

Dean Burchard with Winston Churchill at the Midcentury Convocation in 1949.

## John E. Burchard, Emeritus Dean, Dies

John Ely Burchard—Dean Emeritus of the MIT School of Humanities and Social Science, widely respected architectural critic and historian, authority on housing and urban beauty, and renowned educator and scholar who championed the convergence of science and culture and the melding of technological progress with humanism—died Thursday (Dec. 25) at the Massachusetts Gen-

eral Hospital in Boston. He was 77. Dean Burchard had been in ill health for four years and was hospitalized on several occasions. He entered the hospital last on Dec. 8, his 77th birthday.

Despite his illness, however, Dean Burchard remained active and recently completed his final book, *Bellini Is Dead? Architecture and the*

(Continued on page 8)

## Events to Commemorate Martin Luther King Week

A week-long series of public events at MIT will commemorate the birthday of the late Dr. Martin Luther King, Jr., January 12-16, 1976.

The observance will be organized around the theme "Reflections of the Dream: Past, Present and Future." Highlight of the week will be a keynote address Wednesday, Jan. 14, at 12:30pm in Kresge Auditorium by Walter J. Leonard, assistant to the president of Harvard University. The memorial observance will

begin at 12 noon with a silent march from MIT's main entrance (77  
(Continued on page 8)

### King Day

The Institute will be closed Thursday, Jan. 15, in observance of the birthday of Martin Luther King, Jr. The usual pay practices applying to special Institute closings will be in effect.

## Telephone Seminar Planned

MIT and American Telephone and Telegraph announced Tuesday they will hold a two-day symposium at MIT to assess past and future impact of telecommunications technology on society.

The symposium will take place March 9-10 as part of the 100th anniversary of the telephone's invention.

International leaders in education, science, engineering, communications, business and government will participate.

MIT President, Jerome B. Wiesner, said the principal topics to be explored in workshop sessions will be the social effects of the telephone during its first 100 years, the future impact of computers and information processing, and the two most basic aspects of human communications—language and understanding.

The symposium will include several special events, among them an opening address by President Wiesner and a closing dinner at which AT&T Chairman John D. deButts

will speak. William C. Mercer, president of New England Telephone, will preside at the dinner.

President Wiesner said the symposium will lead off a series of workshop studies to be carried out by the university during the bicentennial year on aspects of the modern world in which science and technology play a major role.

"The invention of the telephone by Alexander Graham Bell a century ago," he said, "deserves appropriate

(Continued on page 6)

## Study Urges Nutrition Funding

Important areas of research vital to strengthening the US food protein supply are either inadequately funded or are entirely neglected in terms of research needs, a study coordinated by MIT's Department of Nutrition and Food Science has found. The study was released Friday, Dec. 19.

The intensive study, supported by a grant from the National Science Foundation, urged that \$200 million be provided over the next 10 years

for work in 14 research areas selected as having high priority. (See Box.)

Dr. Nevin S. Scrimshaw, head of the MIT department, and Daniel I.C. Wang, professor of nutrition, directed the study, which was coordinated by Dr. Max Milner, who recently retired from the United Nations where his position was scientific secretary and director of the secretariat, Protein-Calorie Advisory Group of the

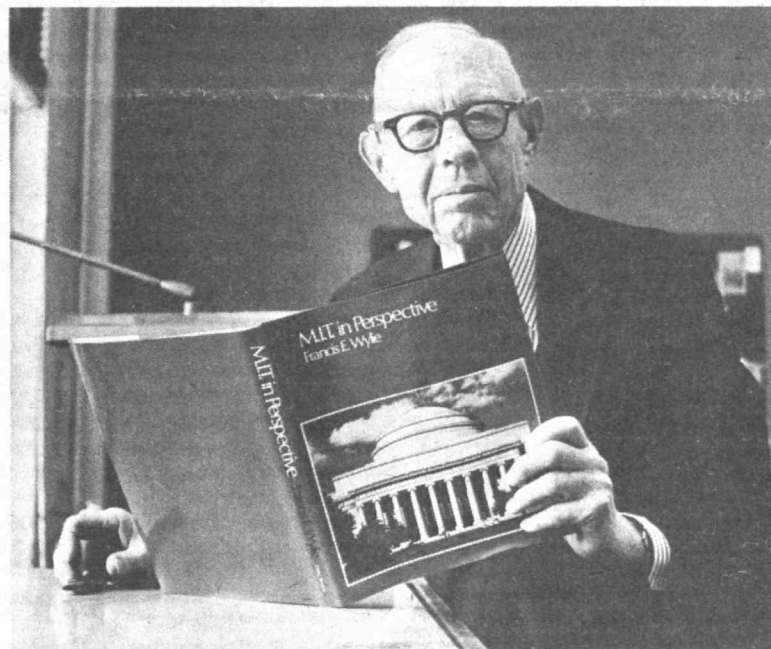
United Nations System.

Dr. Scrimshaw said that the main contribution of the study was the identification of major gaps in US research efforts for the development of protein resources to the end of the century.

Priorities include application of new developments in biology and food technology to conventional agriculture, better identification of

(Continued on page 6)

## Wylie Book: New Glimpse of MIT



Mr. Wylie with a copy of his new book.

From William Barton Rogers' famed note, "May this not prove a memorable day," as classes began at MIT February 20, 1865, through announcement of the 1975 Nobel Prize to Dr. David Baltimore last October, highlights and sidelights of MIT's history are chronicled in a new book, *MIT in Perspective*, by Francis E. Wylie, to be published March 5, by Little, Brown.

Advance sale of the book (\$15.00) has begun for the MIT community and alumni. Copies are available from Walter L. Milne's office (Rm 5-208), from the Alumni Association (Rm E19-437A), and at the Tech Coop.

Mr. Wylie, who retired in 1970 after 15 years as director of public relations at MIT, said he first conceived of the book during MIT's Centennial in 1961.

"We found Samuel Prescott's *When MIT was 'Boston Tech'* very helpful in recapturing the early days

(Continued on page 3)

## Quiet Corridor Camaraderie Unites M.I.T. Night Crew

By ELLEN N. HOFFMAN  
Staff Writer

Not brownies, fairies or ghosts, but a work force of more than 250 persons haunts the halls of MIT during the late night hours, busily cleaning long after the last day shift employees have gone home.

This work force—MIT's evening and night shift personnel—are a close-knit group, hardly known to the thousands of people who spend their days at MIT.

"About 99 percent of the cleaning at MIT takes place during the evening and night shifts," said George J. Pesaturo, Jr., supervisor of building services at MIT. "But most people at the Institute are not aware of the extent of the work that goes on here every night."

Little wonder that most MIT employees never see the 144 building services night shift employees. They report to work at 11pm and leave at 7am. The 110 evening shift workers who come in at either 3 or 4pm and leave at 11pm or midnight do have some contact with day personnel, but the majority of their working

hours are also spent alone.

"Most people don't know that we exist," said Ernie Potvin, a night shift employee who has enjoyed working on the night shift for more than eight years. "I recently met a secretary for the first time after cleaning her office every night for the past eight years."

Like Potvin, Jean Griffin, a night shift worker who fills in doing general cleaning, finds no problem with the strange hours and lack of contact with the daytime community. "I actually like working nights," she said. "I have a son working the same shift and I think that the night shift people are a swell bunch, like a family."

Unlike most parents, Ms. Griffin does not have to worry about struggling out of bed to get the youngest of her four children off to school in the morning—she takes care of that when she gets home from work—before she goes to sleep.

Another advantage of the late shifts is missing rush hour. "You

don't have to worry about rush hour traffic when you leave for work at 3:00pm and come home at midnight," said Chet Marchewka, a machine operator on the evening shift.

For Fred Braxton, an evening shift cleaner in the Graphic Arts building, the evening shift provides a chance to squeeze in a second cleaning job with the Eastern Massachusetts Industrial Cleaners. The late hours only bothered Braxton, a total sports enthusiast, when he missed seeing the Red Sox World Series games on television.

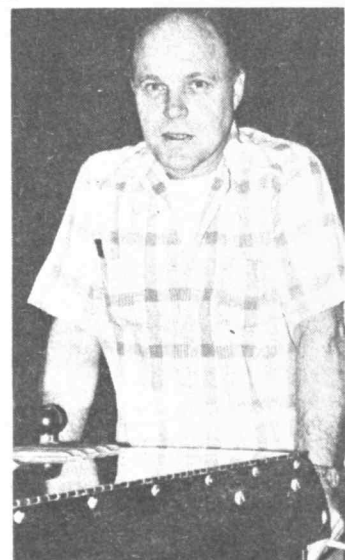
"It does take a while to get used to being in a building by yourself late at night," said Braxton. "At first I heard noises after everyone went home, but after a while you learn to reconcile yourself to the sounds of an empty building."

Because evening and night workers have to cover a lot of territory every night—more than 70 buildings—they work separately, often in touch only with their supervisors, who, equipped with

(Continued on page 3)



One of the 20 women evening and night shift building services employees, Jean Griffin of Cambridge works from 11pm until 7am. Although her husband Walter, an MIT evening shift mailer, has been at MIT for 14 years, this is Ms. Griffin's first year on the MIT night shift.



Evening shift machine operator Chet Marchewka of Everett is shown with the self-propelling scrubbing machine that he operates nightly at MIT. Unlike some evening workers who go to bed after work, Marchewka frequently stays up until 4 or 5am—painting.

# INSTITUTE NOTICES

## Announcements

**Wellesley-MIT Exchange**—Spring term course descriptions, schedules & registration information available in Exchange Office, Rm 7-108.

**First Annual IAP Diplomacy Tournament\***—Sat, Jan 10, 17 & 24, 10am-5pm, New West Campus. Admission \$50/person or \$1/team (1-3 persons). Info & registration: x5-7422 Dorm.

**Second Term Registration**—Registration material due in Registrar's office, Rm E19-335, Mon, Jan 12. There will be a \$5 fine for any registration received after this date. Material available in Registrar's office.

**February Degree Recipients**—Cards enclosed with Feb degree notice must be returned to Rm E19-344 no later than Fri, Jan 23 to indicate whether diplomas are to be mailed, called for in person, or if attendance at Commencement, May 28, 1976 is planned.

**Basic Pistol Marksmanship Course**—Thurs, Jan 8, 6:30pm, duPont Pistol Range. Fee: \$20, covers everything. Open to first 20 members of community to register. Registration: Tom McLennan, x3-3296 or Andy Platias, x8-1417 Draper.

**R/O Co-ordinator**—The Freshman Advisory Council is looking for a creative, innovative, responsible undergraduate to serve as 1976 R/O Co-ordinator. Salary \$1,000. Proposals due by 1/12/76 at FAC, Rm 7-103.

## IAP Notices

**IAP #7, Innovation Projects Seminars**—Will begin Wed, Jan 14 (not Mon, Jan 12), 1-2pm, Rm 37-252.

**IAP #127a, Current Directions in Artificial Intelligence**—Will meet Wed (not daily), Jan 7-28, 1pm, AI Common Rm, 8th fl Bldg NE-43.

**IAP #137, Economics of Energy Supply and Demand**—Will be given Tues, Jan 27 (not Tues, Jan 6), 10am-12n, Rm 39-500.

**IAP #259, Recent Developments in Neurobiology: Implications for the Diagnosis and Treatment of Neurological Disorders**—Will meet Fri, Jan 16, (not Fri, Jan 9), 2:30-4pm, Rm 56-134.

**IAP #269, Shallow-Water Ship Hydrodynamics**—will be offered Jan 20-23, 2pm, Rm 5-314, not as listed in IAP Guide.

**IAP #391, How to Succeed in Job Hunting**—has been cancelled.

**Stochastic Estimation on Cable TV During IAP**—A 19-lecture series on "Stochastic Estimation" will be one of the features of the new Institute Cable TV System during IAP. The lectures, by Professor Michael Athans, are part of a self-study subject on "Modern Control Theory" produced by the Center for Advanced Engineering Study. The programs will be shown on Channel 8 every weekday morning at 10am starting Tues, Jan 6.

**"Introduction to Experimentation" on Cable TV During IAP**—A self-study subject on "Introduction to Experimentation" will be offered during IAP on the new Institute Cable TV System. The lectures and demonstrations by Professor Ernest Rabinowicz, mechanical engineering, will be shown on Channel 8 at 11am. The series starts Thurs, Jan 8, and runs for 14 weekday mornings through Mon, Jan 26. Those wishing to take this subject should obtain a copy of the study guide (\$10.50) and textbook (\$4.95) at the Center for Advanced Engineering Study (Rm 9-234). Students wishing to receive credit (4 units) for taking the subject must also complete all homework and pass a final examination.

## New UROP Listings

For more detailed information on UROP opportunities listed, MIT undergraduates should call or visit the Undergraduate Research Opportunities Program Office, Room 20B-141, Ext. 3-5049 or 3-4849 unless otherwise specified in the listing. Undergraduates are also urged to check with the UROP bulletin board in the main corridor of the Institute.

**Attention!**  
UROP has saved \$6,000 in printing costs by not issuing a new UROP Directory for spring 1976. This money is available for funding students' research proposals for IAP and spring term. The 1975/1976 UROP Directory is current for spring term. Also, check the UROP bulletin board, Tech Talk, or the UROP office for the most recent available projects both on- and off-campus.

**Veterans Administration Hospital**—West Roxbury, Ma.  
The Research Director of the Massachusetts Chapter of the Association of Paralyzed Veterans of America would like to become in-

volved in a study of how wheelchair design and construction materials can be modified. The research director, a quadriplegic himself, wants to reduce the weight of a chair while maintaining strength at stress points. The research would include an analysis of what disabled persons don't like about present designs and a modification of materials and design to lighten a chair.

**Charles Stark Draper Laboratory**—Cambridge, Ma.  
The Draper Lab offers a wide range of projects in which students can become involved. The following projects are among those being offered: 1.) Analysis, design, and model fabrication of a tape drive mechanism. 2.) High pressure effects on electronic and electro-mechanical devices. 3.) Readout for a magnetic compass with high resolution. 4.) Constant-speed drive for a tow tank instrument station. 5.) Design of a hydraulic pressure enclosure. 6.) Design of a special purpose cassette tape reader. 7.) Design of emissivity laboratory test fixture. 8.) Computer software development.

**Massachusetts Attorney General's Office**  
The Massachusetts Attorney General's Office, Administrative Law Division, represents the Massachusetts Department of Public Utilities in a rates case involving the Boston Edison Company. A decision was made by the DPU to allow Boston Edison to increase its rates to all customers. This decision is being appealed to the Massachusetts Supreme Judicial Court. In preparation for the court hearing, the Attorney General's staff is reviewing the economic and financial data prepared by Boston Edison in support of its claim that a rate increase is needed. A student with background in economics, finance, or accounting would work with the legal staff of the Attorney General's Office in the interpretation of the financial data and in the preparation of the brief for the court hearing.

**Computer Sciences**  
The project deals with the structure of biological macromolecules and their analysis through computer applications. The aim is to develop and implement a number of innovative programs for solving and interpreting the structure of molecules, especially macromolecular nucleic acids. A PDP 11/50 system is available. The student should have a background in Fortran programming and preferably experience with computers of the PDP 11/50 type.  
Contact Professor Alexander Rich, x3-4715, or Dr. Gary Quigley, x3-4710.

**Dynamic Control of Urban Transportation Systems**

Several openings exist for students who are interested in understanding the dynamics and control of freeway and signalized arterial traffic systems using optimization techniques. Different aspects of flow optimization (for different performance criteria such as time delay, energy consumption) using linear and nonlinear programming techniques, automated detection and location of accidents and subsequent dynamic rerouting of traffic, optimal synchronization of traffic, optimal synchronization of traffic signals, mathematical model validations using actual data. The research will involve both analytical and digital simulation studies (FORTRAN programming is sufficient). The students will interact with an existing research team under the direction of Professor M. Athans. Contact Dr. Paul K. Hout, Rm 35-318, x3-2351 or Dr. Stanley Gerhswin, Rm 35-407, x3-3149.

**The Children's Hospital Medical Center**—Boston, Ma.  
An opportunity exists for a UROP student in a laboratory involved in basic cancer research. In particular, they have focussed on the mechanism of growth of normal and tumor cells in such systems as the tissue culture flask, the chorioallantoic membrane of the developing chick embryo and the cornea of the rabbit eye. Studies on tumor cells have focused on such tumor properties as angiogenesis (the ability of a tumor cell to induce the growth of blood vessels in the host) and invasion (the ability of a tumor cell to penetrate and grow in host tissue). Studies on normal cells have concentrated on the elucidation of the factors required for normal cell growth and the cessation of normal cell growth. Detailed knowledge of the mechanisms of normal cell growth are needed to understand what goes wrong in the cancer cell. Immediate projects include: the purification and characterization of this protein; determining whether this protein is made by a normal cell; and measuring the levels of this protein in tumor cells that are growing wildly.

**Children's Hospital**—Boston, Ma.  
Determination of the motions and instantaneous centers of rotation of various joints in the body. To date only the hip and knee have been studied. Using radiological technique, normal subjects and patients with various pathological joint disorders will be examined to determine the instantaneous size of rotation of the shoulder, elbow, and ankle. Facilities are available in the lab for performing such x-rays with an x-ray technician.

## Other Opportunities

**Summer Fellowship Program for Women Interested in Medicine.**  
The Medical College of Pennsylvania is offering a summer fellowship program for women interested in medicine. It is limited to residents of Pennsylvania who have completed at least one year of college. The eight week program includes helping on a specific project, viewing medical and surgical procedures, and attending seminars and grand rounds. It is structured to give the student an overview of the field of medicine to help her make a decision about medicine as a career option. Stipends and Federal Work Study grants are available to students in need of financial assistance. Applications should be made as soon as possible. Personal interviews are being scheduled for January and February. For additional information, contact the Pre-

professional Advisory and Education Office, Rm 10-186, x3-4158.

**Summer Program at Brookhaven National Laboratory.**

Brookhaven National Laboratory in Upton, NY is offering summer trainee appointments to students majoring in applied math, physical and life sciences, and electrical, chemical and nuclear engineering. The program is from June 14 through August 27 and open only to students who will have completed their junior or senior year by June 1976. It is designed to give research experience involving such fields as effects of radiation, application of tracer techniques, nuclear medicine, and high and low energy particle accelerators. Stipends will be \$115 weekly, and there is a travel allowance. The deadline for application and for receiving letters of reference is January 31, 1976. For more information contact the Preprofessional Advisory and Education Office, Rm 10-186, x3-4158.

## MIT Club Notes

**MIT Bridge Club**—IAP meetings, Jan 9-31: Fri, 7:30pm-12n; Sat, 1:30-6pm; Stu Ctr Rm 473.

**MIT Figure Skating Club\*\***—A chance for figure skaters who feel confident at skating forwards and who can at least make an at-

tempt to skate backwards to meet as a group. Sun, weather permitting, 11:30am-1pm, skating rink. Free, need athletic card & skates.

**MIT Goju Karate Club\*\***—Mon, Wed & Fri, 7-9pm, Stu Ctr Rm 407. Info: 536-1830.

**Hobby Shop\*\***—Mon-Fri, 10am-6pm, Rm W31-031. Fees: \$10/term for students, \$15/term for community. Info, x3-4343.

## Religious Activities

**The Chapel is open for private meditation** 7am-11pm daily.

**Campus Crusade for Christ\***—Family Time Fri, 7:45pm, Rm 37-252.

**Celebration of Holy Communion\*\***—MIT Lutheran & Episcopal Ministry, Wed, 5:05pm, Chapel. Supper following, 312 Memorial Dr.

**Christian Worship Service\***—Sun, 10:45am, Chapel. Refreshments following service.

**Hillel\***—Traditional services Fri, 4pm, Kosher Kitchen & Sat, 9am, Chapel.

**Prayer Time\*\***—Lunch hour Bible classes led by Miriam R. Eccles. Fri, 1-2pm, Rm 20E-226. All are welcome.

**The Society of Friends (Quakers)**—Luncheon Fri, 12n, bsmt of 312 Memorial Dr. For those interested in the Society of Friends and possible formation of worship group on campus.



January 7 through January 14

CHANNEL 8

Wednesday, January 7, 1976	
9:00am	Surface Chemistry—Lecture 3: Measurement of Surface and Interfacial Tensions of Liquids (1)—Professor J.Th.G. Overbeek
10:00	Stochastic Estimation—Lecture 2: Review of Probabilistic Concepts—Professor Michael Athans
12:00 noon	MIT Science Reporter—John Fitch interviews Professor Harold Edgerton
2:00pm	Surface Chemistry—Lecture 4: Measurement of Surface and Interfacial Tensions of Liquids (2)—Professor J.Th.G. Overbeek
3:00	Engineering in the '70s—Engineering Design at MIT—Professor W.C. Flowers
5:00	Science Reporter (Repeat)
Thursday, January 8, 1976	
10:00am	Stochastic Estimation—Lecture 3: Response of linear systems to white noise inputs—discrete time case—Professor Michael Athans
11:00	Introduction to Experimentation—Lecture 1: Experimentation—Professor Ernest Rabinowicz
1:30pm	Surface Chemistry—Lecture 5: Adsorption—Analytical Aspect—Professor J.Th.G. Overbeek
4:00	Humanitas—The Greek View of Humanity and Science—John Finley, Harvard University
Friday, January 9, 1976	
9:00am	Surface Chemistry—Lecture 6: Thermodynamics of Fluid Interfaces—Professor J.Th.G. Overbeek
10:00	Stochastic Estimation—Lecture 4: Response of linear systems to white noise inputs—continuous time case—Professor Michael Athans
11:00	Introduction to Experimentation—Lecture 2: Performance of Instruments—Professor Ernest Rabinowicz
12:00 noon	Women's Program with Niti Salloway
2:00	History of Electrical Engineering at MIT—Host John Fitch interviews Professor Karl Wildes
5:00	Women's Program (R)
Monday, January 12, 1976	
9:00am	Surface Chemistry—Lecture 7: Spreading—Surface Films of Insoluble Monolayers—Professor J.Th.G. Overbeek
10:00	Stochastic Estimation—Lecture 5A: The Bayesian Approach to Parameter Estimation (1)—Professor Michael Athans
11:00	Introduction to Experimentation—Lecture 3: Errors of Measurement—Professor Ernest Rabinowicz
2:00pm	1972 World Peace Lectures—Buckminster Fuller
Tuesday, January 13, 1976	
10:00am	Stochastic Estimation—Lecture 5B: The Bayesian Approach to Parameter Estimation (2)—Professor Michael Athans
11:00	Introduction to Experimentation—Lecture 4: Combination of Errors—Professor Ernest Rabinowicz
12:00 noon	Lobby Seven
1:30pm	Surface Chemistry—Lecture 7: Spreading—Surface Films of Insoluble Monolayers (R)
3:00	The Energy Crisis: Fact versus Myth—A Global Perspective—Professor Bernard Feld
5:00	Lobby Seven (R)
Wednesday, January 14, 1976	
9:00am	Surface Chemistry—Lecture 13: Charged Interfaces—Electrochemistry of the Phase Boundary—Professor J.Th.G. Overbeek
10:00	Stochastic Estimation—Lecture 6A: The Discrete-Time Kalman Filter (1)—Professor Michael Athans
11:00	Introduction to Experimentation—Lecture 5: The Normal Distribution—Professor Ernest Rabinowicz
12:00 noon	Personnel Program with Jim Culliton
3:00pm	Engineering in the '70s—Undergraduate Engineering Projects: A Change in the Rules of the Curriculum Game—Professor Margaret MacVicar
5:00	Personnel Program (R)

# Oldenburg Exhibition Scheduled

A major exhibition of sculpture, drawings and prints by Claes Oldenburg will open Jan. 17, 1976, and continue through Feb. 25 at both Hayden Gallery, MIT, and at the Institute of Contemporary Art, Boston. The showing will be the first comprehensive presentation of Oldenburg's work in the Boston area.

Organized by the Walker Art Center in Minneapolis, the exhibition explores Oldenburg's particular interest in six themes: *Geometric Mouse, Fagends, Standing Mitt with Ball, Clothespin, Three-Way Plug, and Typewriter Eraser.*

More than 250 works tracing the development of these themes over the last several years in prints, drawings, models, soft sculptures, and large metal works will be shared by both galleries. Each theme is shown in many variations in material as well as content.

Oldenburg plans to attend public opening receptions to be held at the Institute of Contemporary Art and Hayden Gallery from 8 to 11pm Friday, Jan. 16. Shuttle buses will run continuously between the two locations during the opening.

In addition, Oldenburg will give a slide lecture at MIT in Room 26-100 at 8pm Tuesday, Jan. 13. Admission will be \$1.

A catalogue including photo documentation and special chronology and bibliography and a poster designed by Oldenburg especially for the Boston showing will be available at both galleries.

The Council for the Arts at MIT assisted in bringing the Oldenburg exhibition to the Institute.

## Echoes

### 50 Years Ago

The death of the eminent MIT geologist, William O. Crosby, '76, was announced.

A new egg substitute for cooking use developed by Professor Bunker of the Biology Department was reported in *Technology Review*.

### 40 Years Ago

Alumni and friends presented MIT with nine new sailing dinghies, bringing the number of boats in the fleet to 25.

Sports seemed to take on a new vigor as Tech basketball team won a 5 point victory over Harvard and the Beaver Pucksters played rings around Northeastern.

President Compton announced that the Institute would adopt a new policy of stabilizing the size of freshmen class admitted each year. A quota of 600 was given as the projected acceptance of first year students.

### 25 Years Ago

A \$5.25 million grant from the Sloan Foundation was given to the Institute for a School of Industrial Management. The Lever House on Memorial Drive was acquired to house the new school.

Dr. Karl T. Compton was named recipient of the first William Proctor Prize for Scientific Achievement.

Prepared by Ethel I. Newell, MIT Historical Collections, x3-4444.

TECH TALK  
Volume 20, Number 21  
January 7, 1976

Tech Talk is published 45 times a year by the News Office, Massachusetts Institute of Technology. Director: Robert M. Byers; Assistant Directors: Charles H. Ball, Barbara Burke, Robert C. Di Iorio, Patricia M. Maroni, Joanne Miller, William T. Struble, and Calvin D. Campbell, photojournalist; Reporters: Sally M. Hamilton, Ellen N. Hoffman; Institute Calendar, Institute Notices, Classified Ads: Susan E. Walker.

Address news and editorial comment to MIT News Office, Room 5-111, MIT, Cambridge, MA 02139. Telephone 253-2701.

Mail subscriptions are \$6 per year. Checks should be made payable to MIT and mailed to the Business Manager, Room 5-111, MIT, Cambridge, MA 02139.

# Cable TV Debuts

MIT Cable Television, following a script laid out more than a year ago, this week began broadcast operations across a two-mile loop that extends from West Campus housing to the Hermann Building near Kendall Square.

From television sets in Buildings 7, 9, 10, the Student Center, and three dormitories, viewers watched a special inaugural program that officially opened the cable at noon on Monday, January 5. The cable now has two operational channels—MIT stations 8 and 10 on the standard TV dial. As many as fourteen additional channels can be added in accordance with need and funding support.

The first program was broadcast on Channel 8, scheduled to operate from 8am to 6pm Monday through Friday during IAP. Channel 10 is not yet operative, but when it becomes so, it is expected to run 24 hours a day.

Dr. James R. Killian, Jr., speaking on the first cable program, said MIT had been selected by the Sloan Foundation to provide programming that would be useful nationwide.

"Now that the MIT Cable Television System is in place, we face a challenge to make it serve the best interests of our education and our community life," he said. "Two institutions—Dartmouth and MIT—have been selected by the Sloan Foundation to provide a demonstration of how this technology can be useful to faculty and students alike. The Foundation was primarily interested in the development of software and expressed the hope that these two institutions could provide a programming demonstration that would be useful nationwide."

President Jerome Wiesner, also a featured guest on the first program, this week recognized the opening of the cable with the announcement that he is appointing an MIT Cable TV Policy Board. The 10-member group will be chaired by Professor Roy Kaplow of the Department of Materials Science and Engineering and the Division for Study and Research in Education. The Board will include faculty, staff and students. Persons at MIT are invited to present program ideas or specific tapes for consideration for inclusion in the schedule. All suggestions or submissions should be made to Niti Salloway, who is acting as manager of the cable program. She can be reached at MIT x3-3625.

Among the programs scheduled for the first week of operations on Channel 8 are *MIT Science Reporter* with John Fitch as host, *Engineering in the Seventies*, a pre-recorded address by Professor Woodie C. Flowers to high school math and science teachers, a women's program with Niti Salloway, live telecasts of Lobby 7 events, and a taped summary of Professor George W. Rathjens' seminar on nuclear reactor safety.

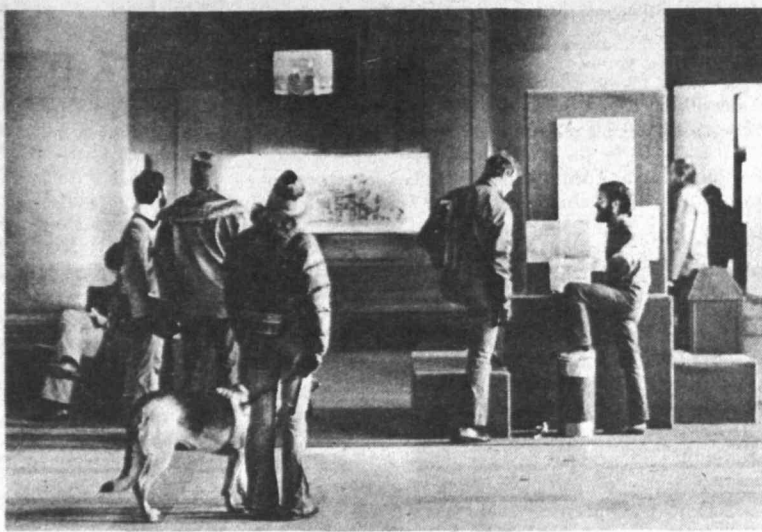
## Ravi Shankar Concert Planned

Ravi Shankar and Alla Rakha, masters of Indian music, will give a sitar and tabla concert on Saturday, Jan. 10, at 8:00pm in Kresge Auditorium.

Shankar, who has received critical acclaim for ingeniously blending the musical styles of the East and West, has composed extensively for the ballet and the cinema, including the music for Satyajit Ray's *Pather Panchali* and the Hollywood production of *Charly*. His music has been played by the London Symphony Orchestra and he has also performed at Woodstock, the Monterey Pop Festival and Lincoln Center.

When playing together at New York's Philharmonic Hall, Ravi Shankar and Alla Rakha received a rave review from Don Heckman of *The New York Times*, who called them "Indian classical musicians of the first order."

Admission to the concert, sponsored by Sangam, the Indian students' organization at MIT, will be \$5 and \$7. A \$2 discount will be given for anyone with a student ID. All seats are reserved. For reservations or further information contact Sangam at x3-3522 between 6:30 and 9:00pm.



MIT Cable TV's inaugural program attracts several Lobby 7 viewers.

held earlier this month (See Cable TV listings on Page 2 for exact times).

Instructional programs that will be featured during the cable's initial experimental period include a 19-lecture series on "Stochastic Estimation" by Professor Michael Athans, director of the Electronic Systems Laboratory, and a series of talks on surface chemistry by Professor J. Theodor G. Overbeek.

In addition, a self-study course, "Introduction to Experimentation," will be offered by Professor Ernest Rabinowicz for a series of 14 programs, beginning January 8. Students may receive four units of credit for the course, which requires a study guide, textbook, and final examination.

## Cambridge Forum Lists 3 From MIT

Three members of the MIT community, Mary Rowe, special assistant to the president and chancellor for women and work, Morris Adelman, professor of economics and Lloyd Rodwin, Ford International Professor of Urban Planning, will participate in the 1975 Cambridge Forum series, "Questions for America's Third Century."

The forum, open to the public without charge, is held every Wednesday evening at 8pm at 3 Church St., Harvard Square.

On Jan. 14 Mary Rowe will appear with psychologist Robert Fein discussing "The Future of Men and Women: What is Androgyny?" On Feb. 18 Professor Adelman and Stephen Breyer of Harvard will speak on

## 'MIT in Perspective'

(Continued from page 1) of the Institute," Mr. Wylie said, "but that book ended in 1916, and there was no single historical record for the period from 1916-1961."

"David S. Woodbury, '21, author of *Elihu Thomson, Beloved Scientist* and *Let Erma Do It, The Full Story of Automation*," developed a historical research summary during the Centennial period which I found most useful when I undertook this book," he said.

The 207-page book contains 280 drawings and photographs, arranged in chapters which detail moments of significance for MIT as well as discussing the development of both traditional and modern disciplines.

"... Rather than attempting to weave stories into a broad, continuous fabric, as a skillful historian would do, I have taken liberties with chronology and, for more or less logical reasons, have manipulated history to provide self-contained sequences," Mr. Wylie wrote in the preface. "One will therefore find 1975 pictures mingled with those of 1875."

Because of the extensive use of pictures, the book is especially appealing as a record of how MIT has changed and grown over the years. The text—some 60,000 lively words—describes not only the great breakthroughs which raised MIT to its position of preeminence in science and technology, but also moments of significance to the Institute itself, such as the great celebration commemorating the move to Cambridge in 1916, the closing of the Radiation Laboratory after World War II, and even student pranks and protests.

As President Jerome B. Wiesner wrote in a foreword:

Cable TV viewing locations are in the lobbies of Buildings 7 and 10; the library on the fifth floor of the Student Center; the lounges in the Fasset Lounge of the East Campus dormitories, Senior House and Bexley Hall; and Room 9-329.

Much of the present organizational structure of this full cable system is informal. The initial, experimental period of operation during IAP is regarded as a time for verifying technical aspects of the equipment and locations of viewing equipment, and devising general guidelines for programming. Other operating issues to be considered are appropriate structures for scheduling and new directions for development. These will be considered by the Policy Board now being formed.

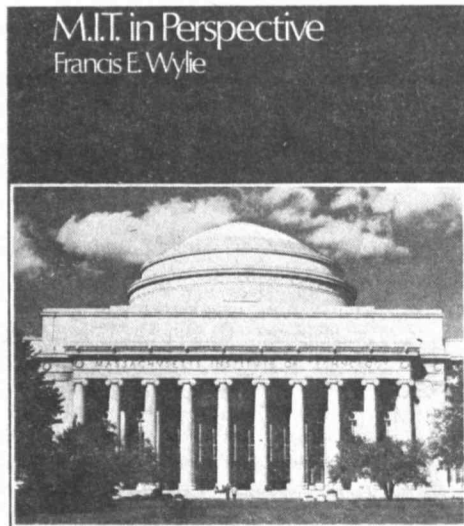
"Break Up the Oil Cartel?" and on March 19 Professor Rodwin will lecture on "The Future Metropolis: Can it be Made Humane?"

## Papers Invited

The Grants Peer Review Study Team—established by the National Institutes of Health in September to study the NIH system of having scientific peer groups review grant applications—will hold public hearings in Chicago Feb. 12, San Francisco Feb. 19, and Bethesda, Md., Feb. 26.

Dr. Ruth I. Kirschstein, director of the National Institute of General Medical Science and chairperson of the study team, said written comments also are being sought and should be sent to Dr. Mathilde Soloway, study team executive secretary, Room 4A35, Bldg. 31, NIH, Bethesda, Md., 20014, before Jan. 16.

"The panoramic view that [Mr. Wylie] provides is, I think, an exciting one... this pictorial story of MIT is presented in a manner that is absorbing and contributes very much in its own special way to the comprehension of the Institute's history and character."



In a unique combination of pictures, captions, and text, this book has indeed put "M.I.T. in Perspective." Send in your order today.

# Dental Clinic Now Open To All MIT Employees

Effective January 1, 1976, the MIT Dental Service is open to all MIT personnel.

Until now only students, student spouses and Health Plan Members could use the Dental Service for routine treatment. Employees who were not Plan members could use the service only for acute and emergency dental problems. Now all MIT employees and students and student spouses may use the Dental Service on a fee-for-service basis.

The MIT Dental Service is located on the first floor of the Infirmary (Building W5), between McCormick Hall and Baker House. Hours are Monday through Friday, 9am to 4:30pm.

The clinic is staffed by two full-time and two part-time general dentists, one part-time endodontist (specialist in root canals), one part-time periodontist (gum specialist), one part-time oral surgeon, two dental hygienists, four dental assistants and two secretaries.

Services provided by the clinic include consultation on dental problems, examination, cleaning (prophylaxis), instruction in oral hygiene (plaque control), fillings, crowns, bridges, root canal treatment, gum treatment, dentures (complete, partial or repair of existing dentures),

extractions, oral surgery, and referrals to other dentists or specialists. The only dental services not provided are pediatric dentistry (patients must be 14 years or over) and orthodontic dentistry (teeth straightening).

Care is provided on a fee-for-service basis and fees are established according to the type work to be done. (Fees are comparable to those of non-MIT dentists.) There is also a charge of \$15 for a broken appointment unless 24-hour notice of cancellation is given. Being more than 15 minutes late is also considered a broken appointment.

Appointments can be made by phoning x3-1501. For an initial exam you will be seen first by the hygienist who will x-ray and clean the teeth. After that the dentist will examine you and determine a treatment plan with you.

For emergency and acute dental problems, call x3-1501 and the secretary will arrange for you to see a dentist as soon as possible, probably the same day.

As with most dental services, there may be a delay of several weeks for appointments particularly during the peak period (i.e. during the semester).

For further questions call 253-1501.

## Corridor Camaraderie

(Continued from page 1)

walkie-talkies, coordinate the late hours' work.

Not a mop and broom operation, the building services crew—covering the Institute seven days a week—is assisted by large power scrubbers, polishers and sweepers which can easily take the place of several persons using hand equipment. However, it is not yet economically advantageous to have automated equipment aiding the two evening shift mail sorters who, each night, must

sort approximately 12,000 pieces of mail.

This can prove to be a lonely existence, but according to Chief Olivieri of the MIT Campus Patrol, it is not especially dangerous. "Most of the criminal activity at MIT takes place during the day," said Olivieri. The 254 evening and night shift building services employees, their eight supervisors, nine dormitory watchmen and ten campus patrolmen coordinate their activities to watch for problems which might arise during the night.

There is a system by which employees working alone in isolated buildings call in to the Campus Patrol at specific hours. "If, for some reason they don't," said Ted Doan, manager of building services, "a supervisor is sent immediately to check things out."

Every so often an experiment will blow up or something will go wrong with equipment and MIT's after hours people have to deal with the problem. However, these are just added tasks.

What has to be dealt with every night, though, is the daily cleaning efficiently carried out by MIT's often unseen work force—the evening and night shift employees.



An avid roller skater, Fred Braxton was once a semi-pro baseball player for the Cambridge Tigers.

## Every Picture Tells a Story

"M.I.T. in Perspective" offers for the first time a panoramic view of the history of M.I.T. Through the inspired juxtaposition of 280 dramatic photographs and drawings with a lively, impressionistic text, Francis E. Wylie richly evokes the experience of generations of students and faculty members from the Institute's founding to the present. Concise, balanced, often humorous, and highly informative, "M.I.T. in Perspective" is a must for the bookshelf of every alumnus and friend.

### BOOK ORDER FORM

I wish to order \_\_\_\_\_ copie(s) of the book, *M.I.T. in Perspective*, \$15 per copy, (Mass. residents add \$.75 for state sales tax), by Francis E. Wylie and have enclosed a check for \$\_\_\_\_\_.

Checks should be made payable to M.I.T.-Picture Book.

Name \_\_\_\_\_ (please print)

M.I.T. or Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Signature \_\_\_\_\_

Please return order form and check to:  
WALTER L. MILNE  
ROOM 5-208, M.I.T.  
CAMBRIDGE, MASSACHUSETTS 02139

Allow three weeks for delivery.

# THE INSTITUTE CALENDAR

January 7  
through  
January 18

*Editor's Note: Anyone connected with MIT – students, employees and faculty – are encouraged to participate in IAP activities. Some courses, in fact, are particularly designed for "lay-people." The number in parentheses in many Calendar entries refers to the IAP course number, in case additional information is needed.*

## Events of Special Interest

**IAP Blood Drive** – Mon, Jan 12 & Tues, Jan 13, 9:45am-3:30pm, Sala. Appointment sheets available at TCA office, Stu Ctr Rm 450. Donors from fall Blood Drive eligible. Info: TCA, x3-4885.

**Earth & Planetary Sciences Lectures for Non-Science Personnel** – **Wed, Jan 7:** The Solar System: Sun and Planets – W. H. Pinson, geology – **Thurs, Jan 8:** Lesser Bodies of the Solar System: Comets, Meteors, Meteorites and Satellites – W. H. Pinson, geology. **Fri, Jan 9:** Age Measurements of Terrestrial Rocks – S. Hart, geology & geochemistry. **Tues, Jan 13:** Sediments and Sedimentary Rocks – J. Southard, geology. **Fri, Jan 16:** What's Cooking in the Laboratory of Paleomagnetism? – A. Brecher, research associate. All 12n, Rm 54-611.

**Molecular Biology for the Non-Scientist (23)** – **Thurs, Jan 8:** How We Know How Information is Transferred from Genes (DNA) into Functions (Proteins) – David Botstein, genetics. **Mon, Jan 12:** History of Biology in the Making: The Recombinant DNA Safety Controversy – Charles Weiner, history of science & technology. 1pm, Rm 56-401.

**Physics for Everyone (289)** – **Mon, Jan 12:** Why Do We Believe in Atoms? – Rainer Weiss, physics. **Wed, Jan 14:** A Physicist Sticks his Nose into Biology – Felix Villars, physics. All 12n, Rm 6-120.

**What Does Food Engineering Have in Common with Samuel Taylor Coleridge** – James Flink, food engineering; **Food for the Future** – Cho Kyun Rha, food process engineering. Research in Nutrition & Food Science Seminar (260). **Fri, Jan 16, 12n, Rm 16-134.** "Lay-people" encouraged to attend.

## Seminars and Lectures

### Wednesday, January 7

**Synthetic Fuels: Economics and Technology** – Martin Zimmerman, Sloan School; Ogden Hammond, DSR staff. Energy Laboratory: Seminar Series (137). 10am, Rm 39-500.

**Photoelectrochemical Cells: Theory and Practice** – Mark S. Wrighton, chemistry. Chemistry Seminar (37). 10am, Rm 4-231.

**Free Trip to UROP: A Student Symposium (202a)** – UROP student guides describing the joys of undergraduate research. 1-5pm, Rm 9-150.

**High Pressure Phase Transformations of Olivine, Pyroxene and Garnet and the Mineralogy of the Mantle\*** – John L. Liu, Research School of Earth Sciences, Australian National University. Earth & Planetary Sciences Colloquium. 2pm, Rm 54-915.

**Megavitamin Dosing – Fact and Fancy** – George Wolf, physiological chemistry. Nutrition & Food Science Seminar (257). 2pm, Rm 16-134.

**Topics From Artificial Intelligence** – Seymour Papert, mathematics; Cecil and Ida Green Professor of Education; co-director, Artificial Intelligence Laboratory. IAP Math Club Lecture (215a). 2pm, Rm 3-370.

**How Universal is Economic Theory?** – Michael Manove, Boston University; Evsey Domar, Ford International Professor of Economics. Current Economic Issues (70). 2pm, Rm E52-394.

**Transportation Vehicles: A Comparative Morphology** – E. E. Covert, aero/astro. Highlights in Aeronautics & Astronautics Seminar (4). 2pm, Rm 33-206.

**Topics in Recursion Theory** – Philip Lavori, mathematics. Annual IAP Logic Week Lecture (215). 3pm, Rm 2-390.

**Chemical Bonding in Amorphous Semiconductors** – Marc Kastner, physics. Lectures in Physics (285). 3:30pm, Rm 6-120.

**Perspectives of the Founders' Philosophies** – Julius A. Stratton, '23, President of the Corporation, Emeritus. Historical Collections "They Were There" Seminar (423) with photos and/or films of the period. 3:30pm, 2nd fl Bldg N42. Pre-register.

**Remote Sensing of the Compositions of Planetary Surfaces** – Thomas McCord, planetary physics, director of George R. Wallace, Jr. Astrophysical Observatory. Earth & Planetary Sciences Lecture Series (63). 4pm, Rm 54-425.

### Thursday, January 8

**Health Effects of Energy Production Processing and Consumption** – James Gruhl, Energy Lab DSR staff. Energy Laboratory: Seminar Series (137). 10am, Rm 39-500.

**TM and Health** – Understanding Transcendental Meditation (426). 10:30am, Rm 4-270.

**Biomedical Engineering: Spatial Orientation** – L. R. Young & C. M.

Oman, aero/astro. Highlights in Aeronautics & Astronautics Seminar (4). 2pm, Rm 33-206.

**A Student's Guide to Career Opportunities in Nutrition and Food Science** – James Flink, food engineering. Nutrition & Food Science Seminar (261). 3pm, Rm 16-134.

**Brillouin Scattering as a Form of Many-Body Spectroscopy** – Thomas Greytak, physics. Lectures on Physics (285). 3:30pm, Rm 6-120.

**An Explanation for the Orbital Dynamics of Meteorites** – Charles Peterson, G. Earth & Planetary Sciences Lecture Series (63). 4pm, Rm 54-425.

**James Michael Curley the Man\*** – Francis Moloney, assistant director, Boston Public Library. The City in the Age of Machine Politics: James Michael Curley's Boston Series. 8pm, Rm 9-150.

### Friday, January 9

**Monitoring and Control of Electric Power Plant Effluents** – Michael F. Ruane, Energy Lab DSR staff. Energy Laboratory: Seminar Series (137). 10am, Rm 39-500.

**Grievance Procedures for Students and Employees\*\*** – Claudia Liebesny, assistant director of personnel; **Mary P. Rowe**, special assistant to president & chancellor for women & work; **Clarence G. Williams**, special assistant to president & chancellor for minority affairs; **Mary O. Hope**, assistant dean for student affairs; **John B. Turner**, assistant dean for graduate school office. Being a Minority Employee and Student at MIT (361b). 12n, Rm 4-231. Minorities encouraged to attend.

**Where are the Solar Neutrinos?** – Paul Joss, physics. Problems in Modern Astrophysics Seminar (291). 2pm, Rm 37-212.

**Engineering Analysis in Computer Age** – T. H. Pian, aero/astro. Highlights in Aeronautics & Astronautics Seminar (4). 2pm, Rm 33-206.

**Optimization Conditions for Problems with Multiple Constraints\*** – M. L. J. Hautus, electrical engineering, University of Florida. Systems, Communications and Control Seminar. 3pm, Rm 37-212.

**Topics in Set Theory** – S. Sageev, mathematics. Annual IAP Logic Week Lecture (215). 3pm, Rm 2-390.

**Liquid Crystals and Superconductivity** – Thomas Greytak, physics. Lectures on Physics (285). 3:30pm, Rm 6-120.

**Life at Boston Tech** – Azel Mack, '15; Waldo Pike, '15. Historical Collections "They Were There" Seminar (423) with photos and/or films of the period. 3:30pm, 2nd fl Bldg N52. Pre-register.

**Weathering of Planetary Surfaces** – Robert Huguenin, sponsored research staff. Earth & Planetary Sciences Lecture Series (63). 4pm, Rm 54-425.

### Monday, January 12

**Guided Tour of National Magnet Lab** – Research Applications of High Magnetic Fields (183). 10am, Rm NW14-2209.

**Options and Problems of Energy Alternatives** – William Jones, research associate, Energy Lab. Energy Laboratory: Seminar Series (137). 10am, Rm 39-500.

**Burd-Man Powered Flight** – J.W. Mar, aero/astro. Experimental Research for Undergraduates Seminar (2a) with laboratory tour. 10am, Rm 33-419.

**Kalahari Hunter-Gatherers: Special Problems of a Non-Landed Minority Group in a Developing Country** – representatives of the Kalahari People's Fund; **Mel Connor**, biological anthropology, Harvard University; **John Marshall**, Center for Documentary Anthropology. Victims of Progress: Indigenous Peoples and their Modern World (121a). Discussion & films. 12n-3pm, Rm 14E-304.

**Finding the MONITOR** – Harold E. Edgerton, Institute Professor and Professor of Electrical Measurement, Emeritus. The Uses of Sonar and Underwater Photography Seminar (90a). 12n, Rm 4-402.

**Invention and New Enterprise Development Seminar** – Jacob Rabinow, National Bureau of Standards. Aero/Astro Seminar (8). 12n, Rm 37-212.

**Sloan Luncheon Seminar Series** – Dean William F. Pounds will speak. Sloan School of Management Seminar (332c). 12:15pm, Rm E52-461.

**Legal Structure and Process: A Brief Introduction\*\*** – Jeffrey A. Meldman, Sloan School. Sloan School Seminar. 1pm, Rm E52-143.

**The SSP, MIT's New Fast ECL Signal Processing Computer\*** – Jack Allweiss, RLE. RLE Seminar. 1:30pm, Rm 36-428.

**Scoring Multiple Choice Exams and Predicting Baseball Averages** – Herman Chernoff, applied mathematics. IAP Math Club Lecture Series. 2pm, Rm 3-370.

**Analytical Models of Imperialism** – Kenneth Flamm, G. Topics in Political Economy Seminar (78). 2pm, Rm E52-394.

**Flutter Vibrations of Aircraft and Structures** – J. Dugundji, aero/astro. Highlights of Aeronautics & Astronautics Seminar (4). 2pm, Rm 33-206.

**Careers in Medicine** – Alvin Poussaint, MD, psychiatry; director of student affairs, associate dean of students, Harvard Medical School. Preprofessional Advising and Education Seminar. (189). 3pm, Rm 7-133.

**Approaches to Fusion** – Benjamin Lax, physics, director of Francis Bitter National Magnet Laboratory. Magnetic Fields & Energy: Fusion and Magnetohydrodynamics Seminar (182). 3pm, Rm NW14-2209.

**Computer Records As Evidence\*\*** – Jack R. Buchanan, United States Supreme Court Judicial Fellow. Computers in Court IAP Series. 3pm, Rm E52-143.

**Physics of Music** – Bernard Burke, physics. Lectures on Physics (285). 3:30pm, Rm 6-120.

**The Move to Cambridge** – R. Stevens and S. Dunning, '17. Historical Collections "They Were There" Seminar (423) with photos &/or films from the period. 3:30pm, 2nd fl Bldg N52. Pre-register.

**Immunology and Cancer** – Paul D. Gottlieb and Herman N. Eisenberg. Discussions on Cancer Research (134). 4pm, Bldg E17, 6th fl conference rm.

**Testing Einstein's Theory of General Relativity with the Solar System as a Laboratory** – Charles C. Counselmann III, planetary sciences. Earth and Planetary Sciences Lecture Series (63). 4pm, Rm 54-425.

**Where and How the Chemical Industry Fits in Relation to All Other Industries** – Jordan J. Bloomfield, Monsanto Company. Chemistry Lecture Series (31a). 4pm, Rm 4-270.

**Some Aspects of Ion Transport in the "Purple Membrane" Halophilic Bacterium H. Halobium** – S. Roy Caplan, Laboratory of Membranes & Bioregulation, the Weizmann Institute of Science; visiting scientist, Harvard-MIT Program in Health Sciences & Technology. HST Biomaterials Science Seminar. 4:30pm, Rm 37-212. Coffee 4pm.

### Tuesday, January 13

**Basic Physics of Superconductivity** – Research Applications of High Magnetic Fields (183). 10am, Rm NW14-2209.

**Conservation of Energy** – James W. Meyer, Energy Lab Program Director. Energy Laboratory: Seminar Series (137). 10am, Rm 39-500.

**Aerodynamics of Race Cars and Other Vehicles** – E. E. Larrabee, aero/astro. Experimental Research for Undergraduates Seminar (2a) with laboratory tour. 10am, Rm 33-419.

**TM and Athletics** – Understanding Transcendental Meditation (426). 10:30am, Rm 4-270.

**MIT Development Foundation** – Richard S. Morse, management. Sloan Luncheon Seminar Series (332c). 12:15pm, Rm E52-461.

**Legal Research and Advocacy: A Brief Introduction\*\*** – Jeffrey A. Meldman, Sloan School. Sloan School Seminar. 1pm, Rm E52-143. Film, "Case in Point," will be shown.

**Why are You Allergic?** – Lisa Steiner, MD, immunology. Biology Seminar (28). 1:30pm, Rm 56-520.

**Economic Growth and All That** – Robert Solow, Institute Professor, economics. Current Economic Issues Seminar (70). 2pm, Rm E52-394.

**Where in the World Am I? W.M. Hollister**, aero/astro. Highlights in Aeronautics & Astronautics Seminar (4). 2pm, Rm 33-206.

**Area Traffic Control and Network Equilibrium** – Nathan Gartner, visiting scientist, Operations Research Center; **Risk Management** – Joseph Ferreira, Jr., urban studies & operations research. Operations Research Center Seminar Series (185). 2:30pm, Rm. 24-121.

**Careers in Medicine** – Joseph Brenner, MD, associate psychiatrist-in-chief, medical department. Preprofessional Advising & Education Seminar (189). 3pm, Rm 7-133.

**Tokamaks I-Design and Basic Principles** – Ronald Parker, DSR staff. Magnet Lab. Magnetic Fields and Energy: Fusion and Magnetohydrodynamics Seminar (182). 3pm, Rm NW14-2209.

**Ethics and Esthetics in Babel's Red Cavalry** – Victor Terras, Brown University. Russian Literature Lecture Series (103). 3pm, Rm 14E-304.

**Computer-aided Legal Research\*\*** – Jack R. Buchanan, United States Supreme Court Judicial Fellow. Computers in Court IAP Series. 3pm, Rm E52-143.

**Solar Winds from Rotating Stars** – Stanislaw Olbert, physics. Lectures on Physics. (285). 3:30pm, Rm 6-120.

**First 100 years of Geology at MIT** – Robert R. Schrock, geology emeritus. Earth & Planetary Sciences Lecture Series (63). 4pm, Rm 54-100.

**A Laser Plate-Making System for Newspapers\*** – Harold I. Becker, manager of systems design, Laser Graphic Systems Corp., Sudbury, Ma. ESL, Electrical Engineering & Computer Science Newspaper Technology Seminar. 4pm, Rm 10-105.

**Contacts Between the lac Repressor and DNA Revealed by Chemical Means** – Dr. Walter Gilbert, Harvard Biological Laboratories. Biology Colloquium. 4:30pm, Rm 6-120, Coffee 4pm, Bldg 56. 5th fl vestibule.

**Slide Presentation\*** – Claes Oldenburg, artist. Committee on the Visual Arts presentation. 8pm, Rm 26-100. Admission \$1.

**Boston Neighborhoods from 1915-1940\*** – Alan Lupo, author, creator of "The Reporter" TV series. The City in the Age of Machine Politics: James Michael Curley's Boston Series. 8pm, Rm 9-150.

### Wednesday, January 14

**Guided Tour of High Field Bitter Magnets** – Research Applications of High Magnetic Fields (183). 10am, Rm NW14-2209.

**Solar Energy: Heating and Cooling** – John Fan & Philip Jarvinen. Lincoln Laboratory. Energy Laboratory: Seminar Series (137). 10am, Rm 39-500.

**Wind Effects on Buildings** – F. Durgin, aero/astro DSR staff. Experimental Research for Undergraduates Seminar (2a) with laboratory tour. 10am, Rm 33-419.

**Invention and New Enterprise Development Seminar** – Mario Donovan, inventor. Aero/Astro Seminar (8). 12n, Rm 37-212.

**Career Development** – Edgar H. Schein, organizational psychology. Sloan Luncheon Seminar Series (332c). 12:15pm, Rm E52-461.

**Tort Law: Brief Introduction\*\*** – Joseph E. Vittek, Jr., aero/astro. Sloan School Seminar. 1pm, Rm E52-143.

**Fifth Symposium on Undergraduate Research\*** – Nutrition & Food Science Symposium. 2pm, Rm 16-134. Refreshments 4pm, Rm 16-139.

**The Central Limit Theorem** – Mathematics Lecture (217a). 2pm, Rm 2-390.

**Synthetic Oxygen Carriers as Blood Substitutes** - Jack E. Baldwin, chemistry. Chemistry Seminar (42). 2pm, Rm 4-370.

**Energy from the Wind** - Rene H. Miller, H.N. Slater Professor of Flight Transportation; head of aero/astro. Highlights in Aeronautics & Astronautics Seminar (4). 2pm, Rm 33-206.

**Careers in Medicine** - Shirley Driscoll, MD, pathology, Harvard Medical School. Preprofessional Advising & Education Seminar (189). 3pm, Rm 7-133.

**Tokamaks II-Laser and Optical Diagnostics for Fusion** - Daniel Cohn, DSR staff, Magnet Lab. Magnetic Fields & Energy: Fusion & Magnetohydrodynamics Seminar (182). 3pm, Rm NW14-2209.

**Inside Mainland China - A Recent View** - Herb Lin, G. Slides & commentary of a 6 week trip. ESG Wednesday Seminars (138). 3pm, Rm 24-612.

**What's New from the MIT Satellite X-Ray Observatory?** - George Clark, physics. Lectures on Physics (285). 3:30pm, Rm 6-120.

**Bosworth's Grand Plan** - O. Robert Simha, '57, director of planning. Historical Collections "They Were There" Seminar (423) with photos &/or films from the period. 3:30pm, 2nd fl Bldg N52. Pre-register.

**Discussion of the Orbital Rendezvous Paradox** - Charles C. Counselman III, planetary sciences. Earth & Planetary Sciences Lecture Series (63) with 2 films. 4pm, Rm 54-425.

**How Technological Changes Affect the Chemical Industry** - Jordan J. Bloomfield, Monsanto Company. Chemistry Lecture Series (31a). 4pm, Rm 4-270.

**Adventures in Mind Control** - Psi Club. Independent offering (353). Lecture on Silva Mind Control. 5pm, Rm 4-159.

**Gettin' Our Share: Women and Money** - Anni Bruckner, board of directors, Mass. Feminist Federal Credit Union; Mary Heinking, prospective business school student. Independent Offerings (383c). 5:30pm, Rm 3-343.

#### Thursday, January 15

**Detection and Interpretation of Weak Magnetic Fields of the Human Body** - Research Application of High Magnetic Fields (183). 10 am, Rm NW14-209.

**Mechanics of TM** - Understanding Transcendental Meditation (426). 10:30am, Rm 4-270.

**CO<sub>2</sub> Laser Solenoid Fusion** - Ward Halverson, DSR staff, Magnet Lab. Magnetic Fields & Energy: Fusion & Magnetohydrodynamics Seminar (182). 3pm, Rm NW14-2209.

#### Friday, January 16

**Opportunities for Preprofessional Education in the Department of Nutrition and Food Science** - S.A. Miller, nutritional biochemistry; H.N. Munro, MD, physiological chemistry; P.M. Newberne, nutritional pathology. Nutrition & Food Science Seminar (258). 10am, Rm 16-134.

**Application of Magnetic Fields to Basic Scientific Investigations in Biology and Medicine** - Research Application of High Magnetic Fields (183). 10am, Rm NW14-2209.

**Solar Energy: Direct Conversion** - David Adler, Cecil H. Green Professor of Electrical Engineering. Energy Laboratory: Seminar Series (137). 10am, Rm 39-500.

**Undergraduate Experimental Research: How to Prepare an Experiment** - A. Shaw, aero/astro technical instructor. Experimental Research for Undergraduates Seminar (2a) with laboratory tour. 10am, Rm 33-419.

**Invention and New Enterprise Development Seminar** - Bernard Gordon, Analog Corporation. Aero/Astro (8). 12n, Rm 37-212.

**Child Care and Social Services on and off Campus\*\*** - Margaret Sand coordinator, child care office; Myra Rodriguez, social worker, medical department. Being a Minority Employee and Student at MIT (361b). 12n, Rm 4-231. Minorities encouraged to attend.

**The Conflict Over Economic Policies** - Franco Modigliani, Institute Professor, Professor of Finance and Economics. Sloan Luncheon Seminar Series (332c). 12:15pm, Rm E52-461.

**Introduction to the IBM 029 Key punch at the East Campus Computer Facility** - Sloan School of Management Seminar (331). 1pm, Rm E52-074.

**Hercules X-1: Unravelling the Mysteries of an X-Ray Star** - Paul Joss, physics. Problems in Modern Astrophysics Seminar (291). 2pm, Rm 37-212.

**MHD Power Generation** - M.S. Martinez-Sanchez aero/astro. Highlights in Aeronautics & Astronautics Seminar (4). 2pm, Rm 33-206.

**Hugo Wolf's Goethe-Lieder** - Martin Dyck, German & Literature. Lecture and recordings in German. Winterliederfest (110). 3pm, Rm 14N-225.

**Magnetohydrodynamics** - Bruce Montgomery, DSR Staff, Magnet Lab. Magnetic Fields & Energy: Fusion & Magnetohydrodynamics Seminar (182). 3pm, Rm NW14-2209.

**The Suffrage Movement and MIT** - Florence Luscomb, '09. Historical Collections "They Were There" Seminar (423) with photos &/or films of the period. 3:30pm, 2nd fl Bldg N52. Pre-register.

**Recent Research Development at Monsanto** - Jordan J. Bloomfield, Monsanto Company. Chemistry Lecture Series (31a). 4pm, Rm 4-270.

## Community Meetings

**Boston Bicentennial for Foreigners (92)** - Sponsored by Wives Discussion Group & Medical Department. Wed, Jan 7: **The Revolution**, an exhibit explaining events leading up to the Revolution, 2nd fl, Quincy Market. Wed, Jan 14: **The Karolik Collection** of American painting, folk art, watercolors and furniture of 18th & 19th centuries, Museum of Fine Arts. Bus leaves Ashdown 1:15pm, sign up Rm 11-203. Fee: \$1.

**International Cooking** - Sponsored by Technology Wives Organization. Tasting Chinese food prepared by Brenda Sun. Wed, Jan 14, 8pm, Rm 10-340. Info: Jenny Gordon, 547-6471 or Judy Cooper 652-1062.

**Hillel Weekend Retreat** - Fri, Jan 16-Sun, Jan 18, Camp Grossman. Contact Rick Field, x5-8264 Dorm, for details.

## Social Events

**24 Hour Coffeehouse\*** - Enjoy relaxing conversation, piano playing, inexpensive food, candy & drinks. Open 24 hours per day, 7 days per week, Stu Ctr 2nd fl lge.

## Movies

**Walkabout** - Barker Library Film/Food Fest (157b). Wed, Jan 7, 12n, Rm 10-500. Lunch for sale.

**Closeup of Mars; Mare Tranquillitatis; Volcano Surtsy; The Sun** - Earth & Planetary Sciences Film Theatre (62). Wed, Jan 7, 2pm, Rm 1-190.

**Walkabout** - Barker Library Film/Food Fest (137b). Wed, Jan 7, 5pm, Rm 10-500. Wine & cheese for sale.

**Skylab** - Skylab Movie Series (10). Thurs, Jan 8, 12n, Rm 33-206.

**The Airplane at Play; Phi Beta Epsilon; Civil Engineering Camp** - Historical Collections Pictures of the Past (409). Thurs, Jan 8, 12n, & 1pm, Rm 6-120.

**Gottingen and New York: Reflections on a Life in Mathematics** - Mathematical Movies (227). Thurs, Jan 8, 2pm, Rm 10-250.

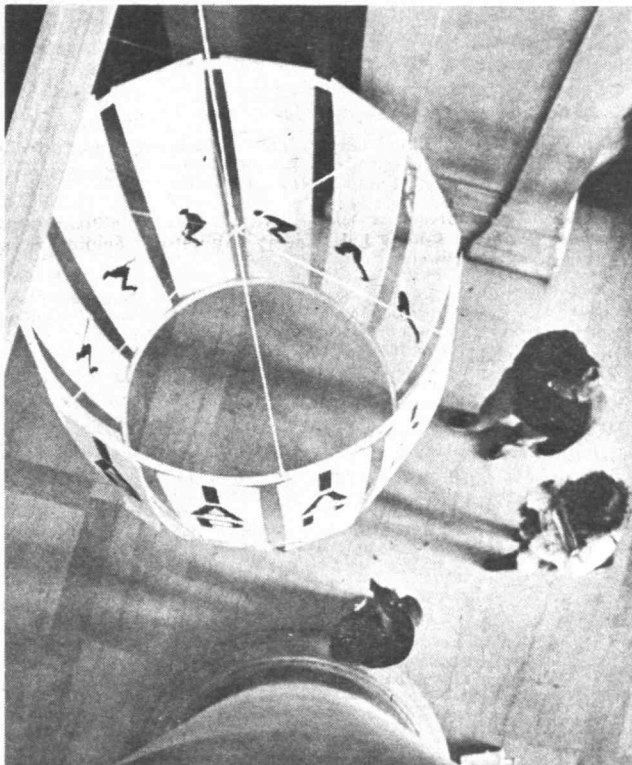
**In the Beginning; History: Layer by Layer; The Not So Solid Earth; Dinosaurs in the Wall** - Earth & Planetary Sciences Film Theatre (62). Thurs, Jan 8, 2pm, Rm 1-190.

**How to Make A Woman** - Sex Roles: Film Series & Discussion (417). Thurs, Jan 8, 7pm, Rm 14N-0615. Admission \$.25 (opt). Followed by small mixed discussion groups.

**Oceanography: Study of the Oceans; Ocean Tides: The Bay of Fundy; Ocean Currents; What's Under the Oceans?** - Earth & Planetary Sciences Film Theatre (62). 2pm, Rm 1-190.

**The Tall Blonde Man with One Black Shoe\*\*** - LSC. Fri, Jan 9, 7 & 9:30pm, Rm 26-100. Admission \$.50, ID required.

**Moby Dick\*\*** - LSC. Sat, Jan 10, 7 & 9:30pm, Rm 26-100. Admission \$.50. ID required.



**A barrel-shaped structure hanging in Lobby 7 is this year's display for new IAP listings. The exercising figures—logo of the 1976 IAP Guides—seem to dance on the inner surfaces of the barrel.**

**Saboteur\*\*** - LSC. Sun, Jan 11, 7 & 9:30pm, Rm 26-100. Admission \$.50, ID required.

**Symmetry; Seashore; Spring; Embryo; Protein Synthesis** - Also additional films on developmental biology. Three Afternoons of Bio-Flicks (26). Mon, Jan 12, 1-3pm, Rm 4-370.

**The Geology of Zuni Salt Lake Marr; Katmai; Time Changes the Land; Glaciation** - Earth & Planetary Sciences Film Theatre (62). Mon, Jan 12, 2pm, Rm 1-190.

**Logic Lane** - Oxford Philosophy on Film (277). Mon, Jan 12, 3pm, Rm 26-100.

**Technology 1934** - Historical Collections Pictures of the Past (409). Tues, Jan 13, 12n & 1pm, Rm 6-120.

**The Classical Groups as a Source of Algebraic Problems** - Mathematical Movies (227). Tues, Jan 13, Rm 10-250.

**The Water Below; Little Plover River Project: a Study in Sand Plains Hydrology; Flow in Alluvial Channels; John Wesley Powell: Canyon Geologist** - Earth & Planetary Sciences Film Theatre (62). Tues, Jan 13, Rm 1-190.

**The Day Tomorrow Began; The First Twenty-Five Years** - Nuclear Films (250a). Tues, Jan 13, 3pm, Rm NW12-222.

**Growing Up Female: Six Becomes One** - Sex Roles: Film Series & Discussion (417). Tues, Jan 13, 7pm, Rm 14-0615. Admission \$.25 (opt). Followed by small mixed discussion groups.

**Les Abysses** - French Film Series. Tues, Jan 13, 7:30pm, Stu Ctr Mezzanine Lge.

**Metropolis** - Barker Library Film/Food Festival. Wed, Jan 14, 12n, Rm 10-500. Lunch for sale.

**Law of Gravitation** - Feynman Film Series (283a). Wed, Jan 14, 1pm, Rm 26-100.

**The Alaska Earthquake; The Restless Earth: Earthquakes; The Restless Earth: Plate Tectonics; Earthquakes: Lesson of a Disaster; Earth Science: Earth's Interior** - Earth & Planetary Sciences Film Theatre (62). Wed, Jan 14, Rm 1-190.

**I'm Going to Tamper With Your Beliefs a Little** - Oxford Philosophy on Film (277). Wed, Jan 14, 3pm, Rm 26-100.

**Metropolis** - Barker Library Film/Food Festival. Wed, Jan 14, 5pm, Rm 10-500. Wine & Cheese for sale.

**Robinson Crusoe on Mars\*\*** - LSC. Wed, Jan 14, 7 & 9:30pm, Rm 26-100. Admission \$.50, ID required.

**Skylab** - The First 40 Days - Skylab Movie Series (10). Thurs, Jan 15, 12n, Rm 33-206.

**Men's Lives** - Sex Roles: Film Series & Discussion (417). Thurs, Jan 15, 7pm, 14-0615. Admission \$.25 (opt). Followed by small mixed discussion groups.

**Reflection of Mathematics to Physics** - Feynman Film Series (283a). Fri, Jan 16, 1pm, Rm 26-100.

**Topology** - Mathematical Movies (227). Fri, Jan 16, 2pm, Rm 10-250.

**Great Lakes: How They Were Formed; The Earth: Resources in its Crust; The Milky Way; The Depths of Space** - Earth & Planetary Sciences Film Theatre. Fri, Jan 16, 2pm, Rm 1-190.

**The Idea of Freedom** - Oxford Philosophy on Film (277). Fri, Jan 16, 3pm, Rm 26-100.

**Inspector Clouseau\*\*** - LSC. Fri, Jan 14, 7 & 9:30pm, Rm 26-100. Admission \$.50, ID required.

**The Last Hurrah\*** - The City in the Age of Machine Politics: James Michael Curley's Boston Series. Fri, Jan 16, 8pm, Rm 2-190. Admission \$.50.

**Captain Blood\*\*** - LSC. Sat, Jan 17, 7 & 9:30pm, Rm 26-100. Admission \$.50, ID required.

**Humshakl** - Sangam. Indian movies with English subtitles. Sun, Jan 18, 2:30pm, Rm 26-100. Admission \$.50 with ID. Info: x5-9774 Dorm. Indian refreshments available.

**Witness for the Prosecution\*\*** - LSC. Sun, Jan 18, 7 & 9:30pm, Rm 26-100. Admission \$.50, ID required.

## Music

**IAP Concert** - Program includes violin and piano sonatas by Beethoven and Bartok. IAP Course 118 concert organized by Stephen and Beatrice Erdeley. Fri, Jan 9, 8pm, Kresge.

**Ravi Shankar and Alla Rakha in Concert\*** - Sponsored by Sangam. Sat, Jan 10, 8pm, Kresge. Tickets: \$7 & \$5, \$2 discount for students. All seats reserved. Reservations: x3-3522, 6-9pm.

## Dance

**MIT Folk Dance Club** - **International:** Sun, 7:30-11pm, Sala. **Balkan:** Tues, 7:30-11pm, Stu Ctr 491. **Informal:** Fri, 12n-1:30pm, Bldg 7 Lobby.

**MIT Folk Dance Club\*** - Workshops with Mandala Fold Dance Ensemble. Sun, Jan 11, Balkan singing 1pm, couple dances 2:30pm, Sala.

## Exhibitions

**Claes Oldenburg Exhibition** - Sponsored by Committee on Visual Arts and Institute for Contemporary Art. Exhibit Sat, Jan 17- Wed, Feb 25, Hayden Gallery. Hours: 10am-4pm daily, 6-9pm Tues. Opening reception Fri, Jan 16, 8-11pm.

**MIT Historical Collections\*** - Permanent exhibition Mon-Fri, 9am-5pm, Bldg N52, 2nd floor. **Bicentennial Exhibits:** Katharine Dexter McCormick, '04; Vannevar Bush, '16, and Karl Taylor Compton, in Bldg 4 corridor.

**Schumann at Work on a Song\*** - Music Library Exhibit of manuscript facsimiles & pictures. Daily, Bldg 14E.

**Hart Nautical Museum\*** - Permanent exhibit of rigged merchant and naval ship models, half models of yachts and engine models. Open daily in Bldg 5, 1st floor.

## Athletics

**Home Schedule\*-Thursday, January 8** - **V Basketball.** New Jersey Institute of Technology, 7:30pm, Rockwell Cage. **Monday, January 12** - **V 'B' Basketball.** Emerson, 7:30pm, Rockwell Cage. **Thursday, January 15** - **V Hockey** Brooklyn College, 7pm, rink. **W Basketball.** Fort Devens, 8pm, Rockwell Cage. **Saturday January 17** - **JV/F, V Basketball.** Trinity, 6:15pm & 8:15pm, Rockwell Cage. **W Basketball.** Trinity, 6:15pm, duPont Gym. **V Hockey.** Clark, 7pm, rink. **JV/F, V Wrestling.** Coast Guard, 2pm & 3:30pm, duPont wrestling rm.

Freshmen are encouraged to attend departmental lectures and seminars. Even when these are highly technical they provide students one means to learn more about professional work in a department and field.

\*Open to the public  
\*\*Open to the MIT community only  
\*\*\*Open to members only

Send notices for Jan 14 through Jan 25 to the Calendar Editor, Room 5-111, Ext. 3-3279, before noon Friday, Jan 9.





# Martin Luther King Week Noted

(Continued from page 1)

Massachusetts Ave.) to Kresge Auditorium.

Also participating will be the Reverend John Brandon, pastor of St. Paul's AME Church in Cambridge, and the MIT Gospel Choir. Jennie Patrick, a graduate student in chemical engineering from Atlanta, Ga., will preside. The program will begin with a recording of one of Dr. King's sermons. A reception will follow the ceremony at McCormick Hall.

Mr. Leonard, formerly assistant dean and assistant director of admissions and financial aid at Harvard Law School, coordinated development of Harvard's Affirmative Action Plan and is now guiding its implementation. He was a founder of the Southern Christian Leadership Conference, is a member of the board of directors of the National Urban League of Eastern Massachusetts and a life member of the NAACP.

Events of the week will begin Monday, Jan. 12, at noon with an



exhibition and tape recordings depicting the life and times of Dr. King, in the MIT main Lobby at 77 Massachusetts Avenue. Included will be "Letter from a Birmingham Jail," recorded by Dr. King just two weeks before his death.

On Tuesday, Jan. 12, at noon, the film, "King: A Filmed Record . . . Montgomery to Memphis," will be shown in the Building 10 Lobby. The film, narrated by Dr. King, was nominated for an Academy Award.

Also on Tuesday will be a seminar on "Love and Intimacy in Black Male and Female Relationships" presented by Ann Ashmore Poussaint, clinical psychologist in the Boston area. The seminar—5-7pm in MIT Room 98150—will be sponsored by John B. Turner, assistant dean of the MIT Graduate School, and the Minority Graduate Student Advisory Committee.

MIT will be closed Thursday, Jan. 15, Dr. King's birthday. MIT this year has adopted the date as an official Institute holiday.

The week-long program will con-

clude Friday, Jan. 16, with a noontime showing of the film, "Legacy of a Dream," narrated by James Earl Jones, in the Bush Room (Rm. 10-105).

Commemoration events were arranged under auspices of the MIT Office of the Special Assistant to the President and Chancellor for Minority Affairs by a committee composed of students, faculty, staff members and religious counselors. Committee members are:

Students: Yolinda L. Hinton, a junior in mechanical engineering from Cincinnati, Ohio; John W. Arnett, III, a senior in electrical engineering from Memphis, Tenn.; James E. Clark, a senior in electrical engineering from Quincy, Fla.; Lynne D. Richardson, a senior in life sciences from Jamaica, N.Y.; Carolyn Clay, a graduate student in materials science and engineering from Chicago, Ill.; Philip G. Hampton, Jr., senior in chemical engineering from Washington, D.C. and Jennie Patrick.

Faculty and staff: Philip L. Clay, assistant professor of urban studies and planning; Patricia A. Garrison, assistant equal opportunity officer; Barbara Wyatt, secretary in the Office of Minority Affairs, and Clarence G. Williams, special assistant to the president and the chancellor for minority affairs.

Religious counselors: the Reverend John Crocker, Episcopal chaplain; the Reverend Constance Parvey, Lutheran chaplain; Rabbi Melvin Gottlieb, Jewish chaplain; the Reverend Robert Moran, Roman Catholic chaplain, and Steven Murphy, associate Roman Catholic chaplain.



# John E. Burchard Dies, Emeritus Humanities Dean

(Continued from page 1)

*Social Purpose*, to be published next spring by McGraw-Hill Publishing Co., New York. Dean Burchard had told associates the book represents a culmination of his career in architectural studies and is aimed at illuminating the social purposes of architectural forms.

MIT President Jerome B. Wiesner said "John Burchard was an intellectual leader and a rare human being."

"His creative genius in the arts and letters was enriched with a deep understanding of their relationship to the natural sciences," he said. "Drawing upon his education and background in architecture, he developed a vision of what the humanities and the arts could do on this campus and that vision was an important force in establishing within the Institute the traditions of a modern university. He was one of the great builders of the Institute and MIT would not be what it is without him. He served with enormous distinction as first dean of the School of Humanities and Social Science, directed the study that led to the founding of MIT's Center for International Studies, and was a close friend and trusted advisor of five presidents of MIT."

Howard W. Johnson, former president of MIT and now chairman of the MIT Corporation, said "John Burchard had a superb capacity for turning ideas into action. Equally at home in the worlds of science and of the humanities, he epitomized the ideal of the Renaissance man. Historian, critic, humanist, he helped shape in countless ways the present style and character of the Institute.

Professor Burchard was impresario of MIT's Mid-Century Convocation on the Social Implications of Scientific Progress, which marked the inauguration of Dr. James R. Killian as President of MIT and at which Winston Churchill spoke. He was later the principle architect of MIT's great centennial observance in 1961.

"A great teacher and a distinguished scholar, his place in the history of the Institute is assured and his passing will be mourned by thousands of MIT alumni."

Dean Burchard was celebrated for several books. He was co-author with Albert Bush-Brown, then a professor of architecture at MIT and later president of the Rhode Island School of Design, of the book, *The Architecture of America, A Social and Cultural History*, published by Atlantic-Little Brown in 1961, which had been commissioned as part of the centennial celebration of the American Institute of Architects and which reviewers said "filled in a major gap" in American architectural literature.

Later books included *The Histori-*

*an and The City* (MIT Press and Harvard University Press, 1963), which he wrote with Professor Oscar Handlin, and *The Voice of the Phoenix: Postwar Architecture in Germany* (MIT Press, 1966).

Dean Burchard was responsible for the present form of the journal, *Daedalus*, published by the American Academy of Arts and Sciences. Long a Fellow of the Academy, Dean Burchard was its vice president in 1953 and president from 1954 to 1956. While president, he joined with the late Harlow Shapley in reforming the Academy's publication into a major journal of intellectual thought under the editorship of Gerald Holton. Dean Burchard considered his initiatives on behalf of the present *Daedalus* to be among his proudest achievements.

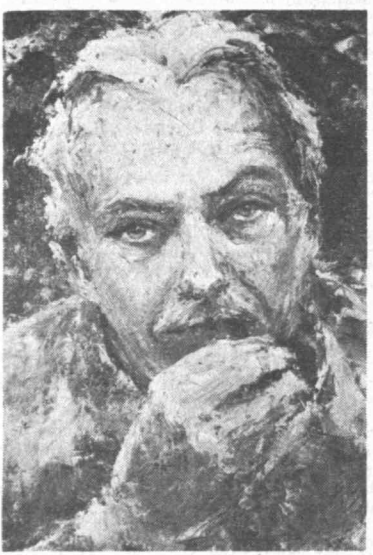
As general chairman of MIT's mid-century convocation in 1949, Dean Burchard was host to the late Sir Winston Churchill who delivered the keynote convocation address. As general chairman of MIT's centennial celebration in 1961, he was host to British Prime Minister Harold Macmillan who presented the keynote address at that meeting.

Dean Burchard, following retirement from MIT, was from 1964 to 1968 principle consultant to the Bay Area Rapid Transit Authority in San Francisco and was considered responsible for many of the innovative architectural and planning considerations that went into the design of that high speed public transportation system. While in California, he was a visiting professor at the University of California at Berkeley and was acting dean of the College of Environmental Design there from 1966 to 1968.

Dean Burchard was the first dean of the MIT School of Humanities and Social Science, which was founded in 1950 and which he served until his retirement in 1964. During his administration the school grew substantially in size, influence and reputation, partly because of the significance of its relationship with the fields of science, engineering, architecture and industrial management, for which MIT had been best known. MIT's Center for International Studies was established and strong graduate programs were developed in political science, philosophy, psychology and linguistics. As dean, he was responsible for the initiation of Course XXI, in which students major in humanities or social sciences in combination with science or engineering. Also, he inaugurated the unique "Humanities in French" courses offered to qualified undergraduates.

Dean Burchard was born in Marshall, Minn., Dec. 8, 1898. After two and one-half years at the College of Liberal Arts of the University of Minnesota, his education was interrupted by service with the US Army Medical Corps, American Expeditionary Forces, until 1919. He was graduated from MIT with the degree

of bachelor of science in architectural engineering in 1923, and received the degree of master of science in 1925. While a graduate student, Dean Burchard was assistant to the head of MIT's Department of Civil and Sanitary Engineering. He also served as a part-time instructor in English from 1924-25; in architecture, from 1926-30; and wrote musi-



Dean Burchard as painted by Dorothy Rand Greenough.

cal criticism for the *Boston Evening Transcript* and the *Boston Globe*.

Upon completion of graduate work, Dean Burchard joined Bemis Industries, Inc., of Boston, and during a period of 13 years became director of research, vice president, and a member of the board of directors of that corporation and of its subsidiary, Housing Company. It was during this period that he became known for work in housing. In 1938 he returned to the Institute as director of the Albert Farwell Bemis Foundation with the rank of professor.

From 1940 to 1945, Dean Burchard was on leave of absence from the Institute serving progressively as executive officer of a committee of the National Research Council; chief of one of the 18 divisions of the National Defense Research Committee; chairman of the two ad hoc committees engaged in studying the problems of navigation and of demolition of obstacles to landing operations—both in preparation for the great amphibious operations which marked the last phase of the war; and deputy chief of the Office of Field Service. Dean Burchard headed four military-scientific missions to theaters of operation which included the United Kingdom, the Caribbean, the Central Pacific, and Germany. In recognition of his war efforts he was awarded the Medal for Merit, the nation's highest civilian award, by President Truman in February, 1948.

Dean Burchard returned from war work in 1946 to take up duties as director of Libraries of the Institute, a post to which he was appointed in

## Obituaries

### Raymond E. Boyd

Raymond E. Boyd, who retired in 1971 after 35 years with MIT, died Dec. 11 at St. Elizabeth Hospital, Brighton. He was 70.

Mr. Boyd, whose position at retirement was administrative assistant to Professor Frederick J. McGarry, then a member of the Department of Civil Engineering, now with the Department of Materials Science and Engineering, is survived by his wife, Grace; two daughters, Mrs. Harold G. Arsenault of Newton and Mrs. Marcy Mazer of Weymouth, and nine grandchildren. He made his home at 35 Columbia St., Watertown.

For many years he was administrative assistant in the former Department of Building Engineering and Construction which was absorbed in the late 1950s by the Department of Civil Engineering. Mr. Boyd was a member of the MIT Quarter Century Club.

### Clifton A. Starbard

Clifton A. Starbard, a library assistant at Hayden Circulation, died Dec. 24 at Mt. Auburn Hospital. He was 69.

Mr. Starbard, employed at MIT

since 1966, is survived by his wife, Janice; a daughter, Carol Beckwith of Reading; a son, Craig, of Watertown; two sisters, Ruth Glass of Worcester and Alberta Herlihy of Springfield, and five grandchildren. His home was at 26 Murrah Hill Rd., Cambridge.

### Fred Burge

Fred Burge, who retired in 1960 after 26 years as a custodian with Physical Plant, died Dec. 29. He was 81.

Mr. Burge, who made his home at 34 Glenwood Ave., Cambridge, is survived by his wife, Elizabeth, also a retired MIT employee; a son, Fred, and a sister, Olive B. Baker of Newfoundland.

Mr. Burge, who joined MIT in 1934, was a World War I navy veteran.

### Charles Bir

Charles Bir, a supervisor of technicians at the Francis E. Bitter National Magnet Laboratory, died Dec. 28 at his home, 26 Glenn Ave., Chelmsford, after a short illness. He was 53.

He is survived by his wife, Doris, and two sons, Richard and Robert.

Mr. Bir joined the Magnet Lab staff in 1960 after working for three years at Lincoln Laboratory.

1944. During his term of office, plans were consummated for the construction of the Charles Hayden Memorial Library. He served as a member of the Cooperative Committee on Library Building Plans which, under a Rockefeller Foundation grant, prepared a monograph, "Planning the University Library Building," published by the Princeton University Press in 1949. He was chairman of the subcommittee of three charged with producing this monograph. In addition, Dean Burchard served as consultant to numerous universities in library planning.

Meantime, Dean Burchard's involvement with the design and planning of the new library for MIT turned out to have profound effect on the musical life of Boston, indirectly, and on the artistic life of the city directly.

Dean Burchard had a hand in originating the now-popular public rehearsals of the Boston Symphony Orchestra and his interest in these programs grew directly out of what had been some original hopes for the Hayden Library. When the Library was opened, Dean Burchard opened negotiations with the BSO with the hope that Friday and Saturday concerts might be brought to the library by cable for the benefit of students here. While this plan did not materialize, it did lead Dean Burchard into discussions with the BSO trustees out of which came the public rehearsals, originally intended for college students. In addition, Dean Burchard became one of the founders and organizers of the Youth Concerts of the BSO. Here at MIT, Dean Burchard's interests in music led to the establishment of the Humanities Series of concerts and other events of high cultural interest.

Still another way in which Dean Burchard's work on the Hayden Library design had a lasting effect on Boston was through the Hayden Gallery. It was Dean Burchard who was responsible for having the Gallery there in the first place and in the form that it is in. He also started the idea of having visiting exhibitions and raised the first money to support them. In the years since, MIT's Hayden Gallery has become a leading Boston area center for the exhibition of major art shows.

In 1949, he was a delegate to the UNESCO conference on documentation in Paris. In August, 1951, Dean and Mrs. Burchard went to Australia at the request of the Australian government and spent three and a half months there and in New Zealand, working on problems of the building of the Australian National Library. He was a member of the eight-man delegation of American educators who visited France and Norway in the summer of 1957 on request of the French and Norwegian governments. He was a member of the panel on Science and Engineering Education of the President's Science

Advisory Committee, which prepared the report issued by the White House on May 24, 1959, entitled "Education for the Age of Science"; and has been a member of the Commission on Instruction and Evaluation of the American Council on Education. In 1960 he was one of four American delegates to a conference in Japan on "Science and Modern Civilization."

Dean Burchard wrote extensive for periodicals on housing, library planning, architecture, and educational and cultural subjects. He was co-author with Lincoln Thiesmeyer of *Combat Scientists*; and editor of *Rockets, Guns and Targets*, both of which were in the series dealing with the official history of OSRD; co-author with Albert Farwell Bemis of *The Evolving House*; and author of *Q.E.D.*, the history of MIT's activities in World War II. He was consulting editor on architecture of the *Encyclopaedia Britannica*, member of the editorial board of *Daedalus*, and was consulting editor of *The Architectural Record* (1958-61). He has lectured or given principal addresses at almost every major university in the United States and several in Canada, Japan, Pakistan, Australia and India. He served twice as visiting professor at the University of California at Berkeley, and was Lowell Lecturer at the Boston Museum of Fine Arts in 1955.

He was consultant to numerous American universities, including Yale, Princeton, Harvard, Smith College, Wayne State University, Michigan State University, the University of California, Rice Institute, New York University and Georgia Institute of Technology. He was a member of the Board of Trustees at Mount Holyoke College (1951-1961); the Board of Trustees of the Boston Museum of Fine Arts (1957-60); of the Advisory Board of the US Merchant Marine Academy, Kings Point, New York (1953-1960); principal consultant to the Graham Foundation for Advanced Studies in the Fine Arts, Chicago (1955-1960); and chairman of the MIT Press Board (1946-1964).

He was awarded insignia of the Ordre des Arts et Lettres (Officier) by the Government of France in 1964. Awarded numerous honorary degrees, Dean Burchard was also a member-at-large of the American Council of Learned Societies (1951-1955), and a member of the Chi Psi and Tau Beta Pi Fraternities, the St. Botolph Club and the Examiner Club as well as a Fellow of the American Academy.

Survivors include his wife, the former Marjorie Walker Gaines, and two sons, John Ely Burchard 3rd of Dhahran, Saudi Arabia, and Marshall Gaines Burchard of Boston. Dean and Mrs. Burchard made their home for many years in Bedford, Mass. Since 1968, they made their home in the Beacon Hill section of Boston.