Massachusetts Institute of Technology

TECH TALK

January 25, 1978
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In the midst of merriment at MIT's Soap Bubble Carnival, Thomas F. Trobaugh, a junior in the humanities department, tries to make a giant bubble with a metal ring dipped in soap solution. The carnival, presented last Thursday by MIT mathematics instructor Dr. Frank Morgan for IAP, mixed magic with mathematics. It featured a quiz, a scientific explanation of the mysteries of bubbles, audience participation bubble-blowing, and a special mystery guest—Dr. Harold E. Edgerton, caped in a bright red, full-length robe. Doc Edgerton showed a film of bullets piercing soap bubbles, and he concluded the carnival by leading the audience in a rousing chorus of—what else?—"I'm Forever Blowing Bubbles."

What a Storm!

"Thank God for Spring," said Larry Pickard, Physical Plant manager of grounds. "I hope it's just around the corner."

Mr. Pickard and his crew spent the weekend digging out MIT and, in fact, they're still at it, gradually moving snow from campus streets and open parking lots to a giant snow pile on Albany Street.

Major casualty of the great January storm was the Carr Indoor Tennis Center, on west campus. The storm caused a depression in the west end of the bubble at about 9am Friday, and by 10:30 it had collapsed.

On the benefit side of the storm, evidence is now in hand that the SNOW line works effectively. Between 9pm Thursday, Jan. 19, and 2pm Saturday, Jan. 21, 253-SNOW responded to 8,188 calls. There is no record of how many busy signals were heard when SNOW was loaded to peak capacity. SNOW also responded to 2,400 calls from 4pm Sunday, Jan. 22, through 2pm Monday, Jan. 23.

Astrophysicists Study Mysterious X-Ray Pulsar

Astrophysicists at MIT are busy these days studying a mysterious galactic X-ray pulsar that recently "turned on" again after a seven-year period of silence.

The discovery of the new outburst from the source was made on January 6 by Dr. George W. Clark, professor of physics, and Lynn Cominsky, an MIT graduate student, by means of MIT's Small Astronomy Satellite, SAS-3, during a four-day scanning operation of the satellite. The outburst was also detected by scientists at the Goddard Space Flight Center using a monitor aboard Britain's Ariel 5 satellite.

From the SAS-3 control room in MIT's Center for Space Research, the scientists next stopped the satellite's spin, pointed it toward the flaring source, and discovered a 3.6-second pulsing behavior.

Then they reoriented another of the satellite's detectors to pinpoint the source's location to within 30 arc seconds in Cassiopeia, according to Dr. Saul A. Rappaport. There are several faint stars in the "error box" but none has been conclusively identified as the source.

Professors Rappaport, Walter H. G. Lewin, and Hale V. Bradt, of the Department of Physics and the Center for Space Research, are co-investigators in the SAS-3 project, of which Professor Clark is principal investigator.

Subsequently, Professor Bradt—who is also co-principal investigator of on of the experiments oin the High Energy Astronomy Observatory-A(HEAO-A)—urged that that satellite be swung from its usual orientation to focus on the newly discovered pulsar. That maneuver was carried out and HEAO-A, America's newest and largest scientific satellite, yielded an even better position for the source.

Professor Rappaport noted that this pulsar was discovered seven years ago by SAS-1 (UHURU) and was listed as a highly variable and transient source. Several months after its discovery it disappeared as an X-ray source.

This pulsar is one of a group of transient sources that are a "big mystery" to astrophysicists, although they are widely believed to be accreting compact objects in binary systems, Professor Rappaport said. The new outburst provides "a good chance to define the orbital parameters and possibly the evolutionary history" of such systems, he said.

'Sets for Cunningham' To Be Shown in Hayden

Sets designed by contemporary American artists Jasper Johns, Robert Rauschenberg and Andy Warhol for dances choreographed by Merce Cunningham will be on view in Hayden Gallery from January 29 through February 24. The sets to be exhibited are Johns' for *Walkaround Time* (1968); Warhol's for *RainForest* (1968); and Rauschenberg's for *Summerspace* (1958) and *Minutiae* (1954).

The exhibition, "Sets for Cunningham: Johns, Rauschenberg, Warhol," is sponsored by MIT's Committee on the Visual Arts and coincides with Cunningham's Boston residency sponsored by the Massachusetts Council on the Arts and Humanities. A preview of the exhibition will be held on Friday, January 27, from 8-10pm.

Since Cunningham does not impose a design concept upon the artists, the four sets in the exhibition may be seen as works of art tangentially related to choreographed movement. Filmed performances of *RainForest* and *Walkaround Time* will be shown at 11am and 2pm daily so that visitors to Hayden Gallery may view these sets during actual performances.

Cunningham's collaboration with artists and musicians dates back to the beginning of his career when he first forged a synthesis of the arts often marked by contrasting characteristics (i.e., elegant movements and tattered costumes), and derived from observations of everyday experience. In 1975, the New York State Award cited Cunningham for "continually innovative work, incorporating art and music, which has exerted a seminal influence on contemporary choreography."

Modern dance, like much modern art, does not depend upon linear narrative elements. This liberation of movement from literal reference parallels the efforts of many contemporary painters who have attempted to free color and material from narrative references. Johns' inflatable homage to Duchamp in *Walkaround Time* (1968), Warhol's floating silver pillows in *RainForest* (1968), and Rauschenberg's works for *Summerspace* (1958) and *Minutiae* (1954) do not meld with the movement but are separate elements reverberating within the framed experience. In fact, Warhol's pillows were first exhibited as an installation piece, *Silver Clouds*, in 1966.

Cunningham has benefited from and been inspired by his association with artists; he has incorporated various references to Duchamp's work in his dances, learned from the "all-over" painting of Jackson Pollock in arriving at his working method and considered certain repetitions of dance sections to be "ready-mades," much like some of Rauschenberg's work.

Johns, who has served as the Dance Company's artistic advisor since 1967, and Rauschenberg, who traveled with the troupe as lighting designer and technical director from 1954 through 1964, were instrumental in establishing an appropriate manner of collaboration between choreographer and artist. Cunningham described this working relationship in 1974: "My ideas about dancing are all *so* flexible, and working with artists has made them more so...so many people think that decor should emphasize something, or define it, or frame it somehow, but life doesn't work that way, and I don't either."

An open rehearsal by members of the Dance Company followed by a discussion led by Merce Cunningham will be held at 4pm on Monday, Feb. 13, in Kresge Auditorium. The rehearsal and discussion sponsored by the Council for the Arts at MIT will be free to members of the MIT community with an MIT ID. There will be a charge of $2.00 for the public.

With the start of the exhibition, Hayden Gallery's hours will change. The Gallery will be open Sunday through Friday from 10am to 4pm, and will be closed on Saturday.

Tennis Refunds

Due to the snowstorm collapse of the Indoor Tennis Bubble, the remainder of seasonal contract time has been cancelled. Refunds for unplayed time will be forthcoming, the Athletic Department has announced.

Lyndon Photograph Exhibit In Hayden Corridor Gallery

An exhibition of recent photographs by Alice Atkinson Lyndon, "Italian Confrontations and Other Temples: A Sculptor's Notebook," will open with a public preview and reception for the artist in Hayden Corridor Gallery on Friday, Jan. 27, from 8 to 10pm.

The exhibition, sponsored by the MIT Committee on the Visual Arts, will remain on view through February 24.

The presentation includes six series of photographs taken during the artist's stay in Italy in 1977. The photographs show the artist's sensibility as a sculptor and compel the viewer to recognize abstract shapes and new spatial experiences in architectural and sculptural details of urban Italy's monuments, automobiles and other objects such as sneakers and umbrellas. Full of wit and rich detail, Lyndon's work follows in the tradition of the earliest architectural photographers of England and France.

Lyndon began to take photographs seriously in 1973 in order to explore with greater immediacy the relationships between objects in space and to create what she has described as "a mysterious occupation of territories."

The first series in the exhibition, "An Attack on the Historical Center of Urbino by 27 White Cars and One Pumpkin," joins the old city of Urbino with a variety of shiny, clean, white cars. The photographs suggest a friendly battle between stone and steel, the "ancients" and the "moderns," who rival each other for the viewer's attention. Design emerges and captures the ironic relationship between the historical aura of the city and its present-day inhabitants.

The second series, "Florentine Umbrellas," enlivens our sense of being in the presence of architectural and sculptural works of art and provides a visual metaphor for spatial experience.

Shadows increasingly become events as the remaining series of isolated buildings, ruins and ornaments parallels the stillness and intensity of Eugene Atget's photographs and the remarkable clarity of conception of the work of Walker Evans.

Lyndon began to explore her interest in sculpture, using the welding and metal casting techniques for her work, while a student in France, at the University of California at Berkeley, and the Danish Royal Academy of Fine Arts. She received the master's degree in sculpture from Berkeley in 1963. After teaching at Berkeley and the University of Oregon, she moved to Massachusetts and in 1974 became the first person to teach sculpture in studio classes at Wellesley College.

In 1977 she participated in "The Handmade Paper Object," an exhibition at the Institute of Contemporary Art. Last March a one-woman show of her sculpture, handmade paper works, clay works and photographs was presented at Jewett Arts Center at Wellesley College. Recent commissions include a portal sculpture for Brown University in Providence, R.I., and a memorial in cast aluminum for the Hebrew Benevolent Society in Detroit, Mich.

Hayden Corridor Gallery, located at 160 Memorial Drive in Cambridge, is always open to the public and free of charge.

Book Contest

The MIT Libraries Third Annual Book Collecting Contest (no. 467) has been rescheduled to meet today (Wednesday, Jan. 25) in the Stein Club Map Room at the Science Library. The public is welcome to attend the exhibit from 10am-5pm. Judges will award cash prizes and gift certificates at 4pm.

Student Injured In Storm Mishap

David B. Cope, 20, a junior in physics from Canton, Ohio, and a resident of Sigma Alpha Epsilon fraternity, 484 Beacon St., Back Bay, was in stable condition at Boston City Hospital Tuesday with injuries suffered when he fell from the roof of the SAE house Sunday while clearing away snow and ice.

Police said leaks had developed inside the house due to the snow and ice burden and Cope had gone onto the roof in an attempt to dislodge it. He slipped and fell five stories, suffering chest and back injuries.

NOVA to Feature Magnet Lab Work

An electromagnetic acceleration system designed and built by students and scientists working in MIT's Francis Bitter National Magnet Laboratory will be shown on the NOVA space program, *The Final Frontier*, to be broadcast at 8pm Wednesday, Feb. 1, 1978, by WGBH-TV, Channel 2, Boston.

The MIT Mass Driver was filmed by NOVA in the magnet laboratory in a demonstration conducted by Dr. Henry H. Kolm, laboratory scientist, and William Wheaton, William Snow, Kevin Fine, Eric Drexler, and Jonah Garbus. Also featured in the program is Dr. Gerard K. O'Neill, Princeton physicist who was a visiting professor at MIT last year and who worked with Dr. Kolm.

THE INSTITUTE CALENDAR X3-3270

January 25 through February 5

Seminars and Lectures

The numbers in parentheses indicate an IAP activity. For futher information consult the *IAP Guide* or call x3-1668.

Wednesday, January 25

Office of Sponsored Programs (565) — George F. Prendergast,** assistant director. **Grants and Contracts.** 9am-noon, Rm 5-234.

Energy Seminar Series (410) — 9:30am: W.J. Jones,** senior research staff, Energy Laboratory, **Introduction to Issues and Possibilities of Electric Rate Structure. 2pm: John Haggerty** sponsored research staff, Energy Laboratory, **Cost and Value of Solar Energy.** Seminars meet in Rm 66-144.

Environmental Chemistry (59) — Ronald A. Hites,** associate professor, chemical engineering, 10am, Rm 66-110.

Issues and Concerns for Those Planning a Medical Career (493) — Prof Jeffery Harris,** economics. **Possible Impacts of Federal Health Regulation,** 10am, Rm 4-145.

The Search for the Nuclear Grail (252) — Prof Irving Kaplan,** nuclear engineering. **The Search for the Ideal Nuclear Reactor Type.** 10am, Rm 9-150.

Bicycle Repair and Bicycles in the Real World (552a) —** Peter Fiekowsky, U. **Bicycle Dynamics: Elements of Steering, Safety, Comfort and Dependability,** 11am, Rm 24-612.

Revolutionary Cuba: Comment & Slides Based on Field Trip Dec '77 — Wayne Cornelius,** associate professor, political science. Noon-3pm, Rm E53-482.

A Formal Theory of Tonal Music (165) — Ray Jackendoff,** professor of linguistics, Brandeis University, 1pm, Rm 4-160.

A Brief Introduction to Law (325) — J.D. Nyhart,** associate professor, Sloan School of Management. **Regulatory Law,** 1-3pm, Rm E52-143.

Health Care Inflation (106) — J. Joskow,** associate professor, economics; **Grossman,** director, Ambulatory Care division of MGH, assistant professor, medicine, Harvard Medical School; **Harris,** assistant professor, economics. **Symposium on Health Care Inflation.** 1-3pm, Rm E52-461.

Highlights of Aeronautics and Astronautics (2) — Prof John Dugundji,** aero/astro, **Flutter Vibrations of Aircraft and Structures,** 2pm, Rm 33-206.

Analysis of Substrates of Intermediary Metabolism (264) — H. Brunengraber,** associate professor, nutrition & food science. 2-4pm Rm 66-160.

UROP Colloquium (526) — UROP** staff & students. Informal, come & talk to us. Eats too! For students, staff & faculty. 2:30pm, Rm 8-314.

Physics Potpourri (293) — Prof Henry Kendall,** physics, **Physics and Society: The Country's Energy Problems,** 3pm, Rm 4-231.

New Technology (448) — Gordan Tully,** Massdesign Architects. **Solar Energy Design in Architecture.** 3:30-5pm, Rm 33-419.

Earth and Planetary Science Lecture Series (90) — Ed Boyle,** assistant professor, earth & planetary science. **Theories of the Pleistocene Ice Age,** 4pm, Rm 54-425.

The Non-Expansion of the Universe: Basics (190) — Prof I.E. Segal,** mathematics, 4:30pm, Rm 2-190.

Environmental Issues in Massachusetts (600) — Merrill Hohman,** director, Air and Hazardous Materials Div, EPA, Region I. **Air Pollution in the Boston Area.** 7:30-9pm, Rm 66-110.

Thursday, January 26

Energy Seminar Series (410) — 9:30am: S. Tung,** sponsored research staff, Energy Laboratory; **Fluidized Bed Combustion. 2pm: R. Cannon,** research associate, Energy Laboratory; **MHD Electrodes.** Seminars meet in Rm 66-144.

Issues & Concerns For Those Planning A Medical Career (493) — Floyd Kemsky,** assistant dean, BU School of Medicine. **How to Finance Your Medical Education,** 10am, Rm 4-145.

Is Entropy Related to Microscopic Quantum Effects (254b) — Prof Elias Gyftopoulos,** nuclear engineering, 10am, Rm 26-204.

A Brief Introduction To Law (325) — Gordan F. Bloom,** senior lecturer, Sloan School of Management; **Anti-Trust Law and Trade Regulation. Jeffrey A. Meldman,** assistant professor, Sloan School of Management; **Patent Law.** 1-3pm, Rm E53-143.

Highlights of Aeronautics and Astronautics (2) — Prof Judson R. Baron,** aero/astro, **Flow Fields by Computer,** 2pm, Rm 33-206.

What is Philosophy (272) — Prof Joshua Cohen, What is Political Philosophy?,** 2pm, Rm 26-168.

Physics Potpourri (293) — Ernest Moniz,** associate professor, physics, **Physics and Society: The Nuclear Fuel Cycle,** 3pm, Rm 4-231.

Applications of Operations Research (490) — Dr. Ashok Kalelkar,** operations research section, Arthur D. Little, Inc, **Risk Measurement as a Decision Parameter in the Hazardous Chemicals By Rail,** 4pm, Rm 24-115.

Bacterial Assay for Environmental Mutagens: Relative Sensitivity Of Forward and Reverse Mutation Assays — Howard L. Liber,** NIEHS Trainee. 4pm, Rm 16-310.

Developments in Commercial Satellite Communications Part II: Modulation and Access Systems — John Harrington,** vice president of research and engineering, Communications Satellite Corp, Washington, D.C. **Systems, Communications & Control.** 4pm, Rm 39-500.

Did Viking Find Life on Mars? —** Gerald A Soffen, project scientist, Viking Project. 4pm, Rm 26-100.

Reflections on Mechanical Engineering (214) — Prof Peter Griffith,** mechanical engineering, **Working — What Happens to MIT Mechanical Engineers When They Graduate,** 4pm, Rm 3-133.

Islam in Perspective (601)* — Dr. Adil Aseer, professor of Arabic and Islamics, Ohio State University, **Concept of God in Islam,** 6:30pm, Rm 3-270.

Space Industrialization and Colonization (308) — Prof August Witt,** materials science and engineering, **Space Manufacturing,** 7pm, Marlar Lounge (37-252).

Role of the Professional in International Development (602) — Mary Roodkowsky,** Boston Industrial Mission, **Women in Development: Case of Ladakh Pakistan,** 7:30pm, Rm 14E-304.

Friday, January 27

Environmental Chemistry (59) — Ronald A. Hites,** associate professor, chemical engineering, 10am, Rm 66-110.

Research Seminars (73) — Prof R. Danheiser,** chemistry. **Total Synthesis of Complex Organic Molecules,** 10am, Rm 18-290.

Superconductivity — Materials Development for Large-Scale Practical Applications (297) — Hitoshi Wada,** visiting scientist, materials science & engineering. **The Alloy Ti-Nb-Cu: A Candidate for Superconductor Applications,** Noon-2pm, Rm 4-145.

Energy Seminar Series (410) — William Peters,** sponsored research staff, Energy Laboratory. **Optimized Usage of Coal,** 2pm, Rm 66-144.

Highlights of Aeronautics and Astronautics (2) — Manuel Martinez-Sanchez,** assistant professor, aero/astro. **Magneto-Hydrodynamic Power Generation,** 2pm, Rm 33-206.

Transition Metal EPR (76) — Edward I. Solomon,** assistant professor, chemistry, 2pm, Rm 6-233.

Physics Potpourri (293) — Prof Bernard Feld,** physics, **Physics and Society: Nuclear Energy and Proliferation.** 3pm, Rm 4-231.

The Non-Expansion of the Universe: Details/Statistics (190) — Prof I.E. Segal,** mathematics, 4:30pm, Rm 2-190.

Saturday, January 28

The Four Loves (593) — Dean V. Shahinian,** G. **3:30-5pm: Affection. 7-8:15pm: Friendship.** Tape Recording of C.S. Lewis, late Cambridge University professor. Ashdown House, 6th Floor Lounge.

Sunday, January 29

The Four Loves (593) — Dean V. Shahinian,** G. **2-3:15pm: Eros. 5:30-7pm: Charity.** Tape Recording of C.S. Lewis, late Cambridge University professor. Ashdown House, 6th Floor Lounge.

Monday, January 30

Energy Seminar Series (410) — 9:30am: John Houghton,** sponsored research staff, Energy Laboratory; **Methods for Estimating Resources & Reserves of Primary Energy Supplies. 2pm: Malcolm Jacques,** sponsored research staff, Energy Laboratory; **Combustion of Alternative Fuels,** Rm 66-144.

Highlights Of Aeronautics and Astronautics (2) — Walter M. Hollister,** assistant professor, aero/astro. **Current Research in Air Traffic Control,** 2pm, Rm 33-206.

What is Philosophy? (272) — Barbara Herman,** assistant professor, philosophy & linguistics. **What is Moral Philosophy?** 2pm, Rm 26-168.

Physics Potpourri (293) — Eric Cosman,** associate professor, physics. **Current Topics in Heavy-Ion Nuclear Spectroscopy,** 3pm, Rm 4-231.

How To Do It — Environmentally (561) —** Representatives of Local Recycling Groups and Government. **Recycling and Resource Recovery,** 7:30pm-9:30pm, Rm 66-110.

Tuesday, January 31

Energy Seminar Series (410) — 9:30am: Knut Mork,** sponsored research staff, Energy Laboratory; **Energy Prices, Demand, and the Rate of Inflation. 2pm: Ashwano Gupta,** visiting scientist, Energy Laboratory; **Combustion Diagnostics.** Rm 66-144.

Workshop on Amory Lovin's Proposals for Soft Energy Paths (410a) — Panel Discussion: J.W. Meyer,** Plasma Fusion Center, Energy Laboratory; **M. McKinstry,** nuclear engineering; **C.J. Ryan,** executive director, System Dynamics Group, Sloan School of Management; **W.J. Jones,** research staff, Energy Laboratory. 2pm, Rm 2-143.

Physics Potpourri (293) — Prof Ulrich Becker, Nature, Photons, and Heavy Photons,** physics, 3pm, Rm 4-231.

Reflections on Mechanical Engineering (214) — Prof Herbert H. Richardson,** department head, mechanical engineering. **How To Float On Air, Or How I Got To Be Department Head,** 4pm, Rm 3-133.

Biology Colloquium — Dr. Paul Patterson,** neurobiology, Harvard Medical School. **Environmental Influences on the Determination of Sympathetic Neurotransmitter Functions.** 4:30pm, Rm 6-120. Coffee at 4pm, Vestibule, 5th fl, Bldg 56.

Wednesday, February 1

Energy Seminar Series (410) — 9:30am: Martin Zimmerman,** assistant professor, Sloan School of Management; **Policy Options in US Coal Supply. 2pm: Maher El-Masri; Water Cooled Gas Turbines.** Rm 66-144.

Bicycles in the Real World (522a) — Peter Fiekowshy,** U. **Bicycles as a Partial Solution to the Transportation Problem,** 11am, Rm 24-612.

Highlights of Aeronautics and Astronautics (2) — Nawal K. Taneja,** assistant professor, aero/astro. **The Airline Industry; Its Status and Potential,** 2pm, Rm 33-206.

What is Philosophy? (272) — Ned Block,** associate professor, philosophy & linguistics. **What is Philosophy of Psychology,** 2pm, Rm 26-168.

Neutron Stars — Where the Frontiers of Astrophysics, Nuclear Physics and Particle Physics Intersect (303) — Kenneth Brecker,** associate professor, physics, 2-4pm, Rm 4-231.

Explore Ways To Combine Work Experiences Off-Campus With Academic Credit or Pay (497) —** UROP; Preprofessional Advising Office; Electrical Engineering Coop Program & Students. **Have Your Cake and Eat It Too — Learning Outside the MIT Campus,** 2-4:30pm, Rm E52-461.

The Instabilities of Gravity Waves on Deep Water or Why Do Waves Break? — Prof M.S. Longuet-Higgins,** Cambridge University, England. Applied Math Colloquium, 4pm, Rm 2-338. Refreshments 3:30pm, Rm 2-349.

New Technology (448) — Ivars Melngailis,** Lincoln Laboratory. **Integrated Optics,** 3:30-5pm, Rm 33-419.

Environmental Issues in Massachusetts (600) — Dr. Nicholas Ashford,** chairman, National Advisory Committee on Occupational Safety and Health (staff, Center for Policy Alternatives). **Federal Control of Toxic Materials in the Workplace and Environment,** 7:30-9pm, Rm 66-110.

Community Meetings

Skat Tournament (549h) —** Mon-Wed, Jan 23-25, 7:30-11pm. German House, 476 Memorial Drive, Cambridge, MA.

Touch for Health Seminar (639) — Marcel Singleton,** certified touch for health instructor. 2-4pm, Varsity T-Club Lng, duPont.

MIT Employees, Federal Credit Union Annual Business Meeting* —** Wed, Jan 25, 5:30pm, Rm 10-340.

Meeting of MIT Community Players —** Performance of W.S. Gilbert one-act play, "Rosencrantz and Guildenstern", Wed, Jan 25, 7:30pm, Mezzanine Lounge, Stu Ctr. Wine & cheese refreshments.

Policymaking in Action — The Boston Scene (498) — The Court System,** Visit the Quincy District Court, Thur, Jan 26, 9am-1pm, Rm E53-460.

Sleigh Ride in Concord, MA —** Hour long sleigh ride sponsored by Tech Wives Organization. Sun, Jan 29, meet in Eastgate lobby at 1:15pm to form carpools for drive to Concord, return to Eastgate for cocoa. Admission $3.00 per person, for reservations call Beverly Colby 494-8768.

Magic Show —** LSC, Mon, Jan 30, 8pm, Kresge. Admission 75¢ w/MIT or Wellesley ID.

Women's Forum — Judi Ince,** Co-Director of the Intensive Program for Dancers in Training at Joy of Movement Center in Cambridge, will speak on Women in the Dance and do some improvisations. Mon, Jan 30, noon, Rm 10-105.

Tech Organization for Professional Secretaries —** TOPS general discussion meetings Thurs through IAP, noon-1pm, Rm 10-280. Bring lunch.

Lobby 7 Events

Ken Rogoff on Chess (545)* — Noon, Fri, Jan 27. Simultaneous chess exhibition. Sponsored by the MIT Chess Club. Rogoff, international master of chess, will play 30 players at once. Admission, $1.50. Tickets & Info: Brad x5-8156 Dorm.

Social Events

IAP Semi-Formal Ball* — MIT-Wellesley Ballroom Dance Club. This is your chance to practice the step you have learned and to have some fun! No partner necessary. Fri, Jan 27, 8pm-midnight, Burton Dining Hall. Free, additional info: Scott Brundage x5-8347 or 494-8974.

Strat's Rat* — Fridays through IAP, 8:30pm-1am, Lobdell (2nd fl, Stu Ctr). Dancing, Live DJ. Beer & Wine: .35/glass, 3/$1; wine available by bottle. College ID required. Free.

Movies

Colossus: The Forbin Project —** LSC Movie. Wed, Jan 25, 7 & 9:30pm, Rm 10-250. Admission 75¢ w/MIT or Wellesley ID.

Daybooks of Edward Weston: Book I and II (1 hour) (530)** — Art Classes/SAA, Wed, Jan 25, 7:30pm, Rm W20-429.

Insights in Biochemistry —** Biology Films. Prof A. Rich & V. Ingram, biology, are among the participants. Wed, Jan 25: **Amino Acids: Building Blocks of Proteins; Protein Structure & X-ray Crystallography.** Noon-1:30pm, Rm 16-134.

Blending of 2 Cultures (46 min) (530)** — Art Classes/SAA, Thur, Jan 26, 5:15pm, Rm W20-429.

Broken Treaty at Battle Mountain (152) —** Native American Film Festival, Thurs, Jan 26, 7:30pm, Rm 66-110. Discussion following.

Charlie Chaplin — The Gold Rush —** Thur, Jan 26, Rm 6-120, 7 & 9pm. Admission $1.00.

AIAA Aerospace Movie Series (1) —** Fri, Jan 27: **The Airplane** at Play **(Doc Draper, 1926). Come Fly with Me (Bob Hoover),** Noon-1pm. **Wingtip to Canopy (Blue Angels),** 12:15pm. **History of Flight — The Wright Brothers, Part 5,** 12:30pm, Rm 35-335.

The Twelve Chairs —** LSC Movie. Fri, Jan 27, 7 & 9:30pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Live and Let Die —** LSC Movie. Sat, Jan 28, 7 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Man of La Mancha —** LSC Movie. Sun, Jan 29, 7 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Insights in Biochemistry —** Biology Films. Prof A. Rich & V. Ingram, biology, are among the participants. Mon, Jan 30: **Determining Amino Acid Sequences in Proteins; Sickle Cell Anemia: Molecular Evolution.** Noon-1:30pm, Rm 6-134.

Estuary (608) —** Ecology Films. Tues, Jan 31, Noon-1:30pm, Rm 8-100.

Insights in Biochemistry —** Biology Films. Prof A. Rich & V. Ingram, biology, are among the participants. Wed, Feb 1: **Enzymes: Catalysts of Life Processes. Enzymes: Specialization and Regulation.** Noon-1:30pm, Rm 16-134.

The Omega Man —** LSC movie. Wed, Feb 1, 7 & 9:30pm, Rm 10-250. Admission 75¢ w/MIT or Wellesley ID.

Pretty Maids All in a Row —** LSC movie. Fri, Feb 3, 7 & 9:30pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Jesus Christ Superstar —** LSC movie. Sat, Feb 4, 7 & 9:30pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

That's Entertainment —** LSC movie. Sun, Feb 5, 7 & 10pm, Rm 26-100. Admission 75¢ w/MIT or Wellesley ID.

Music

Liederkreis, a Vocal Quartet of Distingusished Soloists Who Perform the Rarely Heard Vocal Chamber Repertoire of the Masters.* — Liederkreis will sing lieder by Schubert and Brahms, songs by Rossini and Spanisches Liederspiel, Opus 74, by Schumann. Sat, Feb 4, 8pm. Free. Kresge Auditorium.

Early Music Society* — Thur, Feb 2, 4:30pm, Music Library. Dr Timothy Larset directs a concert focusing on the 16th century chanson "Doulce Memorie". In addition to the original version, there will be contemporary settings for lute and harpsichord.

Exhibitions

Vaguely Photographic* — an exhibition of photographic work by five artists: Laura Blacklow, Martha Leinroth, Wendy Richmond, Ruth Schilling, Joel Slayton. Creative Photo Gallery (W31-310), through Thurs, Jan 26. Free.

Alice Atkinson Lyndon Italian Confrontations and Other Temples: A Sculptor's Notebook* — Sponsored by the MIT Committee on the Visual Arts. Exhibit on view, Sun, Jan 29, through Tues, Feb 28, Hayden Corridor Gallery. Public preview: Fri, Jan 27, 8-10pm.

Sets for Cunningham: Johns, Rauschenberg, Warhol** — Sponsored by MIT Committee on the Visual Arts. Hayden Gallery, Sun, Jan 29-Fri, Feb 24. Public preview: Fri, Jan 27, 8-10pm. Gallery Hours: Sun-Fri, 10am-4pm.

Creative Photography Gallery* — Photographs by seven recipients of 1977 Artists Fellowships in Photography from the Massachusetts Arts and Humanities Foundation. Tues, Feb 7-28, Public opening from 5-7pm on Tues, Feb 7. 9am-4pm on weekdays, 10am-6pm on Saturdays. Creative Photography Gallery, Free.

The Compton Years* — A photographic essay of the lives of Dr. & Mrs. Karl Taylor Compton. Thru Wed, Feb 8, Mon-Fri, 9am-5pm, Margaret Hutchinson Compton Gallery, Rm 10-150. Designed by Historical Collections.

Unfinished Works* — Music Library, Rm 14E-109. Examples of unfinished musical compositions from Bach to Bartok.

MIT Historical Collections* — Permanent exhibition Mon-Fri, 9am-5pm, Bldg N52, 2nd floor. Katharine Dexter McCormick, '04; Vannevar Bush, '16; and **1876 Exhibit,** Bldg 4 corridor. **The New Technology Exhibit** 2nd floor balcony of Lobby 7. **Energy Exhibit** Bldg E40, 1st floor. **Radiation Laboratory Exhibit** main corridor, Bldg 8. **Center for Sapce Research, Astrophysics Exhibit** main corridor, Bldg 4. **Bldg 6 Dedication Exhibit.**

Strobe Alley* — High speed photographs by Harold E. Edgerton, Institute Professor and Professor of Electrical Measurement, Emeritus. Bldg 4, 4th fl.

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* — Wed, Jan 25: JV Hockey, Thayer Academy 3pm. **Thurs, Jan 26: W JV Basketball,** Mt. Ida 7pm. **Fri, Jan 27: JV Hockey,** Emerson, 7pm. **M V Basketball,** Ursinus College, 8:15pm. **Sat, Jan 28: M V Basketball,** Coast Guard, 8:15pm. **M JV Basketball,** Coast Guard, 6:15pm. **M & W Gymnastics,** Yale, 2:30pm. **V Hockey,** Plymouth State, Briggs Arena, 7pm. **W V Swimming,** Darthmouth, 2pm. **V Track,** Bowdoin, 1pm. **V Wrestling,** NY Maritime & Central Conn, 10:30am. **Tues, Jan 31: W V Basketball,** Suffolk, 7pm. **V Hockey,** Tufts, 7pm. **V Squash,** Tufts, 7pm. **Wed, Feb 1: M JV Basketball,** Tabor Academy, 7:30pm. **M V Fencing,** Brown, 7pm. **W V Fencing,** Brown, 7pm. **JV Hockey,** Emerson, 4pm. **Thurs, Feb 2: JV Wrestling,** Emerson, 7pm. **Fri, Feb 3: JV Squash,** Colby, 7pm. **W V Basketball,** U Penn, Swarthmore, noon-2pm. **Sat, Feb 4: V Hockey,** Bates, 7pm. **W V Gymnastics,** Rhode Island College & Maine Farmington, 2pm.

Dance

Ballroom Dance (658) — Andy Szilagyi,** G. Regular meetings, Sun and Tues, 4-6pm, Burton Dining Hall. Introductory and Intermediate.

MIT Folk Dance Club — International: Sun, 7:30-11pm, Sala. **Balkan:** Tues, 7:30-11pm, Stu Ctr Rm 491. **Informal:** Fri, 12n-2pm, Kresge Oval (Bldg 7 Lobby in bad weather). **Israeli:** Wed, 7:30-11pm, Sala.

Hatha Yoga* — MIT Women's League. Over 45 Beginners, Thur, Feb 2, 10-11am. Intermediate, Mon, Jan 30, 5:45pm. Beginners, Mon, Jan 30, 7:05pm. Beginners Intermediate, Tues, Jan 31, 5:45pm, Rm 10-340. Info: Ei Turchinetz, 862-2613.

Hatha Yoga I (625) — Cynthia Friedman,** civil engineering. Tues, 11:30am, Rm 10-340.

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 Feb 1 through Feb 12 to Calendar Editor, Rm 7-102, x3-3270, before noon, Friday, Jan 27.

CLASSIFIED ADS X3-3270

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and Institute extension. Persons who have no extensions or who wish to list only home telephones may submit ads by coming in person to the *Tech Talk* office, Rm 7-102, and presenting Institute identification. Ads may be telephoned to x3-3270 or mailed to Rm 7-102. **Deadline is noon Friday before publication.**

For Sale, Etc.

Lg wooden office desk, top 5'x30", drws have metal slides, lock, etc, $35. Penn x8-2872.

G. 26" bike, $5. Call Sue x3-1702.

Hyde hockey skates, M sz 8, ex cond $10. Single matt, box sprng, legs, used, $15. Call 862-1935.

Pr 1 yr old Michelin stdd rad snows, for VW bug, nw, $55 ea, ask $35 or $65/pr. Charlotte x3-4390.

Couch, pine, almost nw, was $275, now $100. Call x3-4981.

8 track car stereo, in box w/ warranty, $40. Paul x3-2351.

Budget stereo system, Sansui 1010 receiver; Pioneer Project 60 spkrs; Garrard 440 changer; Koss K125 Headphones, $275. Call Rich x3-5106 lv msg, gd until Sat.

2 AM/FM stereo receivers, Sansui 500, Sansui 200, must be sold. Chuck x8-3705 Draper.

Pr of lrg Advent spkrs, gd cond, $125. Call Rafael 536-6575.

Kaseinger ski boots, sz 6½, double boot, worn twice, $15. Helen x8-3501.

Complete downhill ski equip, Head 320 skis, 5'10" + step in bindg, v gd cond; boots 7-7½; poles, $80 or best. Hubert x3-3386.

Exhaust system (muffler & pipes) for '70-'74 Ford Maverick 2 dr w/170 or 200 engine $30. Paul x401 Linc.

Auto 8 track/AM radio player w/ install kit, spkr, wire brckt, cable, grille assem w/instrucs, $50. Mary x3-4722.

Heathkit 10 MHZ chnl oscilloscope $200; Miracord 625 auto, trntbl 2/ custom case & cart. $50. Call 494-8185.

Elec stove, white, gd cond, 4 burners w/2 warmers, 2 storage compart, clock timer; well crock slow cooker, $50; sm refrig, white, sm freeze compart, old, work wl, $50; baby playpen $8. Call 646-2351 early eves.

Realistic SPA-35 receiver; BSR-12A trntbl w/new Shure cartrdg & dust cover 2MC1000 spkrs, $150. Phyllis x3-4237.

Kenmore wash mach, 2 yrs old, perf working cond, $125. Merry x3-7358.

Stereo system, yr old, ex cond; Garrard mod 40B trntbl; Lafayette mod LR-1100 AM/FM receiver, AMD Criterion 555 spkrs, $250 or best. Pete x3-5353.

Charles Balatta ski bindings, fits any boot $5. Tony x3-5717.

Johnson 4135 40 chan CB transceiver w/tuned Breaker magnetic mount antenna, $60; Elec organ $125. Roy 861-6369 eves.

GE 15" TV, B&W, needs minor work $10. Chris x3-4765

Baldwin grand pinao, 5'2", French prov, walnut, 3½ yrs, exc cond, current retail $7500, now $4900 or best. Call 267-4136.

Whirlpool air cond, 1200 BTU, 110B, okay except decor grille missing, $35; Westinghouse apt sz refrig, $40; Sears portbl dishwasher, $40; 2 meter ham transceiver incl KW transmitter. Call x3-3072.

Gas stove, 30" Lady Gibson, almost nw, $100. Frank K x2468 Draper.

LSI II memory bd, nw, on Dec warranty, sell cheap, make offer; seek LSI II users, for info exch. Call 494-8888.

Sealy full sz mattr, $30; 2 Zenith B/W portbl TV's, gd cond, $50; TV stand $5; nw Cooper ww tires, B78-13, 4 ply poly, $30pr; B50-13, 4 ply rayon snows, $40. Dave x7898 Linc.

Twin sz inner sprng mattr, box sprng set, gd qual, gd cond, $50. Ben x7905 Linc.

Bureau, couch, lamps, chair, sngl bed, cinder blck, plants, K cab & lg trunk, price nego. Alan x3-5284.

TDK-KR C-90 Casstt tapes, nw, box 10, $14. Bob x5-9654 aft 5pm.

Kenwood 3500 amp 40 watts/chan, used only 3 mo, $100. Darrell 266-5067.

Vehicles

'28 Model-A Ford roadster, pick up, compl disassembled, needs restoration, $1000. John x3435 Draper.

'65 VW Camper nw interior, $500 or best. Call 254-3877.

'65 Chevelle for parts, ex running, 283, doesn't burn oil, gd auto trnsmm, rare end, battery, radio, heater wipers, nw steer center link, driveable but bad frame, yellow sticker, $150 complete. Terry x3-1606.

'68 Chevy Nova, 2 dr, auto, nw tires incl snows, radio, nw ignition, exc mileage, gd shape, $400 or best. Paul x1394 Draper.

'72 Saab, 6K, gd cond, 4 dr, 99E, $1,316. Call 259-9441.

'73 Audi 100 LS, 4 dr, auto, air cond, AM/FM, well main, 49K, $2,150. Call 389-6890 eves.

'73 Audi 100 LS, red, 20K, rebuilt eng, Michelin tr, nw brk, great car, $2,300 or best. John 659-4275.

'74 Mark IV, Jade green, special '76 addition A/C, all power access, mint cond, $6,000. Call 387-6408 aft 7pm.

'76 Fiat 128 Wagon, blue, stereo, rust proof, wl maint, $2,850 or best. Call 546-3921 aft 5:30pm.

'77 Mecury Monarch, 4 dr, pw st & pw brks, 250 ci 6 cyl eng, lw mileage, ex cond & price. Call x3-2772.

Housing

Brk, spr term, Feb 1-May 31, $60/mo, nr BU bridge. 738-6438.

Brk, studio apt w/K and nw B, Fairbank St nr Beacon, sublet, $183/mo. x3-7805 lv msg.

Central Sq, Camb, 6 blocks from MIT, rm in house w/3 stud and 1 grad, cost split equal w/ chores. $110/mo + util. Call 492-5786.

Comm Ave, studio/ 1 BR sublet, $180/mo. Call Ed x3-3588.

Ashmont Hill, Dorchester, Victorian 3rd fl hse, lg K, lg foyer, BR, LR w/ turretrm & view, hrd wood flrs, lg yard, quiet residntl st, T, $215/mo, inc heat & util. Call 288-8619.

E. Hebron, NH, 4 rm, 4 seas cottage, fully insul, elec therm rm heat, lg cast iron RR stove, mod K & B, 1 acre, priv beach rights, jalosied porch, off main rd, Rt 93, close to Tenny & Waterville Ski, taxes $70/yr. Nancy x3-7649.

Martha's Vineyard, yr round, custom built home, '74, on protected salt water pond, upper $60s. Call x3-7063.

Revere, 1st fl, 1 BR apt, elegant, spacious, avail March 15. $295/mo. Ed Gross x3706 Draper.

Shelter Island, NY, safe, beautiful, 3 BR, 6 rm cottage, charmingly furn, fireplace, full bsmnt, gd school, nr everything, $300/mo. Furhter info call x3-2047.

West Somer, spacious 2 BR apt, T, park, no pets, $265 unheated. John x7519 Draper.

Two, 3 BR houses needed for 1 academic yr 1978-79, gd schools & close to MIT for 2 visiting Canadian professors. Diane x3-5763.

Animals

AKC-English springer spaniel 7 wks old, Jan 25. Sire Amer & Canad grand champ, down from champ lines, beautiful, healthy, intel pups, $150 cash only. Steve x3-4680.

Wanted: M kitten 8-10 wks old, cat carrying case, scratch post. Jim x3-7188.

Home wntd for 2½ yr old friendly F mutt. handsome dog w/ loud bark for her sz. My apt is too small. Nds loving home. Call 492-8835 eve.

Lost and Found

Found: Nr Harvard Sq, 7 keys, some motor & 2 MIT do not duplicate on plastic black velvet whiskey key ring. John x3-4765.

Lost: Parker 45 fountain pen, dark blue. x5-9797.

Wanted

File cabinets, 2 drw & 4 drw. Call x3-2200.

House sitter, March 17-April 1, 3 BR, pets & garden, T, Park. Call x3-2916.

Used Charlie Webb crib, old oak, high chair. Carol x3-4351, 8:30-1pm.

Roommates

Burl, M 24 sks rmmt for 2 BR apt by 128 near 93, $180/mo + util. Ed x7328 Linc.

Highland Ave, Camb, M wanted to share 2 BR apt, from Feb-Sept, $110/mo + util. Call 354-1265 eve.

Rmmt for Camb 4 BR, K, LR apt, $44/mo, 10 min walk to MIT. Mike 547-6784, lv msg.

Camb, near Central Sq, rmmt for coop household, $75/mo + util. Call 547-5539.

Harvard St, near Central Sq, Grad M preferred, 1 rm in a 2 BD apt, avail now, LR furn, incl heat, park, $130/mo. Call 492-9193 aft 6pm.

Miscellaneous

Childs Dance, exploring movemnt & space, learning rhythm & dynamics, dance technique and form, creative expression thru modern dance. Starting Feb, to regstr call Joanne 661-0631.

Sat, March 1, group of Buffalonians going to Bruins/Sabers hockey game, if interested call Harvey, ASAP x5-8272.

Will do typing, technical, fast & effic, IBM Selectric. Betty x3585 Draper.

Will do typing, all kinds, IBM Selectric. Debby x3-4625.

Will do typing, resumes, theses, papers & manuscripts, accurate & effic, IBM Selectric. Lisa x3-7160.

Will do typing, technical, to your specs, manuscripts, equations tables. Sheila Parker x3-5705.

Will do technical or thesis typing, IBM Correcting Selectric. Call x3-2053.

Anyone interested in pretty overseas stamps, current, free. Lisa x3-7226.

Attention Philatelists, Worldwide & US approvals for sale. Call x5-7688.

POSITIONS AVAILABLE

This list includes all non-academic jobs currently available on the MIT campus. Duplicate lists are posted on the Women's Kiosk in Building 7, outside the offices of the Special Assistant for Women and Work (10-215) and Minority Affairs (10-211), and in the Personnel Office, (E19-239).

Personnel Interviewers will refer any qualified applications on all biweekly jobs as soon as possible after their receipt in Personnel.

Persons who are NOT MIT employees should call the Personnel Office on extension 3-4251.

Information on openings at Lincoln Laboratory (Lexington, Ma.) is available in the Personnel Office.

Employees at the Institute should continue to contact their Personnel Officers to apply for positions for which they feel they qualify.

Dick Higham	*3-4278*
Pat Williams	*3-1594*
Carolyn Scheer	*3-1595*
(Secretary — Tertia Perkins)	
Virginia Bishop	*3-1591*
Mike Parr	*3-4266*
Ken Hewitt	*3-4267*
(Secretary — Paulette Chiles)	
Sally Hansen	*3-4275*
Lewis Redding	*3-2928*
Richard Cerrato	*3-4269*
(Secretary — Jenni Leibman)	

Admin. Staff, Asst. Director, in the Office of Minority Education to assist disadvantaged students at freshmen and sophomore levels in succeeding in their academic programs. Bachelor of Science degree required. Proven ability and a continuing interest to work effectively and efficiently with minority undergraduate students in science and engineering are essential. Background in science or engineering, some facility with use of computers desirable. A78-3 (1/25).

Sponsored Research Staff, in the Sloan School to perform research on topics related to management use of computer-based information systems and management of computer resources. Will also present findings to sponsors; write proposals and participate in securing research contracts. A Master's degree in management, at least 3 years consulting experience and a background in computer technology and management information systems required. R78-8 (1/25).

Sponsored Research Staff in Urban Studies and Planning to do regional economic research on employment, energy and transportation problems; prepare reports; submit computer runs; maintain tapes, discs, cards and computer workbooks. Excellent economic background, at least 1 semester of linear algebra plus experience in doing computations, preferably on the IBM 370/168 required. Research experience and Fortran programming experience preferred. Non-smoking office. 35 or 40 hrs./wk. R78-9 (1/25).

Technical Asst. in the Biology Dept. to become involved in the isolation and physical characterization of key components of the blood coagulation systems, and studies of the molecular mechanisms by which components interact in fulfilling their physiological roles. A B.S. or B.A. in physical chemistry, or, secondarily, biochemistry, and good laboratory skills required. C78-2 (1/18).

Academic Staff, Technical Asst., part-time, in the Biology Dept. to perform isolation and detailed biochemical analysis of chromosomes using various centrifugation and electrophoretic methods. Specific techniques include polyacrylamide gel electrophoresis of DNA and proteins (one and two dimensional). B.S. or M.S. in biochemistry and good laboratory skills required. Half-time appointment. C78-3 (1/18).

Sponsored Research Staff in the Research Lab of Electronics to research the development of techniques for fabricating submicrometer structures. Will collaborate with faculty, staff and students on application of submicrometer structures in microelectronics, integrated optics, x-ray lenses, liquid-crystal alignment, radiation detectors, thin film growth and superconducting devices. Ph.D. in physics, electrical engineering, materials science or equivalent in applicable experience required. R78-3 (1/18).

Sponsored Research Staff, Programmer, temporary, in the Division for Study and Research in Education to implement the language LOGO in PASCAL for the TI 990 series of computers. Bachelor's degree in computer science or mathematics desirable. Must have experience or knowledge of at least some of the following: LOGO, PASCAL, LISP, compiler design, high level language interpreter design, operating systems. (6-8 months) R78-6 (1/18).

Sponsored Research Staff, Medical Technologist, in the Laboratory for Animal Medicine to perform laboratory tests in hematology, chemistry, bacteriology, urinalysis and serology. Will set-up, read and report results of bacteriological cultures; spin down blood, and perform related tasks as necessary. Bachelor's degree in medical technology or a related field, or college-level course work with some professional experience in medical technology required. Applicants must be currently registered as, or eligible for registration as, a medical technolgist, or have passed an equivalency exam for medical technologists. R78-4 (1/18).

Exempt, Unit Coordinator, in the Medical Dept.'s Infirmary to coordinate and manage administrative functions. Will be responsible for purchasing; petty cash fund; telecommunications systems; telephone listing preparation; statistical records; billing; liaison with various Depts. Bachelor's degree in business administration or health related field preferred. Minimum of 2 years experience preferably in a hospital or related medical facility required. Organizational skills and ability to deal effectively with people also required. E78-1 (1/18).

Exempt, Audiologist, part-time, in the Medical Dept.'s Ear, Nose and Throat Clinic to administer hearing tests with emphasis on pure tones and speech discrimination; maintain records; participate occasionally in hearing conservation studies. Bachelor's degree in Audiology required. Experience preferred but not required. 10 hrs./wk. E78-2 (1/18).

Admin. Asst. V in the Civil Engineering Dept., Transportation Systems Division to assist in the formulation and administration of Division policies; plan and direct work of other office personnel; act as liaison between staff and visitors, students and other personnel; monitor budget and reconcile accounts; coordinate admissions and faculty search procedures; schedule appointments and courses; formulate plan for space allocation. Ability to deal with the public effectively and ability to independently make decisions required. MIT experience preferred. B78-27 (1/25).

Secretary IV for 1 faculty member in the School of Humanities and Social Science to perform routine secretarial duties: type; file; schedule meetings; arrange travel; transcribe machine dictation. Will also provide support services to various projects and occasionally provide back-up typing. Excellent secretarial skills required. Knowledge of dictaphone helpful. B78-36 (1/25).

Secretary IV, part-time, in the Lab for Nuclear Science will schedule appointments and meetings; type correspondence, reports and articles for publication; process requisitions; proofread; file. Excellent technical typing, shorthand and excellent secretarial skills required. Good grammar, spelling and ability to read German essential. College or business school training and a minimum of 5 years experience also required. 20 hrs./wk. (9am-1pm) B78-28 (1/25).

Secretary IV for 1 faculty member, research staff and students in the Nutrition and Food Science Dept. to arrange travel; answer and screen telephone calls; type; file. Excellent typing and organizational skills required. Knowledge of medical terminology preferred. B78-33 (1/25).

Secretary IV in the Sloan School to type technical manuscripts and tables from written copy and dictaphone; prepare course material; arrange travel; answer and screen telephones; handle accounting material. Excellent typing skill, including technical typing experience, good command of English grammar and spelling required. Machine transcription experience also necessary. Position can be structured for job sharing by 2 part time people. B78-32 (1/25).

Secretary IV to work with 2 faculty members in the Materials Science and Engineering Dept. schedule appointments, classes and seminars; arrange travel; prepare class work; maintain files; type and edit correspondence, papers, manuscripts, proposals and reports from hand written draft and machine dictation. Will also independently respond to inquiries; prepare reports; assist visitors and researchers with schedules, reports and procedures. Typing skill required. Technical typing skill preferred. B78-19 (1/18).

Secretary IV in the News Office to handle general secretarial duties: maintain biweekly payroll; monitor accounts; process bills; handle purchasing and petty cash; file; type. Strong typing skills and organizational ability required. 37.5 hrs./wk. B78-26 (1/18).

Secretary III/IV to faculty/student research group in Ocean Engineering to type class materials, reports, manuscripts; arrange travel; monitor research expenses; maintain small reference library. Good typing and organization skills are required. MIT experience and technical typing skill helpful B78-30 (1/25).

(Continued on page 4)

Echoes

January 22 - 28

50 Years Ago

Technology's Wind Tunnel was moved from its temporary location in a building at the rear of the Institute to a permanent position in the new Daniel Gugenheim Aeronautical Laboratory. Wind in the tunnel is produced by means of a 14-foot propeller. By placing models in the tunnel, studies are made of the behavior of aircraft under various flying conditions.

40 Years Ago

Six postdoctorate and eighteen postgraduate fellowships have been donated by E. I. du Pont de Nemours and Company to eighteen institutions including Technology. The du Pont fellowships differ from the usual industrial fellowships in that they are not restricted to the research subject to be undertaken.

25 Years Ago

Plans for a new MIT auditorium have been completed with groundbreaking ceremonies scheduled for May of this year. The auditorium has been made possible by a grant from the Kresge Foundation and was designed by Eero Saarinen in association with Professors Anderson and Beckwith of the Institute's Department of Architecture.

Prepared by Marcia Conroy, MIT Historical Collections, x4444.

TECH TALK
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(Continued from page 1)

Secretary III/IV in the Office of Minority Education to share secretarial duties for an assistant director and a director: type correspondence, reports, manuscripts and proposals; maintain files; answer phones; sort and distribute literature for mailing. Good typing and general secretarial skills, as well as ability to interact with faculty and students required. B78-37 (1/25).

Secretary III/IV in the Office of Sponsored Programs to perform secretarial duties for 2 administrators. Will also perform clerical duties as necessary. High school graduation, or equivalent, with 3 years experience, or formal education with 1 year of experience required. Good typing skills essential. MIT experience helpful. B78-12 (1/18).

Secretary III/IV in Urban Studies and Planning to type manuscripts, correspondence and reports; maintain files and records; schedule appointments; arrange travel; handle mail. Occasionally help with Dept. typing and telephones. Excellent typing skill, good English grammar, ability to compose letters and ability to type from recorded disk or tape required. Prior secretarial experience also required. Shorthand an asset. B78-25 (1/18).

Secretary III in the Student Office of the Nutrition and Food Science Dept. to type; xerox; file; answer telephone; answer inquiries in person, on the telephone and through written correspondence. Typing skills required. High School graduation also required. B78-17 (1/18).

Secretary/Receptionist III in the Nuclear Reactor Laboratory, operations office, to type reports, correspondence; purchase orders and bills; make travel arrangements; answer phones; greet visitors; provide information and referral services; sort and distribute mail; provide back-up secretarial service to department headquarters office. High school graduation, or equivalent, good typing skill and one year serretarial experience required. Good organizational ability and telephone manner also necessary. B78-22 (1/18).

Accounting Asst. V in the Comptroller's Benefit Accounting Office to perform several functions related to health care insurance: communicate with Blue Cross/Blue Shield and MIT Health plan offices; verify retirement estimates and termination on retirement plan; prepare various reports. Will also reconcile monthly pension update; post journal entries, cash transactions and general ledger entries; perform monthly trial balances; prepare bi-annual closing schedules. Typing skill, accounting knowledge, accuracy with figures required. Familiarity with computer input and output desirable. B78-13 (1/18).

Sr. Clerk IV in the Student Financial Aid Office to maintain clerical systems to support data-processing equipment: receive and collate new awards and changes; detect award errors; translate transactions into machine-compatible language; prepare transactions for keypunching; maintain liaison with Student Account office data-processing operation; maintain data-processing files, dictionaries and manuals. Will also assist with general clerical work: type reports and correspondence; file; prepare reports and studies; participate in undergraduate and graduate aid processes. Good typing skill, strong organizational skill, familiarity with accounting and data-processing systems required. B78-29 (1/25).

Sr. Clerk IV in the Medical Dept. to process all department purchase and service requests, accounts receivable and payable and requests for payments; maintain stock inventory and distribute supplies; type; process permit applications; distribute keys. Good typing skill and ability to work accurately under pressure required. Accounting experience required. 37.5 hrs./wk. B78-35 (1/25).

Sr. Clerk IV in the Admissions Office to process college transfer applications; handle mail inquiries; answer questions regarding credits, evaluations and equivalents; prepare statistical reports. Excellent typing skill and ability to handle detail required. Ability to work well with faculty and students necessary. College background helpful. B78-14 (1/18).

Sr. Clerk III/IV in Administrative Computing Services will type data processing documents, reports, studies and technical memoranda; maintain document library; perform other related clerical duties. Excellent typing skill and experience in a clerical position required. Experience in data processing helpful. B78-21 (1/25).

Clerk-Secretary III/IV in the Center for Cancer Research to prepare invoices; post information from various sources; file; check statements against orders; prepare reports; analyze expenditures and commitments. Will also type letters, grants and manuscripts; answer phones; keep records on research grants; order supplies and keep record of pruchase orders. Good typing skill, facility with figures, organizational skill required. Familiarity with chemical and biological terms helpful as well as familiarity with MIT accounting procedures. 40 hrs./wk. B78-2 (1/18).

Sr. Clerk III, part-time, in the Laboratory of Animal Medicine to perform general clerical duties: type; file; answer telephone; process invoices; prepare billing statements. Typing skill required. Business school training preferred. Bookkeeping experience helpful. 20 hrs./wk. B78-16 (1/18).

Clerk II, part-time, in the Presidents Office to xerox, sort and deliver material to various offices; set up and maintain a complex file. Ability to handle detailed work, a mature attitude required. 10 hrs./wk. (2pm-4pm, M-F). B77-479.

Lab Asst., part-time, in the Biology Lab to perform lab tests using spectrophotometers, pH meters and centrifuges; record and collate results; wash lab glassware; keep lab in order. Familiarity with the use of above equipment, knowledge of basic math and decimal system and skill to operate lab equipment required. 15 hrs./wk. H78-13 (1/25).

Hourly, Animal Technologist, in the Division of Laboratory Animal Medicine to direct activities of other animal care personnel; maintain equipment; direct planning for new animals; monitor general health of animals; assure cleanliness of animal areas; maintain records; may perform minor treatment of animals. Position required successful completion of Animal Technologist course plus 5 years experience in animal care. Applicants must be high school graduates. 40 hrs./wk. H78-12 (1/25).

Hourly, Technician C (E-M) in the Energy Laboratory to perform electromechanical assembly, checkout and maintenance work on gas turbine test facilities. Position requires graduation from a 2 year day technical school, or its equivalent in applicable experience, as well as ability in light pipe-fitting, welding and brazing, machining and fabrication, soldering, cable fabrication, as well as basic electronic and instrument hookup ability. 40 hrs./wk. H77-202 (1/18).

Hourly, Electrical Design Drafter in the Physical Plant to prepare new working drawings including field studies and measurements; maintain file of electric system drawings. Must have fundamental technical training and understanding of basic control systems and use of one-line and schematic diagrams. Lay out drafting experience required, as well as some experience with underground primary voltage system and industrial type wiring system. A minimum of 5 years experience is necessary. H77-198 (1/18).

The following positions were still available at *Tech Talk* deadline. The date following each position is the date of the most recent *Tech Talk* issue in which the position was described.

ADMINISTRATIVE STAFF:
A77-3, Systems Programmer, Info. Processing Serv. (2/16)
A77-15, Director, MIT Alumni Fund (4/13)
A77-62, Industrial Liaison Officer, Ind. Liaison Off. (12/14)
A77-73, Sr. Appl. Analyst, Off. of Facilities Mngm't. Syst. (11/16)
A77-79, Applications Prog., Info. Proc. Serv. (12/14)
A77-80, Manager, Info. Proc. Serv. (12/14)
A77-82, Associate Director, Sloan School (12/14)
A77-83, Dir. of Personnel Relations, Personnel Relations (12/14)
A77-84, Admissions Officer, Admissions Off. (12/14)
A77-86, Systems Prog. II, Info. Proc. Serv. (1/11)
A77-87, Systems Prog. II, Info. Proc. Serv. (1/11)
A77-89, Proj. Architect, Phys. Plant (1/11)
A77-91, Sr. Prog. Analyst, Info. Proc. Serv. (1/11)
A77-92, Editor/Writer, News Office (1/11)
A78-1, Dir. of Purchasing & Stores, Purchasing (1/18)

BIWEEKLY:
B77-518, Sec. III-IV, Mech. Eng. (10/5)
B77-590, Sec. IV, Hlth. Sci. & Tech. Div. (1/4)
B77-611, Sec. IV, Elec. Systems Lab. (11/2)
B77-647, Sec. IV, Treasurer of the Corp. (11/16)
B77-655, Sec. IV, Chemical Eng. (11/16)
B77-667, Clk./Typist III, Resource Planning (11/30)
B77-671, Admin. Asst. V, National Magnet Lab. (12/7)
B77-672, Sec. IV, Nutrition & Food Sci. (12/7)
B77-679, Sec. V, Nuclear Sci. (12/7)
B77-684, Sec. IV, Nutrition & Food Sci. (12/7)
B77-688, Sr. Clk. V, Account Rep., Computing Serv. (12/7)
B77-692, Sec. III-IV, Dean for Student Affairs (1/18)
B77-696, Sec. IV, Personnel Office (12/7)
B77-704, Comp. Oper. III-IV, Info. Proc. Serv. (12/14)
B77-705, Comp. Oper. III-IV, Info. Proc. Serv. (12/14)
B77-708, Sec. IV, Architecture Dept. (12/14)
B77-712, Tech. Asst. V, Alumni Assoc. (12/14)
B77-713, Sec. IV Economics Dept. (12/14)
B77-716, Accounting Asst. V, Comptroller's Actg. Off. (12/14)
B77-720, Sec. IV-V, Off. of the Pres. (12/14)
B77-724, Sec. IV, Alumni Assoc. (1/4)
B77-728, Admin. Asst. V, Child Care Off. (1/4)
B77-729, Sec. IV, Earth & Planetary Sci. (1/4)
B77-730, Sec. III, Architecture Dept. (1/4)
B77-731, Account Rep. V, Info. Proc. Serv. (1/4)
B77-737, Sec. IV, Ctr. for Trans. Studies (1/11)
B77-740, Sr. Clk. III, Comptroller's Acctg. (1/11)
B77-741, Tech. Typist III-IV, Elec. Syst. Lab. (1/11)
B77-742, Sec. III, Admin. Comp. Serv. (1/11)
B77-743, Sec. IV, Earth & Planetary Sci. (1/11)
B77-747, Sec. IV, Political Sci. (1/11)
B77-749, Clk. Messenger II-III, Energy Lab. (1/11)
B77-753, Sec. IV, Tech. Adaptation Prog. (1/11)
B77-755, Sec. IV, Earth & Planetary Sci. (1/11)
B77-761, Sec. IV, Nutrition & Food Sci. (1/11)
B77-766, Sr. Clk. III, MIT Press (1/11)
B77-768, Sec. IV, Sloan School (1/11)
B77-770, Sec. III-IV, Lab. for Comp. Sci. (1/11)
B77-772, Sec. IV, Provost's Office (1/11)
B78-4, Sec. IV, Civil Eng. (1/18)
B78-5, EDP Proj. Devel. Lib. V, Admin. Comp. Serv. (1/18)
B78-8, Sec. IV, Admissions (1/18)
B78-9, Sec. IV, Biology (1/18)

ACADEMIC STAFF:
C77-23, Mngr. of Financial Serv., Medical Dept. (5/25)
C77-36, Social Worker, Medical Dept. (10/5)
C77-45, Tech. Asst., Nut. & Food Sci. (12/7)
C77-46, Tech. Inst., Aero/Astro. (1/11)
C77-47, Tech. Inst., Biology (1/18)
C78-1, Tech. Inst., Mech. Eng. (1/18)

EXEMPT:
E77-44, Admin. Asst., Nuclear Reactor Lab. (1/4)
E77-46, Admin. Asst., Comptroller's Acctg. Off. (10/19)
E77-47, Eng. Asst., Aero/Astro. Dept. (10/19)
E77-54, Eng. Asst., Ctr. for Mat. Sci. (12/14)
E77-56, Estimator/Scheduler, Physical Plant (11/9)

HOURLY:
H77-89, HVAC Designer/Draftperson, Physical Plant (10/5)
H77-137, Tech. A, National Magnet Lab. (9/14)
H77-170, Waiter/Waitress, Endicott House (10/19)
H77-176, Mech. B, Energy Lab. (11/30)
H77-195, Drafter, Physical Plant (1/4)
H77-201, Tech. A, National Magnet Lab. (1/18)

SPONS. RES. STAFF:
R77-37, High Energy Physics Res., Bates Linear Accelerator (3/9)
R77-51, Sr. Res. Eng., Energy Lab. (3/22)
R77-53, postdoc. res., Physics, Res. of Elec. (4/6)
R77-73, Plasma Physicist, National Magnet Lab. (4/27)
R77-74, Plasma Physicist, National Magnet Lab. (4/27)
R77-79, postdoc. res., Physics, Lab. for Nuclear Sci. (5/4)
R77-80, postdoc. res., Physics, Lab. for Nuclear Sci. (5/4)
R77-91, Sr. Accelerator Physicist, Lab. for Nuclear Sci. (5/18)
R77-93, Design Engineer, National Magnet Lab. (11/9)
R77-94, Design Engineer, National Magnet Lab. (11/9)
R77-95, Biophysicist, National Magnet Lab. (5/25)
R77-97, Chemical Eng., Energy Lab. (6/1)
R77-105, Managing Dir., Energy Lab. (6/22)
R77-112, Spons. Res. Staff, National Magnet Lab. (6/22)
R77-137, Spons. Res. Staff, Bates Linear Acceleraotr (8/31)
R77-139, Programmer, Res. Lab. of Elec. (8/31)
R77-150, Spons. Res. Staff, Res. Lab. of Elec. (9/7)
R77-153, Reactor Util. and Elec. Sup., Nuc. Reactor Lab. (9/7)
R77-161, Elec. Engineer, Mech. Eng. (9/7)
R77-170, Combustion Engineer, Energy Lab. (9/28)
R77-189, Experimental Physicist, National Magnet Lab. (10/26)
R77-192, Comp. Lanaguage Devel., Lab. for Comp. Sci. (10/26)
R77-196, Computer Prog., Lab. of Architecture & Planning (10/26)
R77-201, Prog./Data Analyst, Earth & Planetary Sci. (11/9)
R77-209, Res. Scientist, Energy Lab. (11/30)
R77-210, postdoc. res., Plasma Physics, Res. Lab. of Elec. (12/7)
R77-211, Spons. Res. Staff, Comp. Syst. Design, Lab. for Comp. Sci. (12/7)
R77-212, Spons. Res. Staff, Prog. Lang. Design, Lab. for Comp. Sci. (12/7)
R77-213, Spons. Res. Staff, Comp. Software Design, Lab. for Comp. Sci. (12/7)
R77-216, Oceanographic Res., Earth & Planetary Sci. (12/14)
R77-221, Neurochemist Res., Nutrition & Food Sci. (12/14)
R77-227, Plasma Physicist, Res. Lab. of Elec. (1/4)
R77-228, Plasma Physicist, Res. Lab. of Elec. (1/4)
R77-230, Computer Syst. Designer, Lab. for Comp. Sci. (1/11)
R77-231, Computer Syst. Designer, Lab. for Comp. Sci. (1/11)
R77-235, Programmer, Earth & Planetary Sci. (1/11)
R77-238, Prog./Analyst, Har./MIT Div. of Hlth Sci. & Tech. (1/11)
R78-1, Cell Culture Chemist/Biologist, Cell Culture Ctr. (1/18)
R78-2, Chief Oper., Lab. for Nuclear Sci. (1/18)

The following positions are on HOLD pending final decision:

B78-20	Sr. Sec. V
B77-754	Sec. V
B77-752	Admin. Asst. V

The following positions have been FILLED since the last issue of *TECH TALK*:

C77-41	Acad. Staff
B78-7	Sec. IV
B77-721	Tech. Asst.
R77-218	Spons. Res. Staff
B77-764	Lib. Asst. IV
B77-711	Sec. III-IV
A77-76	Admin. Staff
B77-765	Sr. Clk. III
B77-771	Sec. III
C77-43	Acad. Staff
B77-673	Sec. IV
B77-399	Sec. IV
B77-744	Sec. IV
B77-719	Acctg. Clk. III
B77-733	Sec. IV
R77-220	Spons. Res. Staff
R77-17	Spons. Res. Staff
B77-752	Admin. Asst. V

INSTITUTE NOTICES

Announcements

BSO Open Rehearsals—Discount tickets for Wed, Jan 25, on sale now at TCA, Stu Ctr Rm W20-450.

RUNE—the MIT journal of arts and letters is seeking submissions—poetry, short fiction, essays & graphics—for spring issue. Drop off manuscripts, Rm 14N-305, or send through Institute mail to Rm 50-301. Deadline: Tues. Feb 28, 1978. Info: Susan, 566-0030, or Don, 267-6448.**

Wives' Group—A list of international women interested in exchanging conversation in Italian, Japanese, German, Portuguese, Farsi, Chinese, etc., for English conversation is available from the Wives' Group. Contact Karen Devine, x3-2916.**

Club Notes

MIT Chess Club*—Meetings, Saturdays, 1-6pm, Rm W20-407. Speed chess, analysis and tournaments. Info: Brad, x5-8156.

MIT Electronics Research Society—Our computers are up, our scopes are running. IAP is the time to build that electronics project. Lab, Rm 20B-119, is open evenings. Info: x3-2060. Dues, $2. New members welcome.**

MIT Figure Skating Club—Sundays, 11am-1pm, MIT Skating Rink. Bring skates. People who skate forwards comfortably and have at least attempted to skate backwards are welcome to meet other skaters and practice their skills.**

MIT Go Club*—Meetings, Mondays & Wednesdays during IAP, 8pm, Rm W20-491.Go is played, taught. Discussions on strategy, occasional speakers on basic tactics announced in advance. Check *IAP Guide* for additional activities.

MIT Juggling Club*—Juggling practice, all levels. We teach beginners. Sundays, through IAP, 12:30-4pm, Rm W20-473, free.

MIT Soaring Association*—General meeting, Thurs, Jan 26, 7:30pm, Rm W20-492. The film *The Sunship Game* will be shown. Refreshments.

Shotokan Karate Club—Practice, Mon & Tues, 6-7pm, Fri, 6-8pm, duPont, T Club Lng. Info: Bill Kerr, x5-6518 Dorm or Bing Wu, x5-6550 Dorm.**

MIT Space Habitat Study Group*—Interdisciplinary discussions of space industrialization, colonization & related issues. Tues & Thurs, 7pm, Marlar Lng (Rm 37-252). Contact: Beverly Bugos, x3-6896.

Religious Activities

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

Christian Service*—Sundays, 10:45am, Chapel. Singing, preaching, sometimes testimonies, prayer following. All invited.

MIT Hillel Services*—Daily Minyan: 8am, Rm 1-136. The Downstairs Minyan (Conservative Egalitarian): Saturdays, 10am, 312 Memorial Dr. Reform: Fridays, 6:30pm, Chapel. Orthodox: Fridays, Sundown, Kosher Kitchen (50-005); Saturdays, 9am, Bush Rm (10-105).

Interdenominational—Worship and holy communion, Wednesdays, 5:05pm, Chapel, sponsored by Lutheran-Episcopal Ministry. Get acquainted supper following. Info: Randy Clark, x3-6921.

MIT Islamic Society*—Friday Prayers held in Kresge, Rehearsal Rm B, 1pm.

Prayer Time—Bible class, Fridays, 1-2pm, Rm 20E-207, guest speakers, music, refreshments. Miriam R. Eccles, founder-director, Alpha and Omega Missionary Society.**

Tech Catholic Community*—Liturgies: Sundays, 9:15am, 12:15 & 5:15pm; Tuesdays & Thursdays, 5:05pm; Fridays, 12:05pm, Chapel. Graduate Student Retreat—Fri-Sun, Feb 3-5. A weekend of prayer, reflection & discussion led by a theologian. Pre-registration required. Contact: Rev Bob Moran, CSP, x3-2981.

MIT Vedanta Society*—Meditation and discourses on the Gita by Swami Sarvagatananda, of the Ramakrishna Vedanta Society of Boston. Fridays, 5:15pm, Chapel.

IAP Notices

The numbers in parentheses indicate an IAP activity. For further information consult the IAP Guide or call x3-1668.

Evening Seminar on Careers and Ethics—Tues, Jan 31, 7:30pm, Rm 1-134. Approaches to career problems and ethics.**

Israel Aliyah Information Night (609b)—Assorted speakers, Wed, Jan 25, Stu Ctr West Lng. Sponsored by MIT Hillel.**

Ken Rogoff on Chess (545)*—Thurs, Jan 26, 8pm, Stu Ctr Mezzanine Lng. Free. Rogoff, international master of chess, will give a commentary on the Korchnoi-Spasky chess match. Sponsored by the MIT Chess Club. Info: Brad, x5-8156 Dorm.

News Writing Seminar (567)—Mark James & David Koretz, News Editors, *The Tech*. Wednesdays, 7:30pm, through IAP, Rm W20-483.**

Tour to Prime Computer Inc—Visit to plant in Framingham, discussion with company engineers. Thurs, Jan 26, leave from Lobby, Bldg 39, 12:30pm. Free. Sponsored by EECS Student-Faculty Committee. Info: EECS Undergrad Office, Rm 38-476.**

What It Takes To Publish a Newspaper (570)—You are invited to see what it really takes to publish an issue of *The Tech*. Mondays, 7pm-midnight, Tuesdays, noon-midnight, through IAP, Rm W20-483. Info: x3-1541.**

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.

What's It All About?
On Wed, Jan 25, UROP is holding an informal gathering. UROP staff and undergraduate UROP participants will be available to answer questions and talk about the program—how it works, and what it's like. Faculty, staff, and students who have any questions, comments, complaints, or praise, or who would just like to meet the UROP staff are welcome to drop by Chipman Room (8-314), 2:30-5:00pm. Refreshments.

Oral Biology Labs
Project involves the use of various biochemical techniques, anthropometric measures and some microbiology in order to determine effects of feeding marginally deficient diets in the growth and development of male rats. Immediate purpose is to determine how these diets affect tooth formation and how dental caries is influenced by them.
Contact: Jorge Sintes, Rm E18-577.

Hearing Disability Telephone Device
Project available for a student interested in electronic aids for those with hearing disabilities. It has been found that using two telephones can significantly increase the ability of the hard-of-hearing to understand phone conversations. The project would involve the study of this phenomenon with the ultimate objective of constructing a device to be used on telephones.
Contact: Prof L. Braida, Rm 36-747, x3-2575, or x3-2589.

Recovery of Uranium from Seawater
A project has been started in Nuclear Engineering to examine the economic feasibility of extracting uranium from seawater. Although dilute, the total resource base is sufficient to preclude the need for fuel reprocessing of breeder reactors. Several nations have pilot-scale work underway in this area. Participation of students and staff is welcome. Interesting problems in chemical engineering, ocean engineering and chemistry are involved. Credit available.
Contact: Prof M.J. Driscoll, x3-4219, Rm NW13-201.

CABLE TV SCHEDULE X3-3625

January 25 - 31, 1978

Wednesday, Jan. 25
Channel 8:
11-12noon — *AUDIO TECHNIQUES FOR VIDEO TAPE*
12:30-1:30pm — *PROGRAM FORMATS FOR INSTRUCTIONAL VIDEO TAPE*
1:30-3pm — *MCGEORGE BUNDY* President of the Ford Foundation. Recorded 3/15/77 as part of the "World Change & World Security" lecture series.

Thursday, Jan. 26
Channel 8:
11-12noon — *HOW TO PRODUCE A VIDEO TAPE PROGRAM*
12:20-1:30pm — *CAMERA TECHNIQUES FOR VIDEO TAPE*
1:30-2pm — *GRIST FOR THE MILL* Produced by Glorianna Davenport and Ann Marion.

Friday, Jan. 27
Channel 8:
11-12noon — *THE PREPARATION OF TITLES & ARTWORK FOR VIDEO TAPE PRODUCTION*
12:30-1:30pm — *PORTABLE VIDEO TAPE PRODUCTION TECHNIQUES*
2-3:45pm — *SCIENTIFIC SEXISM: FROM FREUD TO SOCIOBIOLOGY* with Freda Salzman. Recorded 11/18/77.

Monday, Jan. 30
Channel 8:
12-1:30pm — *SIGVARD EKLUND* Director General of the International Atomic Energy Agency. Recorded 3/24/77 for the "World Change & World Security" lecture series.

Tuesday, Jan. 31
Channel 8:
11-12:30pm — *TO JUPITER, SATURN AND BEYOND: THE PLASMA MEASUREMENTS ON VOYAGER* by John Belcher. Physics Colloquium recorded 11/3/77.
1-2:30pm — *THE ENGINEERING OF FOODS* by Professor Rha, Dept. of Nutrition. Recorded 10/18/78.

Communications Skills Workshop

A nine-session, community-wide workshop in communications skills, sponsored by the Office of Personnel Development, will begin on Monday, Feb. 27.

The workshop is the fourth to be held on an Institute-wide basis. As in the past, a wide variety of participants is sought and will include persons in both supervisory and non-supervisory positions at all employment levels: hourly, bi-weekly, academic, administrative, and research staff; and faculty members.

Focusing on interpersonal communications skills, the workshop is designed for participants to learn and to practice effective ways of functioning in both group and interpersonal situations, according to Drs. Adam and Maureen Yagodka, co-directors of the Office of Personnel Development.

Enrollment in the workshop will be limited to 26. Participant selection criteria will include such factors as job function and location, length of experience at MIT, and type of job responsibility. Workshop meetings will be held on February 27, March 2, 6, 9, 16, 23, and 30, and April 4 and 6 from 1:30 to 4:30pm.

Applications should be submitted before noon Friday, Feb. 3, to the Communications Workshop, Office of Personnel Development, Rm E18-320. Forms are available in your department or laboratory headquarters or by calling x3-4077.

Repertory Ballet Set for Jan. 28

The Boston Repertory Ballet will premiere a new work set to songs of Cole Porter—and featuring a singer and pianist on stage—in Kresge Auditorium, Saturday, Jan. 28, at 8pm.

The "Cole Porter Suite" was choreographed especially for this performance by Samuel Kurkjian, artistic director of the company. Tickets for the performance are $3, and they can be obtained at the MIT Graduate Student Office in Walker. Further information is available at x3-2195.

The MIT performance will also feature guest artists Lydia Abarca and Ronald Perry, principal dancers with the Dance Theatre of Harlem. Ms. Abarca and Mr. Perry will appear in the Boston-area debut of the pas de deux from George Balanchine's *Agon*—one of the masterworks of the twentieth century repertoire—set to the music of Igor Stravinsky. They will also dance the Grand Pas de Deux from *Le Corsaire*, choreographed by Petipa and Minkus.

The remainder of the program will consist of Anthony Tudor's *Soiree Musicale*, with music by Rossini, and Mr. Kurkjian's *Speed Zone*, with music by Paul Hindemith.

Obituaries

David Smart

Word has been received of the death of David Smart, 79, a machinist in the Research Laboratory of Electronics from 1942 until his retirement in 1964.

Mr. Smart and his wife, Maisie Mitchell Smart, had been living in Arbroath Angus, Scotland, since his retirement.

Russell Cobb

Russell Cobb, 72, an administrative assistant at the Charles Stark Draper Laboratory from 1964 until his retirement in 1970, died December 15.

Mr. Cobb is survived by his widow, Florence Cobb of West Harwich.

Catherine LeBlanc

Catherine M. LeBlanc, 45, a secretary in the Information Processing Center, died suddenly Tuesday, Jan. 17, at her home in Hyde Park.

Ms. LeBlanc was associated with the Neurosciences Research Program from 1964-71 and returned to the Institute last year.

She is survived by her mother, Marguerite Meuse LeBlanc, and a sister, Charlotte Johnson of Las Cruces, N.M.