (1987) (Administration)

## Students:

Pamela J. Loprest, '86 (Urban Action Representative) Stephen H. Pasternak, '87 (Alpha Phi Omega
Representative

Molly S. Shoichet, ' 87 (Urban Action Representative) K. T. Shum, G

To Be Appointed (Inter-Fraternity Conference
Representative)

## Committee on Copyrights and Patents

This Committee recommends to the administration policy guidelines for the processing of patents and copyrights. It also recommends policy for the licensing of such patents and copyrights. It takes the initial step in the
determination of ownership of patents and copyrights when applications are submitted by the faculty and staff.

Kenneth A. Smith, Chairman
George H. Dummer,* Executive Secretary
Samuel A. Goldblith*
Jay K. Lucker*
John A. McCook
David C. White (1987)
Clifton G. Fonstad, Jr. (1988)
David G. Jansson (1988)
Phillip A. Sharp (1988)
Daniel I. C. Wang (1988)

## Executive Committee of the Council for the Arts at MIT

The Executive Committee presides over the Council's general activities and consists of the Chairmen of the Council's committees, representatives elected from the Council membership, and ex officio members appointed by the President.

Jerome B. Wiesner, Chairman
Catherine N. Stratton, Vice Chairman
Luis A. Ferre, Honorary Chairman
Paul Tishman, Honorary Chairman
John P. de Monchaux*
Ann F. Friedlaender*
Vernon R. Alden
Leo Beranek
Harold E. Edgerton
Bradford Endicott
Vincent A. Fulmer
Kenneth J. Germeshausen
Paul E. Gray
Ernest A. Grunsfeld III
Bartlett Hayes
Roy Lamson
Nelson C. Lees
Vera G. List
William L. Porter
Ida Ely Rubin
Gregory Smith
Max Wasserman
Toni Wyman

## Dining Advisory Board

This Board provides a forum for addressing diningrelated issues on campus and facilitating a greater degree of dialogue and mutual support between those who provide food services and those who use them. The Board is composed of faculty, students, and staff.

Robert A. Sherwood, Chairman
Dorothy L. Bowe
Harmon E. Brammer
Judith M. Douglis
Marianne Hatton
S. Edward Leonard, Jr

Lawrence E. Maguire
Robert M. Rose

## Students:

Karen J. Baker, '86
Carolyn E. Beer, '86
Christine A. Chu, '88
Juhaina N. Hussain, '86
John R. Kenney, '87
Glen J. Kissel, G
Jeffrey T. Kung, '87
Karen L. Lee, ' 86
Robin L. Maury, ' 86
Mark D. Neumann, '86
John F. Pitrelli, G
Gregory D. Troxel, '87

## Endicott House Board of Governors

The Board of Governors of Endicott House was established in 1955. The duties of the Board include: to set policies that will maximize the use of this conference center, within prescribed bounds; to review and approve the operating budget; and to select and support the management of this facility. The Board also approves capital improvements to the property.

William R. Dickson (1986), Chairman
Vincent A. Fulmer (1986)
Mary L. Morrissey (1986)
O. Robert Simha (1986)

Gene M. Brown (1987)
ohn A. Currie (1987)
Richard M. Douglas (1987)
Woodie C. Flowers (1987)
Robert L. Bishop (1988)
Erich P. Ippen (1988)
Frank E. Perkins (1988)
Zenon S. Zannetos (1988) $\qquad$

## Associate Members

Bradford M. Endicot
Howard F. Miller

## Institute Council on Environmental Health and Safety $\dagger$

This Council is responsible to the President for coordinating the policy development and the assessment of procedures of the several Institute committees concerned with specific areas of environmental health and safety. The Council serves as a forum in which overlapping and joint areas of concern of these committees are reviewed and clarified and wherein questions in dispute by individual committees will be esolved. The Council is also responsible for
identification of those new environmental health and
safety matters which may emerge as new activities are undertaken and as new technologies develop or old ones change direction. In instances where such new activities do not fall within the purview of an existing committee, the Council may expand the area of concern of an existing committee or recommend the creation of a new committee.

Robert A. Alberty, Chairman
Richard I. Chamberlin (Industrial Hygiene Officer)
John M. Fresina (Director of Safety Office)
Thomas R. Henneberry (Insurance and Legal Affairs Officer)
Michael A. Kane (Acting MedicallDirector) crimenima\$
William R. Dickson (Chairman, Committee on Safety)
John M. Moses (Chairman, Committee on Animal Care)
Frederick D. Greene II (Chairman, Committee on Toxic Chemicals)
Alan Davison (Chairman, Committee on Radiation Protection)
Michael A. Marletta (Chairman, Committee on Assessment of Biohazards)
Willard S. Putnam (Chairman, Committee on Radiation Exposure to Human Subjects)
Norman C. Rasmussen (Chairman, Committee on Reactor Safeguard)
George Wolf (Chairman, Committee on the Use of Humans as Experimental Subjects)

## Equal Opportunity Committee

This Committee was established in 1970 to give support coordination, and direction to the Institute's programs for equal employment and educational opportunity. The
Committee advises the President and senior academic and administrative officers on matters pertaining to equal opportunity, reviewing existing programs, and recommending new ones.

Herman Feshbach, Chairman
Equal Opportunity Officer* (Constantine B. Simonides)
Special Assistant to the President and Assistant Equal
Opportunity Officer* (Clarence G. Williams)
Special Assistant to the President* (Mary P. Rowe)
Stephen H. Crandall
Mary Z. Enterline
Wade M. Kornegay
Heather N. Lechtman
Raphael C. Lee
Salvador E. Luria
ohn A. McCook
Lester C. Thurow
Gerald N. Wogan
Students:
Yvonne Y. Mao, '86
David V. Tribble, ' 87

## Faculty Club Advisory Board

The Advisory_Board shall provide general policy guidance, issue rules and regulations affecting the membership, and facilitate communications between the membership and the management. It shall also be responsible for the adoption of changes to the constitution and bylaws of the MIT Faculty Club by a vote of at least two-thirds of the Board.

Charles C. Ladd (1988), Chairman
Associate Director of Housing and Food Services*
(Lawrence E. Maguire)
Director of Finance* (John A. Currie
Manager, MIT Faculty Club (David J. Lanni**), Secretary Jack B. Howard (1986)
Kim Molvig (1986)
Ascher H. Shapiro (1986)
Holliday C. Heine (1987)
Dorothy G. Adler (1988)
Royce N. Flippin, Jr. (1988)
Paul H. Quinn (1988)

## Committee on Foreign Scholarships

This Committee was established in 1964. Its members conduct interviews with applicants for various international scholarships in October and November. The Committee then meets to evaluate and rate the
applicants for the Fulbright-Hays Grants; to select two nominees for the Churchill Scholarship; and to nominat one or more principal candidates and alternates for the DAAD Scholarship.

Eugene R. Chamberlain (1988), Chairman
David J. Epstein (1986)
Paola M. Rizzoli (1986)
Martin A. Abkowitz (1987)
David H. Friedman (1987)
Gretchen Kalonji (1987)
Campbell L. Searle (1987)
Janie Vanpee (1987)

## Student

Kevin B. Fitzgerald, G

## Committee on the Hobby Shop

The Committee encourages and promotes the use of the Hobby Shop by students.

Benjamin L. Averbach, Chairman *.....v A. Tmetrime
Alan H. Epstein
Irving Fischman
Woodie C. Flowers
Clifton G. Fonstad
John S. Whitaker

## Students:

Arthur B. Gregory, '87
Dana M. Takaki, ' 87

## IAP Policy Committee

This Committee was established by a faculty vote in 1971 to deal with policy matters and the continued evaluation of the Independent Activities Period, and to work closely with the Faculty Policy Committee and the Committee on the Undergraduate Program in reviewing IAP within the context of the total academic program. It reports to the faculty at intervals of not more than four years.

Shaoul Ezekiel (1986), Chairman
Mary Z. Enterline*
Samuel M. Allen (1986)
Deirdre A. Dow-Chase (1986)
Andrew M. Eisenmann (1986)
Steven Gass (1986)
Mary R. Jasinski (1986)
Gordon V. Kelly (1986)
Margaret S. Richardson (1986)
Janet Romaine (1986)
Maryglenn Vincens (1986)
James Higginbotham (1987)
Garth Saloner (1987)
David H. Raulet (1987)
Steven R. Bussolari (1988)
Maher Aziz El-Masri (1988)
Louis Menand III (1988)
Keith A. Nelson (1988)
Students:
To Be Appointed

## Advisory Committee to the <br> Institute Personal <br> Assistance Program

The Committee reviews and advises on issues related to PAP. It may also make recommendations on relevant personnel policy and procedures.

Thomas B. Sheridan, Chairman
Cheryl L. Birchette-Pierce
William P. Borge
John A. Currie
John J. Dunn
James J. Fandel
Ronald C. Fleming
Alfred J. Koumans
Joan F. Rice
Donna R. Savicki

## Committee on International Institutional Commitments

Jointly appointed by the Chairman of the Faculty and the President, this Committee reviews the scale and nature of MIT's international contractual commitments for education and/or research or service and consults with the administration and initiators of international projects.

Eugene E. Covert (1987), Chairman
Virginia D. Lyons, Executive Officer
Provost* (John M. Deutch)
Associate Provost* (Kenneth A. Smith)
Chair of the Faculty ${ }^{*}$ (Mary C. Potter)
Director, Office of Sponsored Research* (George H. Dummer)
Lotte L. Bailyn (1986)
ack Ruina (1986)
Suzanne D. Berger (1987) (sabbatical 1985-86)
Richard K. Lester (1987)

Students
John B. Searles, '86
Kevin B. Fitzgerald, G

## Standing Committee on the Lincoln Laboratory

This Committee was first appointed on recommendation of the Ad Hoc Review Panel on Special Laboratories. It was established in 1975 as an Advisory Committee to the President and is charged with reviewing the program of the Lincoln Laboratory and recommending policy regarding the relationship between the Laboratory and the teaching and research programs of the Institute.

Louis D. Smullin (1986), Chairman
Judson R. Baron (1986)
Michael S. Feld (1987)
Karl U. Ingard (1987)
Erich P. Ippen (1987)
Thomas S. Kuhn (1987)
James R. Melcher (1987)
John L. Wyatt, Jr. (1987)

## MIT Hospital Bóard

According to the by-laws of the MIT Medical
Department, adopted by the Corporation in the fall of 1984, the MIT Hospital Board consists of seven members of the MIT Medical Management Board and is responsible for the MIT hospital as an operating unit of the MIT Medical Department, including the responsibility o review and approve clinical privileges granted to MIT staff members.
W. Gerald Austen, Chairman (Corporation)

Constantine B. Simonides* (Vice President)
Acting Medical Director* (Michael A. Kane)
Acting Department Head and Executive Director, MIT
Medical Department* (Laurence H. Bishoff)
John Pratt (1987)
Willard S. Putnam (1987)
Mitchell W. Spellman (1987)

## MIT Medical Management Board

According to the by-laws of the MIT Management Board, adopted by the Corporation in the fall of 1984, the MIT
Management Board serves as a board of directors for the
MIT Medical Department, operating within the MIT structure.
W. Gerald Austen (1988), Chairman (Corporation)

Constantine B. Simonides,* Vice Chairman (Vice President)
Acting Medical Director* (Michael A. Kane)
Acting Department Head and Executive Director, MIT
Medical Department* (Laurence H. Bishoff)
ames J. Culliton (1986)
Mary Frances Wagley (1986)
Thomas J. Allen (1987)**
ohn Pratt (1987)**
Willard S. Putnam (1987)
Mitchell W. Spellman (1987)
Warren E. C. Wackert (1988)*

## MIT Press Editorial Board

The members and chairman of the Editorial Board are members of the Institute faculty. The director of the Press, the vice president to whom the Press reports, and the director of Libraries are ex officio, non-voting members; the Board meets at three- or four-week intervals throughout the year. The Editorial Board is responsible for the imprint of the Press, and all projects for publication must have its approval. In addition to reviewing publishing proposals, the Editorial Board reviews and participates in the formulation of Press editorial policy and provides guidance and support to the Press Acquisitions Department.

Ascher H. Shapiro (1986) Chairman
Vice President§ (Constantine B. Simonides)
Director, MIT Press§ (Frank Urbanowski)
Director of Libraries§ (Jay K. Lucker)
Loren Graham (1986)
John P. Longwell (1986)
Daniel N. Osherson (1986
Harold Abelson (1987)
John P. de Monchaux (1987)
Richard M. Held (1987)
Robert M. Solow (1987)
Carl Wunsch (1987)

## MIT Press Management Board

The Management Board was initially established in 1972 to supply guidance on management and fiscal matters. Its role has evolved to that of a Board of Directors of the Press, within the Institute framework. The chairman of the Editorial Board and the director of the Press are ex officio members, and the Management Board is chaired, ex officio, by the vice president to whom the Press reports. The other Board members are MIT faculty and reports. The other Board members are MIT faculty and
staff and outside publishers. The Board ordinarily meets staff and outside publishers. The Board ordinarily twice a year to review Press operations, to receive
reports, and to consider strategy and policies for the reports, and to
Press's future.

Vice President* (Constantine B. Simonides), Chairman
Director, MIT Press* (Frank Urbanowski)
Chairman, MIT Press Editorial Board* (Ascher Shapiro) (1986)

Ann F. Friedlaender (1986)
Norman Pomerance (1986)**
Jack Schulman (1986)**
Alvin J. Silk (1986)
W. Bradford Wiley (1987)**

Jeremiah Kaplan (1988)**
Arthur L. Singer, Jr.. (1988)**
Christopher T. Walsh (1988)

## Committee on the MIT Sea Grant College Program

This Committee provides advice on policy issues, program goals, and program evaluation to the Provost and provides policy guidance and advice on program goals and objectives to the Director.

James M. Utterback, Chairman
Chryssostomos Chryssostomidis§
Dean A. Horn§
Marcus Karel**
Alfred A. H. Keil*
Keith D. Stolzenbach§
Arthur B. Baggeroer (1986)
Robert S. Langer (1986)
John P. Longwell (1986)
Zenon S. Zannetos (1986)
David M. Gossard (1987)
Margaret L. A. MacVicar (1987)
David N. Wormley (1987)
Stanley Backer (1988)
Peter S. Eagleson (1988)
James W. Mar (1988)

* Ex officio voting. The names of ex officio members, or their designated representatives (Des. bers, or are indicated in parentheses next to the Rep.), are indicated in parentheses nex
listing of the ex officio position in all listing of the
** Non-MIT member
§ Ex officio non-voting. The names of ex officio members, or their designated representatives (Des. Rep.), are indicated in parentheses next to the listing of the ex officio position in all committees.
$\ddagger \quad$ Appointed by the President
$\dagger$ Safety Committee


## MIT-Wellesley Upward Bound Joint Steering Committee

This Committee, created in 1969 as a joint MIT and Wellesley College faculty committee, is charged with overseeing the implementation of the Upward Bound Program, a coeducational, multiracial, multiethnic educational program for Cambridge youth of high school age. In this role, the Committee meets regularly to review program performance, and to ensure that the program's administration meets Federal Office of Education guidelines and delivers services in a manner consonant with the standards of excellence of both institutions.

## MIT

(To Be Appointed), Chairman
Ronald S. Crichlow,* Director, Upward Bound Program
Vincent C. DeBaun
Charles H. Fine
Leo Osgood
Clarence G. Williams

## WELLESLEY

Vanessa L. Allyne
Mary S. Campbell
Joy Renjilian-Burgy
Rosamond V. White

## MIT Working Group on Support Staff Issues

The Working Group for Support Staff Issues is a group made up of employees throughout the Institute who have a special interest in working together toward creative solutions to problems of concern to support staff.

Katherine R. Cochrane, Co-convener (Alumni Association)
Joyce R. Cooper, Co-convener (Plasma Fusion Center)
A. Lucy Allen (Department of Electrical Engineering and Computer Science)
Gladys Barron (Educational Video Resources)
Rebecca G. Bisbee (Laboratory for Computer Science)
Dorothy L. Bowe (Financial Aid Office)
Ann Braden (Office of Dean for Student Affairs)
Richard J. Caloggero (Department of Electrical
Engineering and Computer Science)
Elaine J. Cook (Department of Electrical Engineering and Computer Science)
Annie L. Cooper (Sloan School of Management)
Nanci A. Drago (Quarter Century Club)
Jayne E. Gardini (Lincoln Laboratory)
Jayne E. Gardini (Lincoln Laboratory)
Deborah A. Hannon (Sloan School of Management)
Therese Z. Henderson (Sea Grant Program)
Ruth B. Hobbs (Resource Development)
Ruth B. Hobbs (Resource Development
Janet R. Husson (Admissions Office)
Ruth McGrath (Libraries)
i) Paula A. Mosher (Lincoln Laboratory)

Wanda Osborn (Sloan School of Management)
Marion D. Redonnet (Alumni Association)
Janice A. Smith (Department of Chemistry)
Marie A. Stuppard (Department of Mechanical Engineering)
Jean M. Sucharewicz (Admissions Office)
Linda B. Suter (Deparment of Nuclear Engineering)
Elaine M. Vallante (Department of Psychology)
Anna W. Verhulst (MIT Women's League)
Trudy L. Zakin (Financial Aid Office)

## Resource Persons:

Ornah Becker (Personnel Benefits)
Susan P. Gaskell (Personnel Office)
Richard Higham (Personnel Office)
Joan F. Rice (Personnel Director)
Constantine B. Simonides (Vice President)
Susan Warshauer (Personnel Development)

## Medical Consumers' Advisory Council

This Council serves as a communications link between the Medical Department and its users. Its objectives are to keep the MIT community informed of the services available through the Medical Department and to discuss criticisms and suggestions for the modification or
addition of services to meet the changing needs of the community. The Council reports annually to the Medical Management Board, which is the governing board of the Medical Department within the MIT structure. All meetings are open to the MIT community.

Robert D. Rosenberg (1986) (Faculty), Chairperson Medical Director* (Michael A. Kane)
Chief of Student Health Programs* (Mark A. Goldstein)
Executive Director, Medical Department* (Laurence H. Bishoff)
Coordinator for Health Information and Education* (Constance A. Bean)
Vera J. Ballard (1986) (Minority Community)
William P. Borge (1986) (Union)
Dorothy L. Bowe (1986) (Administration)
Priscilla K. Gray (1986) (MIT Women's League)
Charles W. Kazules (1986) (Lincoln Laboratory)
Leo Osgood (1986) (Office of Dean for Student Affairs)
Virginia Pochetti (1986) (Support Staff)
Ann M. Guilfoy (1987) (Draper Laboratory)
Ann M. Guilfoy (1987) (Draper Laboratory)
Rosanne Kumins (1987) (MIT Health Plan)
Rosanne Kumins (1987) (MIT He
Robert T. Sauer (1988) (Faculty)
Robert T. Sauer (1988) (Faculty)
Technology Community Women Rep. (To Be Appointed) One Faculty Member (To Be Appointed)
Maria de Marco, Secretary

## Students:

Steven M. Griffiths, ${ }^{\prime} 87$
Craig S. McConnell, '88

## Committee on Operations Research

The Committee was established in 1953, and is made up of individuals from various academic departments who are either active in operations research or are users of its methodologies. The Committee provides interdepartmental coordination and liaison on matters related to the field, and furnishes guidance for the Operations Research Center.

Richard C. Larson, Cochairman
Jeremy F. Shapiro, Cochairman
Fred C. Schweppe (1986)
Alvin J. Silk (1986)
Gabriel R. Bitran (1987)
John R. Hauser (1987)
Pierre A. Humblet (1987)
Harilaos N. Psaraftis (1987)
Charles H. Fine (1988)
Robert M. Freund (1988)
Steven R. Lerman (1988)
John D. C. Little (1988)
Thomas L. Magnanti (1988)
Martin L. Weitzman (1988)
M. Anthony Wong (1988)

## Prelaw Advisory Council

This is a group of advisors specially selected on the basis of professional background and interest in legal education.
J. D. Nyhart, Chairman

Nicholas A. Ashford
Gordon F. Bloom
Charles C. Caldart
Judith W. DeCew
Alan Hein
Jeffrey A. Meldman
Louis Menand III
James L. Powell
Martha W. Weinberg

## Students:

Douglas M. Bank, ' 88
Darrell S. Mavis, '88
Anthony P. Polito, '86

[^1]
## Premedical Advisory Council

This is a group of advisors specially selected on the basis of professional background and interests in medicine or medically related areas.

Lisa A. Steiner, Chairman
Eugene Bell
Cheryl L. Birchette-Pierce
John H. Brandt
Melvin H. Chalfen
Ernest G. Cravalho
Charles S. Davidson
William M. Deen
Richard M. Douglas
Stan N. Finkelstein
Rochelle R. Friedman
Lee Gehrke
Jeannette L. Gerzon
Mark A. Goldstein
Stephen J. Healey
Alan Hein
Michael F. Holick
H. Walter Jones, Jr.

Michael A. Kane
Alfred J. Koumans
John C. Kryder
Robert S. Lange
Robert S. Lees
Padmakar P. Lele
Bernard Levy**
Robert W. Mann
Roger G. Mark
Borivoje B. Mikic
John M. Moses
Walle J. H. Nauta
Paul M. Newberne
Barbara L. O'Pray
Chester M. Pierce
Barbara K. Prazak
Melvin H. Rodman
Adrianne. E. Rogers
Robert D. Rosenberg
Margaret S. Ross
William A. Ruth
William M. Siebert
Anthony J. Sinskey
Irwin W. Sizer
Jeffrey I. Steinfeld
Cynthia M. Stevens
Felix M. H. Villars
Robert K. Weatherall
Michael S. Weidman
Leonard Wolsky

## Committee on Privacy

This Committee was established in 1971 by vote of the faculty. It examines the policies and procedures of the Institute concerning the collection, security, disclosure, and use of information, including that obtained for administrative purposes or in the course of behavioral research.

Kenneth M. Hoffman (1988), Chairman
Elizabeth A. Northrup, Executive Secretary
Samuel Jay Keyser*
effrey A. Meldman
Fred Moavenzadeh (1986)
oanne E. Murray (1986)
Irwin Oppenheim (1987)
lerome H. Saltzer (1987)
Louis Menand III (1988)

## Students:

Sanjoy Mazumdar, G
Robert S. Weiner, '86

## Committee on Radiation Exposure to Human Subjects $\dagger$

The responsibilities of this Committee, established in 1974, are to: 1) review for authorization applications involving ionizing radiation exposure to human subjects for research purposes, insofar as the proposed study applies to radiation exposure; 2) review for approval the procedures that will ensure radiopharmaceutical quality of materials for human administration; 3) advise the Committee on the Use of Humans as Experimental Subjects relative to the radiation risk to research subjects; 4) conduct general surveillance of medical use of radiation; and 5) ensure compliance with Nuclear Regulatory Commission (NRC) broad medical license conditions, including periodic reporting to the NRC.

Willard S. Putnam, Chairman
Francis X. Masse, Executive Secretary
Gail A. Magenis**
Bruce J. Biller
Gordon J. Brownell
Frank P. Castronovo, Jr.**
Robert S. Lees
Vernon R. Young

## Committee on Radiation Protection $\dagger$

This Committee is responsible for the establishment and continuing review of an adequate radiation protection program at the Institute and its off-campus sites. The Committee is also responsible for the Institute's compliance with radiation protection regulations promulgated by state, Federal, and local agencies.

Alan Davison (1986), Chairman
Murray M. Bolton, Jr., *xecutive Secretary
Radiation Protection Officer* (Francis X. Masse)
Rep. of Medical Dept.* (Richard I. Chamberlin)
Rep. of Division of Comparative Medicine* (Christian E. Newcomer)
Rep. of Office of Sponsored Programs* (Paul C. Powell) Rep. of Whitehead Institute* (Gerald R. Fink)
Reactor Radiation Protection Officer§ (Edward Karaian)
Assistant Radiation Protection Officer§ (Mitchell S. Galanek)
Assistant Radiation Protection Officer§ (James L. Jones)
Rep. of Lincoln Laboratory§ (Jean L. Ryan)
David E. Housman (1986)
John G. King (1987)
Harold F. Hemond (1988)
Vernon R. Young (1988)

## Committee on Radio Astronomy

The Committee acts as a vehicle for interdisciplinary discussion on planning for large radio telescopes.

Bernard F. Burke, Chairman
Irwin I. Shapiro**
Jonathan Allen
Alan H. Barrett
Charles C. Counselman III
John W. Dreher
Gordon H. Pettengill
David H. Staelin

## Committee on Reactor Safeguard $\dagger$

The primary concern of this Committee is with matters of nuclear safety related to the MIT Research Reactor, including the safety of personnel on and off site. The Committee reviews and approves prior to implementation all new operating plans and policies, all significant modifications thereto, and all new
experiments involving significant changes in procedure. The Committee verifies that nuclear reactor operation is consistent with MIT policy, rules, approved operating procedures, and license provisions,
Norman C. Rasmussen, Chairman
John A. Bernard, Jr., Secretary
Associate Provost and Vice President for Research* (Kenneth A. Smith)
Physician in Charge of Environmental Medical Service* (William A. Ruth)
Director, Nuclear Reactor Laboratory* (Otto K. Harling)
Director of Operations, Nuclear Reactor Laboratory* (Lincoln Clark, Jr.)
Reactor Radiation Protection Officer*
(Edward Karaian).
Radiation Protection Officer* (Francis X. Masse)
Director, Safety Office* (John M. Fresina)
Arthur Foster**
James W. Gosne
Samuel Levin**
Constantine J. Maletskos**
Mujid S. Kazimi (1986)
Ronald G. Ballinger (1987)
Peter Griffith (1987)
David D. Lanning (1988)

## Committee on the Research Laboratory of Electronics

The Committee is available for consultation by the Laboratory directors on general questions of policy affecting RLE. Members include representatives of the administration and the heads of departments with major student and faculty participation in the research program.

## Jonathan Allen, Chairman

Gene M. Brown
Richard L. Cartwright
Ronald C. Davidson
Ann F. Friedlaender
Jerome I. Friedman
J. David Litster

Joel Moses
Neil E. Todreas
Christopher T. Walsh
Gerald L. Wilson
Peter A. Wolff

## Committee for Review of Space Planning (CRSP)

This Committee originates, reviews, evaluates, and/or coordinates all proposals of requests for new space, space assignments, or requests for major alterations and renovations of existing spaces.

John M. Deutch, Chairman
William R. Dickson, Vice Chairman
Victoria V. Sirianni, Secretary
Paul F. Barrett
Gene M. Brown
James J. Culliton
John P. de Monchaux
Daniel H. Gould
O. Robert Simha

Kenneth A. Smith
Kenneth L. Thompson
Gerald L. Wilson

## ROTC Committee

The function of the Committee, which was established in 1970, is to monitor the policy and operations of the office of ROTC Programs and to deal with all matters pertaining to ROTC.

Robert E. MacMaster, Chairman
President* (Paul E. Gray)
Assistant Provost* (John B. Turner)
Jane Betts
Alvin W. Drake
James P. Hassett
Frederick D. Massie
Frederick D. Massie
Vincent P. McDonough
Vincent P. McDonoug
Stephen M. Meye
David B. Ralston
David B. Ralston
Emmanuel J. Scivoletto

## Committee on Safety $\dagger$

This Committee, established in 1962, is responsible for reviewing current practices with regard to general safety, and for formulating and implementing broad safety policies for the Institute. The Committee works closely with the Safety Office.

William R. Dickson (1986), Chairman
Director, Safety Office* (John M. Fresina)
Industrial Hygiene Officer* (Richard I. Chamberlin)
Stephen D. Immerman (1986)
Saul A. Rappaport (1986)
Paul F. Barrett (1987)
Puul F. Barrett (1987)
Gary E. Wnek (1987)
Anthony Colozzi (1988)
Robert W. Hagerty (1988)
John A. McCook (1988)
James Olivieri (1988)
Michael A. Kane (1988)
Student:
Sharon D. Moran, G

## Student Activities Development Board

The Student Activities Development Board, in its present form, was established in 1970 to allocate funds to student and community activities for items of capital equipment and the expense involved in minor space changes. Applications for funds are solicited in February.

Kenneth C. Russell, Chairman
Barbara M. Fienman,* Executive Secretary
Dean for Student Affairs* (Des. Rep. - Margaret S. Richardson)
William J. Hecht
Jeffrey A. Meldman
Judah L. Schwartz

## Students:

Janine M. Nell, G (Graduate Student Council President)
Bryan R. Moser, ' 87 (Undergraduate Association President)
Kalyanaram Gurumurthy, G (Graduate Student Council Co-Treasurer)
Steven C. Semken, G (Graduate Student Council CoTreasurer)
Michael S. Kelley, ' 87 (Finance Board Chairman, Undergraduate Association)
Lisa Y. Bell, '86 (Chairman, Association of Student Activities)
Peggy C. Chang, '88 (Undergraduate Student at Large)
Bernard C. Teh, '86 (Undergraduate Student at Large)

## Technology Broadcasting Corporation

Technology Broadcasting Corporation acts as a nonprofit trustee for the MIT radio station, WMBR.

John H. Kosian (1987)** President
Todd S. Glickman (1987)** Vice President
Kenneth T. Pogran (1987)** Treasurer
Thomas L. Higgins (1986)**
Allan R. Kent (1986)
Andrew Lippman (1986)
Morton Berlan (1987)
Morton Berlan (1987)
Barbara M. Fienman (1987)
Barbara M. Fienman (1987)
Edward Hyson (1987)** ("Oedipus")
Larry A. Parmenter (1987)**
Walter L. Milne, Secretary

## Committee on Toxic Chemicals $\dagger$

This Committee is responsible for reviewing current practices with regard to the effects on human subjects of toxic chemicals, including carcinogens. The Committee is also responsible for formulating policies necessary to control the risks and exposure to personnel working with such agents, and for compliance with governmental regulations.

Frederick D. Greene II (1987), Chairman
Medical Director* (Michael A. Kane)
Director, Safety Office* (John M. Fresina)
John P. Longwell (1986)
Michael A. Marletta (1986)
Michael A. Marletta (1986)
Steven J. Burden (1987)
Steven J. Burden (1987) (1987)
William H. MacLachlan
William H. MacLachlan (1987)
George W. Boylen, Jr. (1988)
Alan Davison (1988)
James G. Fox (1988)
Alexander M. Klibanov (1988)

## Student:

David P. Genereux, G

## Committee for Transportation and Parking

This Committee reviews and advises upon policy governing the operation of the parking system at MIT. It further serves to monitor and make recommendations concerning transportation-related issues which affect the MIT community.

Moshe E. Ben-Akiva, Chairman
Peter H. Brown
William R. Dickson
James J. Fandel
Bruce R. Musicus
James Olivieri
O. Robert Simha

Lawrence E. Susskind
Michael E. Treacy
Staff to the Committee:
Marshall V. Cheverie

## Committee on the Use of Humans as Experimental Subjects $\dagger$

The Committee is responsible for reviewing every research project utilizing humans as research subjects, and for devising effective procedures to ensure the adequate review of all protocols. Its principal role is to determine whether subjects used in any research project are protected against undue risk and to ensure that their rights, privileges, and privacy are also protected.

George Wolf, Chairman
Bruce J. Biller
Stephen L. Chorover
Thomas B. Duff
Eliot Hubbard**
Alfred J. Koumans
Robert W. Mann
Francis X. Masse
Jeffrey A. Meldman
Barbara L. O'Pray
Jerome Rothenberg
Daniel Shevitz
Annamaria Torriani-Gorini
Leonard Wolsky
Mildred Zanditon**

## Students:

Ronald E. Becker, ' 87
Lynne T. Haber, G

## Committee on the Visual Arts

The Committee acts as an advisory body for all aspects of the visual environment and arts at MIT. Its work includes review of and advising on plans for exhibitions at the List Visual Arts Center (including the Hayden Reference and Bakalar Galleries), for public non-curricula programs, and for major visual arts events; and advising on acquisition policy for MIT and on major acquisitions for the MIT art collection.

Boris Magasanik (1987), Chairman
Executive Assistant to the President* (Kathryn W. Lombardi)
Special Assistant to the President for the Arts* (William L. Porter)

Director of Exhibitions, CVA* (Kathy Halbreich)
Executive Director of the Council for the Arts* (Helvi M McClelland)
Director of Planning* (O. Robert Simha)
Heather N. Lechtman (1986)
Walter A. Rosenblith (1986)
Peter A. Wolff (1986)
David H. Friedman (1987)
Leo Marx (1987)
Walter S. Owen (1987)
Jerome Rothenberg (1987)
Peter S. Eagleson (1988)

## Students:

Andrea M. Ghez, '87
Robert J. Webster, ' 87
Ansel M. Spoerri, G

## Wellesley-MIT Joint Committee

The Committee monitors and coordinates the WellesleyMIT Exchange Program to ensure that it constitutes a meaningful diversification in the learning experience of the undergraduates of both schools.

Robert J. Silbey (1987), MIT, Cochairperson
Maud H. Chaplin, Wellesley, Cochairperson

MIT
Manager, Wellesley-MIT Exchange* (Mary Z. Enterline)
Associate Provost* (Samuel Jay Keyser)
Associate Dean for Student Affairs* (Holliday C. Heine)
Woodie C. Flowers (1986)
Kathryn J. Crecelius (1987)
Louis Menand III (1988)

## Students:

Russell M. Basch, '86
Mark S. Caylor, ' 86
ohn R. Kenny, '86
WELLESLEY
Dean of Students* (Molly Campbell)
Marjorie Lucas
Sabine Raffy
Margaret Thompson
Adjunct Member:
Exchange Coordinator* (Dawn L. Monmouth)

## Students:

(To Be Appointed)

- Ex officio voting. The names of ex officio mem bers, or their designated representatives (Des Rep.), are indicated in parentheses next to the listing of the ex officio position in all committees.
** Non-MIT member
§ Ex officio non-voting. The names of ex officio members, or their designated representatives (Des. Rep.), are indicated in parentheses next to the listing of the ex officio position in all committees.
$\ddagger$
Appointed by the President
$\dagger$ Safety Committee


## Advisory Committee for Women Students' Interests

This Committee advises the Coordinator for Women Students' Interests in her role as a special resource for graduate and undergraduate women on campus. The Coordinator plans programs, organizes women's groups, and provides support to existing women's organizations.
The Committee is composed of graduate and
undergraduate students, faculty, and staff.
Margery Resnick (1987), Chairman
Special Assistant to the President* (Mary P. Rowe)
Associate Dean of the Graduate School* (Jeanne E.
Richard)
Priscilla K. Gray*
Holly B. Sweet*
Laya W. Wiesner*
David J. Anick (1986)
Lotte L. Bailyn (1986)
Robert I. Hulsizer, Jr. (1986)
Kathryn W. Lombardi (1986)
Shirley M. McBay (1986)
Shirley M. Picardi (1986)
Marilyn A. Pierce (1986)
Cheryl L. Birchette-Pierce (1987)
Mildred S. Dresselhaus (1987)
Lois S. Eichler (1987)
Keith D. Stolzenbach (1987)
Dorothy L. Bowe (1988)
Vernon M. Ingram (1988)
Staff to the Committee:
(To Be Appointed)

## Students:

Mary K. Bayalis, ' 86
Katherine L. Boyd, G
Elizabeth De Mille-Barnett, G
Denice D. Denton, G
Theresa M. Flood, ' 87
Sharon E. Klotz, ' 86
Sonia Leon, ' 86
John M. Lucassen, G
Sean P. Manns, '86
Yvonne Y. Mao, '86
Leslie G. Melcer, ' 88
anine M. Nell, G
Nirmala J. Panicker, G
Susan C. Scott, G
Karen R. Sollins, G
Deborah L. Thurston, ' 87
Sarah C. Tasker, '87
Julia L. White, '87

## Women's Advisory Board

This advisory Committee is representative of many women at MIT. Its members are elected from various constituencies and from various areas of the Institute. The Committee works with and advises the Special Assistant to the President on areas of concern to the constituent groups and serves as a communications link with her office. Members of the Committee are appointed for one-year terms, and the Chair rotates.

Marguerite E. Ampolo (Lincoln Laboratory Support Personnel)
Isabelle E. Barclay (Women's Forum)
Staff Associate, Dean for Student Affairs Office (To Be Appointed)
Gwendolyn Biggert (Working Group on Support Staff Issues)
Sheara R. G. Biron (Lincoln Laboratory, Professional Women's Network)
Toby Bloom (Women Graduate Students in Computer Science)
Catherine M. Boone (Women Graduate Students in Political Science)
Dorothy L. Bowe (MIT Women)
Jean Broderick (Chemical Engineering)
Kathryn A. Bushnell (Quarter Century Club)
Margaret T. Coleman (Association of MIT Alumnae)
Jahde Collins (Lincoln Laboratory Support Staff)
Christine Cousineau, G
Barbara A. DiPalma (Lincoln Laboratory Support Personnel)
Amy G. Epstein, G (Graduate School Council)
Susan P. Gaskell (Personnel Women)
Marilee Jones (Ad Hoc Committee on Women's Admissions)
ennifer Lin, '87 (Association of Women Students)
Margaret F. Mann (MIT Women's League)
Sylvia A. McDowell (American Association of University Women)
Fanya Montalvo (Computer Science Women)
Patricia R. Murray (Technology Wives Association)
Ruth Perry (Director, Women's Studies)
Jeanne E. Richard (Women's Forum)
Kimberly E. Ritrievi, G (Sloan School Graduate Student Women)
Lynn A. Roberson (Women's Coordinator)
Charlotte N. Schell (Lincoln Laboratory Women's Forum)
Elizabeth Smela, '85 (Pro Femina Group)
Gail M. Sullivan, G (Women in Architecture)
Holly B. Sweet (Experimental Study Group Women's Group)
Sharon Traweek (Women Faculty)
Mary T. Wasilewski (Society of Women Engineers)
Elizabeth Y. Wattenberg, G (Graduate ABS Women)
Mary P. Rowe* (Special Assistant to the President)

## Ad Hoc Committee on MIT and Intelligence Agencies

The Ad Hoc Committee on MIT and Intelligence Agencies will consider and develop recommendations for policies and procedures pertaining to potentia polvement of MIT and members of the MIT community with intelligence agencies.

Kenneth M. Hoffman, Chairman
Louis Menand III
Ascher H. Shapiro
Phyllis A. Wallac
Myron Weiner

## Ad Hoc Advisory Committee for the Secondary Technical Education Project

The Committee is composed of members of the faculty and administrative staff. Its task is to act in an advisory capacity to the Director of the Secondary Technical Education Project, who will cooordinate MIT's collaboration with the Boston School System in Science developing the Mario Umana Harbor School of Sciencer described in the Phase II Desegregation Order of Federa Judge W. Arthur Garrity on May 10, 1975.

Louis L. Bucciarelli, Chairman
Director, Secondary Technical Education Project* (Alford
Dyson, Jr.)
Harold Abelson
Dorothy L. Bowe
Phillip Clay
Marcia E. Conroy
Ronald Crichlow
Ira Dyer
Woodie C. Flowers
Jonathan A. King
Phyllis R. Klein
Steven R. Lerma
Walter L. Milne
Edwin F. Taylo
Myron Tribus
Bruce D. Wedlock
Clarence G. Williams

## Advisory Committee on Shareholder Responsibility

The Advisory Committee on Shareholder Responsibility serves to advise the Executive Committee of the MIT serves to advise the Executive Committee of the MIT
Corporation on matters concerned with MIT's votes and other actions as a socially responsible owner of stocks in businesses and industries.
D. Reid Weedon, Jr.,** Chairman

Treasurer* (Glenn P. Strehle)
William R. Dickson
Allan F. Henry
Daniel M. Holland
Walter L. Milne, Secretary

## Students:

Pamela J. Loprest, '86
Lance E. Murrah, G

Casablanca** - LSC Movie, Dec 8, 6:3089pm, Rm 26-100.
\$1MIT.Wellesley ID.
Episode 4: A New Tradition** - LSC Movie, Dec 12. ${ }^{\text {E1/MIT }}$
Wellesley ID.
Episode 5: The TBA Strikes Back ${ }^{* *}$ - LSC Movie, Dec 13
si/MIT. Wellesley ID.
TBA** - Student Ctr Committee movie, Dec $13,11 \mathrm{pm}$
FreeMIT-Wellesley ID.
04Episode 6: Return of the TBA** - LSC Movie, Dec 14
\$1MIT. Wellesley D .

## Music

Noon Hour Chapel Series** - Charles Mokotoff and Robert
Strizich, classical and barouque guitar perform Coble, Rodrigo, Koshkin, Foscarini, Corbetta, Pellegrini, , De Visee and De Mur
cia, Thurs, Dec 5, 12:05pm, MIT Chapel. Free. MIT Concert and Festival Jazz Bands** Jamshied Sarifi
and Everett Longstreth, directors, with guest bands, Fri, Dec 6 , MIT Concert Band** John Corley, director, performs works
by Milhaud, Guppy, Mahr, McGah, Williams, \& Caiazza, Sat, Dee $7,8 \mathrm{pm}$, , Kresge Audi
week before in Lobby 10 .

MIT Brass Ensemble** - Greg Hopkins, conductor and Myron
Romanul, pianist, Sun, Dec 8 , 4:30pm, Kresge Auditorium. MIT Chamber Music Society* - conductors Marcus
Thompson, Jean Rif, John Buttrick and Melissa Howe,

Noon Hour Chapel Series* - La Fontegara perform medieval
and Renaissance Christmas season music, Thurs, Dec 12 , MIT Symphony Orchestra* - David Epstein, music director
Sat, Dec 14, 8:30pm, Kresge Auditorium. Admission 81 .

MIT Women's Chorale* - perform works by Mozart, Bach,
Reger, Butler, Mendelsosoh, Dello Jooio, Sun, Dec 5 , 1 , pm, Rm
10-250. Free. Concert ends with singing of traditional carols and
Chinese Intercollegiate Choral Society* - Meets Suns,
3.5pm, Rm W20.491. Currently rehearsing Chinese folk songs.
MIT Gospel Choir* - Rehearsals: Dec 7 , Student Ctr Rm 491 ;
Dec 14, Student Ctr Rm 491. All rehearsals, 11-1:30pm. Info,
Theater
Interviews for MTG's January Production, Babes in
Arms $^{*}$ - Non-paying positions for director, musical director choreographer, set, light and costume decigners,
Dec $4-5,7.9 \mathrm{pm}$. Call for appointment, x 3 -6294.

## Dance

MIT Dance Workshop* - An evening of student works in
progress, presented by director Beth Soll, Dec $6.7,8 \mathrm{pm}$, Kresg pititle Theatre. Free
MIT Balliroom Dance Club Workshops** - Dec 8: Beginnin
Charleston, 12:30-1pm; Intermediate Hustle, 1:30-2:30pm; Ad vanced Viennese Waltz, 4.5pm. All classes at Student Ctr Sala
de Puerto Rico. Admission: Beginning $\$ .25 / \mathrm{members}$,
$\$ .50 /$ non-members; Internediate $+/ \$ .50 /$ members, $\$ 1 /$ nonn members; Adv
$\times 5.9171$ dorm.

Western Square Dancing* - Tech Squares 10 -week class now
in progress, Tues, $8-11 \mathrm{pm}$, Student Ctr 2nd Floor. Combined
 Children's Dance Classes** - Pamela Day, instructor
Creative MovementModern Dance clases for children ages $3-8$ Creative Movement Modern Dance classes for children ages 3.8 ,
Ages $34:$ Fri, 2:15-3pmi Ages $58:$ Fri, $3: 304430$ pm, West cam-
pus location convenient to Westgate, Chiltre pus location convenient to Westgate. Children do not have to
speak English. For info, location, and registration, call Pamela,
$\times 33-5791$ Tues/Thurs morning,


A scene from the MIT Spanish Drama Workshop production of El Arquitecto y el Emperador de Asiria, with Neil D. Cudmore '87, left, and Victor Sleury. Students of this
workshop will present another evening of Spanish language drama this Friday, Dec. 6, at 8 pm in the Mezzanine Lounge of the Student Center. There will be three one-act plays by contemporary dramatists representing some of the most recent and significant theatre of Chile, Argentina and Mexico. Workshop director Manuel Delgado, assistant professor of Spanish, gave the following assessment: "Through scenes of sometimes light-hearted, and sometimes ironic humor, these plays shed light on the social and human conditions in Latin American culture." They are: El Delantal Blanco by Sergio Vodanovic, Historia de un Flemon by Osvaldo Dragun and Elanso by Emilio Carballido. Refreshments will be served in this cafe teatro production and donations will be accepted.
-Photo by Maria Elena Lara '84

## Undergraduate education under discussion

## Discussions are now fully under way within

 the School and Institute committees described below to strengthen the academic program and overall experience for MIT's undergraduates. According to Professor Margaret MacVicar, MIT's Dean for Undergraduate Education, these deliberations have the potential of galvanizing thoughtful, bold changes in the undergraduate academic pro gram and in its relationceDean MavVicar exd
Dean MacVicar and the various committee chairs invite members of the academic community "to communicate with members of the these deliberations, and above all, to seize imaginatively upon the special opportunity the Institute has before it."

## Committee on the Humanities, Arts, an

 Social Sciences RequirementThe charge of this Committee is to develop a well-thought-out proposal for a new HASS of Humanities and Social Science, but that also will address the concerns expressed by faculty in the Schools of Science and Engi neering who want their technically educated students to receive a liberal education tha will serve them in good stead throughout their Requirement that not only will meet the con cerns adult lives. The Committee expects to prepare a preliminary report for discussion in the spring. The Committee reports jointly to Ann F. Friedlaender, Dean, School of Humani ties and Social Science, and to Dean MacVicar.
The Committee members are: Pauline Maier History, Chair; Lotte Bailyn, Management Alan Guth, Physics. John Hildebidle Liter ure; Stephen Lippard, Chemistry; Gary Marx rban Studies and Planning; Louis Menand History; George; Stephanopoulos, Chem and Engineering; Bernhardt Wuensch, Materials Science and Engineering, and Mark Curtiss

Integrative Education Committee The charge of this Committee is to design an integrative program in the liberal arts that is suitable to the MIT context and culture. In defining the goals of such a program and how they might be reached, the Committee hopes to provoke wider discussions about the desirability of bringing the "new liberal arts" to a
self-selected group of MIT undergraduates.

By "new liberal arts" the Committee has in mind the establishment of dual competency in a technical discipline (science or engineer
ing) and a humanities, arts, or social science ing) and a humanities, arts, or social science discipline. Th
Friediaender. The Committee members are: Leo Marx,
STS and Literature, Chair; John Harbison, Music; Philip Khoury, History; Arthur Music; Philip Khoury, History; Arthur
Mattuck, Mathematics; Marsha Rosner, Applied Biological Sciences; Francis Ogilvie, plied Biological Sciences; Francis Ogivie, Engineering; Irene Tayler, Literature; Martin Weitzman, Economics, and Jeremy Wolfe Psychology. Graduate student member undergraduate member to be appointed. School of Science Education Committee The charge of this Committee is to: a) initiate and respond to proposals bearing on undergraduate education; b) provide the Dean with information and counsel on departmenta views of undergraduate education; c) look a the science core subjects (Institute Require ments), and assess the quality of teaching subject matter, effectiveness, and whethe they provide a coherent basic education in the sciences; and d) explore whether the Institute Science Requirements should be changed The Committee reports to Gene M. Brown Dean, School of Science.
The Committee members are: Robert Silbey Chemistry, Chair; Robert Jaffe, Physics Arthur Mattuck, Mathematics; Marsh Rosner, Applied Biological Sciences, John Southard, Earth, Atmospheric, and Planetar

Commission on Engineering
Undergraduate Education
The Commission is charged with conducting comprehensive review of the MIT program of undergraduate engineering, including those Institute's the Instituren which influence thg neering education. The four-member Commis sion is assisted by three subgroups focuse sion is assisted by three subgroups focused
respectively on the Institute core, the engineering curricula, and the Institute environ ment. The Commission is coordinating it meview closely with those being conducted by the School of Science Education Committe and by the Committee on the Humanities, Arts, and Social Sciences Requirement. The Commission is working with these committee as well as with departmental groups from the School of Engineering to develop, by January a set of goals for engineering education. It wi
then address implementation, and produce a Mrey 1986. The Commisec mondations L. Wilson, Dean, School of Engineering. The Commission members are: Jack Kerrebrock, Aeronautics and Astronautics, Chair; Hermann Haus, EECS; Lawrence Chair; Hermann Haus, EECS; Lawrence
Lidsky, Nuclear Engineering, and Borivoje Lidsky, Nuclear Engineering, a,
Three of the members chair the following subgroups, whose memberships at this time ${ }^{40}$
Subgroup on Institute Core: Hermann Haus Chair; Edward Crawley, Aeronautics and Engineering. Subgroup on Engineering Curricula Chemical Engineering; Rafael Bras, Civi Engineering; Shaoul Ezekiel, Aeronautics and Astronautics and EECS; Louis Smullin, EECS and Bernhardt Wuensch, Materials Science and Engineering.
Subgroup on Institute Environment
Borivoje Mikic Chair Borivoje Mikic, Chair; Jeffrey Lang, EECS; James Melcher, EECS; Jerome Milgram, Ocean Engineering, and Fred Moavenzadeh, Civil
Engineering.

## Bambara to read

Writer Toni Cade Bambara will give a reading from her work today (December 4) at 8 pm in Rm 34-101, sponsored by the Women's Studies Program as the third speaker in the series, "Freedom, Fiction, and Family: Black
Women Today." Ms. Bambara, who lived in Atlanta for many years but now makes her home in
Philadelphia, is most well known for her book, The Salt Eaters
The concluding appearance of the series will be given by psychologist Helen Boulware Moore, who will speak on "The Black Woman Revisions of a Distorted Image," on Februar
19.

## Weinberg speaks at Forum <br> "The Search for the Origins of Cancer," will be discussed by Professor Robert A. Weinberg of biology and the Center for Cancer Research tonight at 8 pm in the Cambridge Forum, Church St . The program is open to the public free of charge

MIT Museum Bldg - Berenice Abbott: Vision of the 20th
Century. Five decades of photographs by Berenice Abbott, in cluding portraits from the '20.s. images of a vanishing NY City
from the ' 3 os and scientific photos illustrating waves and light
refraction, through Dee $27.1 . \mathrm{M}$. Pei: Selected Projects, through December. The United Nations: A Photographic
Retrospective. Photographs documenting UN involvement in agriculture, education, health and scientific programs, through
Dec 31. DAOBRed Weights Scelptor Carol Keller and painter
Kathleen Soles use a variety of materials to explore spatial am Kathleen Soles use a variety of materials to explore spatial am-
biguity as a metaphor. Through Jan 31, 1986. Light
Sculptures by Bill Parker 74, Changeable, touchable plasma
suilptures. ,
 $\mathrm{He}^{\mathrm{e}}$ is an elected member of the Sigma Xi Honorary Research Society and the Tau Beta associate editor of the Journal of Engineering Graphics and Design of the American Society fraphics and Design of theering Education

## Ernesto Blanco to give Den Hartog Lecture

Adjunct Professor Ernesto E. Blanco of the Department of Mechanical Engineering is the recipient of the 1985 Jacob P. Den Hartog the Den Hartog Lecture at 3pm Dec. 6 in Rm the De

The award is given annually for "excellence in teaching mechanical engineering which has ostered the development of physical insigh and engineering judgment. It is named for Mrofessor Emeritus Jacob P. Den Hartog of engineering educators in the world.
Professor Blanco is widely recognized as an outstanding industrial practitioner of mechan cal engineering design and deeply respected fo his commitment to teaching and research.
Since 1974 he has been president of Universa Textile Machine Corp. and has been involved in the development of special textile machines He has designed a faulty needle sensor for knitting machines for which a patent has been issued. Healso has beell ment of a Braine cell display system for the Foundation and Foundationtand is presently of the ophthalmic division of
surgical Inc. of Norwood, Mass
Professor Blanco holds the BME from Rensselaer Polytechnic Institute. He was also educated at La Salle Academy, Havana Intitut and Havana University, all in his nativ Academy in Ma, and at
From 1960-64 he was an assistant professo in the Department of Mechanical Engineering at MIT. From 1964-69 he was associate professo at Tufts University in the Department of Engineering Graphics and Design. From 1969 until 1974, when he became head of Universa Textile, Professor Blanco was corporate staff consultant at Malden Mills, Inc., where he wa involved with research and development of special textile machines for proprietary proc esses and supervised technical development in enelect group or hiv ung


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## Housing








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Anneltura, 33416 or $776-2869$ evee.
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Lost and Found


Lost: set of car keys on wh plastic key
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## Surplus Property

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Will be responsible for arts Sout 9,000 . Wecounts,
totaling $\$ 115$ million
sill vising eight MITI employeesear, Will function
as chief liaison on student the Student Financial Aid Office, the
Registrar's Office, and Deans' Offices Registrar's Office, and Deans' Offices.
Will exemplify and instill in staff an at. titude of caring, helpfulness, and col. fegiaity, without loss of efficiency and ef-
fairnesss of poli ensieure anssistency and develop and implement written com.
munications with students and parents, other MIT offices, and outside sponsoring
agencies; handle those inquires and complaints which are special cases with policies or "impage"; regularsy review the status of financial delinquaencies, and
develop and implement procedures for minimizing them; and counsel students
with financial problems or equivalient combinsation of edducation
and experience required. Exceptional communications and human reptations
skills; extensive experience working with students; strong menanagerial experience
necessary. A facility and accuracy with ing needed. Experience with computer Assistant to the Bursar/Student Ac-
counts, Bursar's Office, to ensure the timely payment of student fees due MIT.
Will help students and their parents un. derstand the accounting of charges and
credits to their accounts. Responsible for
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Deans, faculty, department ad ministrators, financial aid officers, and
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vithholding of degrees. Ad-
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with the Student Financial Aid Office in advising students on financing theire edu
cation cation. Bachelor's Degree or equivalent
combination of education and experience
required. High degree of com men required. High degree of communication
and human relations skills, desire to assist others, patience to listen, and abili-
ty to apply rational analysis to their pro numbers and computer systems, respect for order, and ability to systematically or-
ganize thousands of written and oral treal Librarian IV, Head, Engineering Libraries, MIT Libraries, will administer
MITs Barker Engineering Library and its branch and the Aeronautics and Astro-
nautics staff, under the Associate Director for Public Services. Will manage a staff of
eight librarians and 16 support staff and will participate in and oversee the provi-
sion of information services and the develparticipate in systemwide policy formulation as a member of the Divisional
Librarians Group which coordinates the public services of the MIT Libraries and
as a member of Library Council. MLS as am an ALA-accredited library school re. quired. Minimum of five years increasing. an engineering or science reesearch library required. Demonstrated effeective manage
ment skills required ment skills required. Experience in infor-
mation services and collection ing ment as wervices and and collection managege of the application of technology to librar-
ies are essential. Degree in engineering or science highly desirable. Final candidates
must demonstrate well-developed in. terpersonal skills and
in groups. C85-168

## Sponsored Research

Staff
Research Staff/Programmer, Haystack Atmospheric Sciesnoss Gith the Hay engaged in a
diversified program of upper sta diversinied program of upper atmosesperici, using the Millstone Hill radaric locested in
Westford, MA. Responsibilities will in clude the development, maintenance and documentation of data manayysis sofware
for Harris H100 and H800 computers. Bacheolor's degree and several compurs expe.
rience in FORTRAN applications prorience in FORTRAN applications pro-
gramming required. Experience in nu-
merical merical analysis, computer graphics and
scientific data base systems highly
desirable. R85-869 Technical Assistant, Chemical Engineering, to assistan in a long term pro-
gram designed to study the energy metabolism and general bioche energy
animal cell systems. Work includes small-
 and biochemical analytical and separa-
tions techiques (celetrophoresis, gas
chromatography, affinity and high pressure liquid chromatography, ultracen:
trifugation; fluorometry and UV and visi-
ble abo dividual will also perform some alconhol
and organic acid fermentation work and oversee ordering supplies and other
general maintenaneotakss. Requires BS
in Biology, Biochemistry, or Chemistry in Biology, Biochemistry, or Chemistry.
Previous research laboratory experience
and course work in biochemistry and ap-
plied microbiology preferred. R85-862

## Library Support

Staff
(

## Concert Band to feature flute, clarinet works <br> By MICHAEL GOOD '79

Correspondent, MIT Concert Band Band, conducted by John Corley, will feature the premiere of a concerto for band by a former MIT student and gu
appearances by two students.
Admission is free and the public is invited Admission is free and the public is invited Kresge Auditorium. Tickets will be available in Lobby 10 from December 2 to December 6. Karen Dickson ' 87 will be the featured
Professor T.B. King dies at 62


Engineering intern tionally known for his lurgy, died unexpectedly of a heart attack at his home on Saturday, No-
vember 23 . He was 62 . A memorial service was held November 27
at First Congregational at First Congregational Winchester. A date for a memorial service at
MIT will be announced soon. Donations in his
memory may be made to the Joh
Endowed Junior Faculty Chair.
Dr. King, a leading authority in chemical of MIT's Department of Metallurgy and Materials Science from 1962 -1972.
Dr. Merton C. Flemings, head of the Depart ment of Materials Science and Engineering, King headed, expressed deep sadness at Dr King's death
leaching, research, and department leadership during a difficult decade, and his strong participation in departmental activities through out his career. The co-op program, which has
been so important to us, has run since its inception under his guidance.
"We have lost a colleague, friend, and a gentleman who through his humor, wit and good nature helped us to see the better part of
ourselves," Dr. Flemings said. For nearly 33 years at MIT
Fas a dedicated teacher whofessor King was a dedicated teacher who was deeply undergraduate students. He was director since undergraduate students. He was director, since its inception, of the departmental co-op program, whereby students acquire actual experi his time generously to the role of advisor and his time generously to
Professor King's research was centered on thermodynamics and kinetics of high-temperature systems, such as in steelmaking. He was Rabbi Herman Pollack

## Funeral services for Rabbi Herman Pollack

 a religious counselor at MIT for 20 years andthe first director of the MIT Hillel Foundation the first director of the MIT Hillel Foundation,
will be held at 1 pm Wednesday, Dec. 4, at Levine Chapel, 470 Harvard St., Brookline. Rabbi Pollack died Monday, Dec. 2, at Beth
Israel Hospital after a long illness. He was 78 . Israel Hospital after a long illness. He was 78 . Chapel next month. The date will be an

## naunced later.

social justice and was strongly committed of pacifism. From 1952 until his retirement in May of 1972, Rabbi Pollack guided the development of a full program dedicated to the enrich campus. His counsel and spiritual support was available to all of MIT's students and for many years he served as the military draf counselor for the entire student body.
In 1969 Rabbi Pollack and Professor Jerome for a brought the issue of conscience and the Vietnam war before the Rabbinical Court of They argued successfully before the court that conscientious objection to the Vietnam war was possible within the Jewish tradition. Rabbi Pollack was the author of Jewish
Folkways in Germanic Lands (1648-1806) Folkways in Germanic Lands (1648-1806):
Studies in Aspects of Daily Life, which was published in 1971 by MIT Press
Rabbi Pollack was married for many years to the late Sophie (Schneiderman) Pollack who died in 1976. He is survived by his
daughter, Mrs. Rosalind Cherson of Newton daughter, Mrs. Rosalind Cherson or Newton at whose home, observance will be held through Sunday, Dec.

## Joseph Clarke

> Joseph Clarke, 63, of Chelsea, a guard at
Lincoln Laboratory since 1976 , died November 18 after a short illness. He leaves his widow Audrey C. Jewett and four children, Roy D. of
Danvers, Richard A. of Texas, Scott A. and Danvers, Richard A. of Texas, Scott A. and
Deborah N., both of Chelsea. He is also survived by a brother, Wallace Be. Malden, sister, Hilda M. Walker of Beverly and two grandsons

Concerto for Piccolo and Band (1985). Mr Guppy graduated from MIT in 1979 with
degrees in biology and music. He has played degrees in biology and music. He has played
flute, piccolo, and alto flute in the MIT Concert flute, piccolo, and alto flute in the MIT Concert
Band for 11 years. The Concerto is his second Band for 11 years. The Concerto is his second
work for band; his first, Lament, was premiered work for band; his first, Lament, was p
by the MIT Concert Band last year.
by the MIT Concert Band last year.
Ms. Dickson is a junior majoring in electrical Ms. Dickson is a junior majoring in electrical
engineering. She has played flute and piccolo engineering. She has played flute and piccolo last year was a member of the New England Intercollegiate Band.
contact with Soviet scientists in his field and on five occasions visited the USSR to attend conferences on steelmaking and to visit Soviet industrial facilities and technical institutes. In 1967 he was one of eight leading professors at MIT selected to give lectures in a series called "Horizon" which was devoted to aspects of science expected to have the greatest influence in the future. He spoke on the future of
traditional natural building materials such traditional natural
as wood and stone.
as wood and stone.
Dr. King joined the MIT faculty in 1953 as an assistant professor. He became associate professor in 1957 and professor in 1961. From Department of Metallurgy and Materials Department of Metallurgy and Materials 1962 . was a consultant on extractive metallurgy to major industrial corporations and a consultant on emissions from copper smelters
to the US Environmental Protection Agency Dr. King was born in Motherwell, Scotland on April 27, 1923. He received the BS degree in applied chemistry with first-class honors in 1945 and the PhD degree in metallurgy in 1950, both from Glasgow University, Scotland. He was a research metallurgist with Clyde
Alloy Steel Company in Glasgow from 194546 and a lecturer at the University of Strath clyde from 1950-53.
In 1985 he was awarded an honorary ScD from Glasgow University
Professor King was a Fellow of the Metal lurgical Society of the American Institute of
Mining, Metallurgical and Petroleum EngiMining, Metallurgical and Petroleum Engi-
neers (AIME), and a member and past chairman of the Boston section of the AIME. He was a Fellow of the American Academy of Arts and Sciences and a member of the American Society for Metals (ASM). He He was also A mert $\mathrm{Xi}_{\mathrm{i}}$ and an He was also a member or migma Mu. He was a member of The Winchester Country Club and an avid golfer well known for his prowess and sportsmanship.
Dr. King is survived by his wife, the former Helen Z. Scott of Winchester, and his children, Lesley King of Boston, Edith King of both of New Yo Anne King and Alan King,

Luscomb memorial set
A memorial service for Florence Luscomb,
MIT's oldest alumna, will be held Sunday MIT's oldest alumna, will be held Sunday,
Dec. 8, at 3pm in Arlington Street Church. Ms. Dec. 8, at 3pm in Arlington Street Church. Ms.
Luscomb, who died October 27 at the age of 98 , Luscomb, who died October 27 at the age of 98 ,
was a 1909 graduate in architecture.

## Robert C. Casselman

Robert C. Casselman, an MIT graduate and former Sloan School teacher who was a busimany years, died Nov 29 in Sanibel, Fla the age of 67 . and engineering administration in 1939 and served on the academic staff at the Sloan School of Management in 1964-65.
He had been a Polaroid executive for many years, the principal architect of a controversial plan to reorganize and streamline state government, and an associate director of Boston's

## Elkanah E. Yarde

Elkanah E. Yarde, 60, of Randolph, a technician at MIT from 1956 until his retirement earlier this year, died suddenly November 26. He is survived by his widow, Rayetta Thorne, one son, Terrill Yarde and three sisters, Hazel
Ward, Ernesta Ford and Sylvia Yarde.
John B. Keefe
John B. Keefe, 73 of Westwood, a foreman at Research Laboratory of Electronics until his retirement in 1973, died November 21. Mr.
Keefe, who began working at MIT in 1946, is survived by his widow, Anna Mankus, and two sons, Paul and John Keefe of Portland,
Maine. He also leaves two brothers, Edward and Robert of Roslindale.

## Michael N. Walsh Sr.

Michael N. Walsh Sr., 56, of Arlington, a plumber at Physical Plant since 1969 died November 27. He is survived by his widow, of Arlington; Capt. Edward M.(USMC) of Jacksonville N.C. Michael Jr. Patricia M Jacksonvine M. Thomichael Jr., Patricia M., Jacqueline M., Thomas A. and Daniel J., all of brothers and two grandchildren

Washington Bridge (1950) by William Schuman (b. 1910). Graduate student Charles R. Marge in
Fantasia in
(1983). These two students have Fantasia in G(1983). These two students have
assumed important leadership positions in assumed the band this fall, taking charge of much of the rehearsing and other arrangements during the illness of Mr. Corley

They conducted all but one selection of the special costumed concert given in Lobby 7 on
Halloween night. There was the largest crowd ever for this particular concert, with the audience crowded throughout the Lobby and on all the balconies. This concert also was filmed and featured in a special Halloween report by Joyce Kulhawik on WBZTV, Channel 4.
One selection chosen for the December 7 concert takes note of the anniversary of Pear1
Harbor: Two Marches, Op. 260 b (1946), by Darius Milhaud (1892-1971).The first march, In Memoriam, was written in memory of Pearl Harbor, while the second, Gloria
Victoribus, commemorates the ultimate vic tory.
Nicholinney 82 will be the featured soloist in miered by the Concert Band in 1963 Caiazza played tenor saxophone flute and clarinet in the big bands of Woody Herman and other bandleaders, and served on the faculty at the Berklee College of Music until his retirement in 1976.
The program also includes Russian Christmas Music (1944) by Alfred Reed (b. 1921) and Toccata Marziale (1924) by Ralph Vaughan Williams.
Each year the MIT Concert Band commissions a new work for band. This year's commission, Black Sun (1985) by Thomas McGah, will receive its MIT premiere at the McGah is a faculty member at the Berklee College of Music.


The United Way campaign at MIT has made a 20 per cent gain in the past two 80 per cent of the $\$ 250,000$ goal. More ene More have made contributions. Another 400 contributors would bring the level of giving even with last year, and very close to the goal, according to campaign coordinator Ann Brazier.
-Photo by Calvin Campbell

## Dedication to honor Brown

day. The most recent example ot this approach is the Microsystems Technology Laboratories, which is housed in the building to bear Dr. Brown's name
Dr. Brown is recognized internationally for his work in the field of servomechanisms and as an authority on automation. As founder and director of the MIT Servomechanicms Laboratory from 1941-52, he pioneered the theory and applications of feedback control. tuthored with Donald P.Campbell, remains a authored with Don
standard reference
During world War II, under Dr. Brown's leadership, the Servomechanisms Laboratory played a leading role in the application of servos to automatic fire-control systems. In the post-war period, his attention turned first to the development of the control system for the Brookhaven Nuclear Reactor and later to
digitally controlled machine-tool systems. The latter work completely revolutionized the machine tool business.
During the 1950s, Dr. Brown led his colleagues in a major program of educational innovation, developing the electrical engineering department's core curriculum. New subjects were added, textbooks were written and new laboratory programs were initiated. Under his leadership modern materials theory and modern principles of energy conversion were introduced into the teaching of electrical engineering. The educational innovations he spearheaded have had worldwide influence on the teaching of electrical engineering.
As dean of engineering, he played a key role in the development of interdepartmental research centers and led MIT's participation in international educational relationships, establishing interactions with institutions in Berlin, India and Singapore. His ideas for continuing education for practicing engineers led to the establishment of
Since his retirement in 1973, Dr. Brown and his wife Jean have spent their summers on Lake Winnepesaukee in New Hampshire and
their winters in Arizona. heir winters in Arona.
The building to be named for him, which is at 60 Vasser St., was built in 1967 when Dr. Brown was Dean of Engineering.Athat Computer Center was overflowing its original facilities. Faced with a pressing need formore computer space Dr. Brown conceived a novel idea. Under construction at that time
Space construction began here

## (continued from page 1)

gear in the MIT pool, later using space pressure suits in the neutral bue
space Flight Center space Flight Center
Over the years, Professor Akin and other students have spent
working at Marshall.
The result was data that indicated a high potential for efficient construction work in space. The MIT work showed that humans, in
fact, can be more productive in space than on fact, can be more productive in space than on space the problem of moving heavy parts and equipment is avoided and there is no fear about falling off a high structure.
The MIT data indicate that a productivity rate of 500 pounds an hour is within easy reach in space construction. That compares
was the structure that became Building 37, the Center for Space Research. Dr. Brown's dea: build a near duplicate of that structure on an adjacent site, using the designs, eng1neering specifications and drawings of the speedy construction of what is now Building 39, which continued to house the MIT Information Processing Center until the early 1980s. Starting in 1982, the interior of the six-story Building 39 was completely rebuilt. The more than $\$ 21$ million cost was borne by a group of electronies companies and the federal govern-
The building now houses laboratories for research in all areas of fabrication and evaluastructures. Large, state-of-the-art integrated circuits and systems can be processed from starting material through final test and packaging. Individual process steps can be packaging. Individual process steps can be
studied in great detail. Advanced devices can studied in great detail. Advanced devices can be made a patterns can be created for many purposes, electronic devices.
On the second floor is the Integrated Circuits Laboratory, a 2,500 -square-foot "clean room" with 4,500 square feet of support area. In a eliminated to pevent contamination of the semiconductor chips.
The third floor houses most of the airhandling equipment and the building's computers and test systems.
On the fourth floor are the Technology Research Laboratory and the Submicron Structures Laboratory.
Ten smaller individual laboratories are on the fifth floor.
Offices for 10 faculty members, 15 staff and 60 students are located in the building The Integrated Circuits Laboratory and the building facilities and operations are managed by the Microsystems Technology Laboratories, The Sy Professor Dimitri A. Antoniadis. The Submicron Structures Laboratory, Brown Building, is directed by Professor Henry I. Smith.

Besides work carried out in the Brown Building, the MIT program in VLSI includes research in electronic materials, computeraided design, systems architecture and theory. million.
with about 50 pounds an hour for earth construction.
The MIT group focused on worker productivity because it was an area in which not much research had been done. Fresh ideas emerged because, as Professor Miller put it, "The students didn't have preconceived notions. "They don't have 20 years of bu

The structure that was assembled during the shuttle mission was a tetrahedral cell that looks like an inverted pyramid. Six aluminum beams, each 12 feet long and weighing 64 was chosen in the early MIT experiments because it is expected to
of any space structure.


[^0]:    The listings in this supplement reflect information as of November 15, 1985, therefore, several committees do not have full memberships. Appointments of members (including student members) take place continuously throughout the year. Updated information on committees is always available from the Information Center, Room 7-121, Ext. 3-1475.
    § Ex officio non-voting. The names of ex officio members, or their designated representatives (Des. Rep.), are indicated in parentheses next to the listing of the ex officio position in all committees.

[^1]:    * Ex officio voting. The names of ex officio members, or their designated representatives (Des. Rep.), are indicated in parentheses next to the listing of the ex officio position in all committees.
    ** Non-MIT member
    § Ex officio non-voting. The names of ex officio members, or their designated representatives (Des. Rep.), are indicated in parentheses next to the listing of the ex officio position in all committees.
    $\dagger$ Safety Committee

