

September 3, 1975
Volume 20
Number 5

## MIT Welcomes Freshman Class



Freshmen throng the pienic whic man class of 1,155 students this week, including students from 47 states and 30 foreign countries.
The freshmen began arriving last Friday for the start of Residence/Orientation Week prior to registration for all students Monday, Sept. 8, and the start of regular classes Tuesday, Sept. 9.
This year's freshman Class of 1979 includes 34 students admitted after only three years of high school. Ninty-one percent of the class members ranked in the upper 10 percent of their high school graduating classes.
Among the freshmen are 175 women ( 15 percent), 30 blacks, and 74 members of other ethnic minorities (American Indian, Mexican-American, Oriental, Puerto Rican and other Spanishspeaking minorities).
The state with the largest number of entering freshmen is New York with 234. Thirty-three percent of the class is from the middle Atlantic states. Eighteen percent come from New England states.
According to Peter H. Richardson, director of admissions at

MIT, the class was selected from among 4,700 final applicants. The incoming freshmen have worked at such diverse jobs as archeolgist, snake keeper for a zoo, conservationist, disc jockey, manager of a lobster business and a crewman on a Japanese oil tanker before coming to MIT

The freshmen were officially introduced to MIT with a picicic

MIT
Photo by Calvin Camphell
Killian Court last Friday. Aca demic counselling and socia activities will continue through Sunday, Sept. 7, closing with the President's Reception for parents and freshmen at $3: 30$ at the Presi dent's House
The class is the largest in MIT history-109 more than a year ago-and it represents the firs (Continued on page 3)

## Technology Studies Program Launches Credit Subjects

> science, technology and culture

The MIT Technology Studies Program will offer its first formal group of subjects to undergraduates this coming academic year.
Technology Studies, under the directorship of Louis L. Bucciarelli, Associate Professor of Engineering and Technology Studies, and guided by a steering committee chaired by Harold J. Hanham, Dean of the School of Humanities and Social Science, brings together faculty from widely diverse fields of scholarship to explore

The Program's subject offerings will address the interrelationship of individual and collective social values and the conduct of technical work; how the organization (in professions, faculties, corpora tions, etc.) of those who work in science and engineering affects what they accomplish, and the impact of technlogical change on society and its members.
These subjects may be used to fulfill MIT's new Field of Concen tration requirement in the Hu manities, Arts, and Social Sci-
(Continued on page 8)

## Brilliant x-ray Source Repeats 1917 Display

The brilliant show being put on in the sky by a newly-discovered x -ray source is a repeat performance, scientists have found. The star, which recently emerged from obscurity by in creasing its x-ray and visible radi ation by a factor of at least a thousand, gave off a similar outburst of visible light in 1917
Moreover, the star (or two stars in close orbit) is probably rela tively near us in the galaxy-al though it still may be several

## \section*{thousand light-years away.} <br> ntinued on page <br> Four District Officers Named

## For Leadership Campaign

Appointments of four district officers for MIT's $\$ 225$ million Leadership Campaign have been announced by Lt. Gen. James B. Lampert (USA Ret.), '39, vice president for resource develop ment and campaign director
They are: Robert H. Bliss, '48, Mid-West Region and two Canadi an provinces; Kevin J. Kinsella

'67, Western States; James N Phinney, Metropolitan New York and Arnold H. Singal, '63, Middle

These findings have emerged from a combination of sophisticated instruments and historical sleuthing involving researchers at both MIT and Harvard University.
The new $x$-ray source-now the brightest source of x-rays in the sky-was discovered in early August by the British satellite Ariel-5. MIT scientists working with MIT-designed equipment aboard SAS-3, NASA's x-ray astronomy satellite, soon confirmastronomy satelite, soon confirm-
ed the discovery, and located the ed the discovery, and locate

Atlantic Sates and South. A fifth officer will soon be named for the New England Region.
The district officers will work with area leaders in contacting Continued on page

## Crime Prevention

 Notices IssuedThe MIT Campus Patrol has begun issuing "Crime Prevention Notices" warnings as part of a program to curtail property losses at MIT.
Patrol officers are leaving notices when they find situations that invite theft. Notices call attention to unlocked areas, unattended valuables, office equipment not bolted down, open or unlocked windows and unsecured motor vehicles or bicycles.
Campus Patrol Chief James Olivieri said MIT property thefts last year nearly doubled when compared to 1973. He said the new program of notices was instituted in an effort to prevent another rise this year
Chief Olivieri said the patrol is maintaining copies of notices issued to identify areas of the Institute where security is lax and where special prevention efforts are needed

Scientists Find Evidence of New Nuclear Structure

By BARBARA BURKE Staff Writer
Evidence for a new nuclear structure has been found by a team of researchers from MIT, the Argonne National Laboratory and the Niels Bohr Institute.

The researchers believe they have created a "nuclear molucule:" two carbon nuclei joined at the surface to form an excited, cigar-shàped magnesium nucleus. Such a structure has been sought by physicists for more than 20 years.

The finding was reported in a recent issue of Physical Review Letters. It is expected to be significant in elucidating the behavior of the nucleus under large deformations and in understanding the basic processes by which two nuclei collide and fuse to form a new nucleus. The study of the nuclear fusion processes, or "heavy ion fusion reactions," is an
active field of nuclear research; among its objectives are the production of superheavy elements which could be important energy
sources, and understanding the the evolution of stars
The deformed nucleus

c
created by bombarding a stationary car bombarding a stalerated carbon nucleis with accelerated carbon nuclei of particular bombarding energies.
Previously, when physicists have observed highly energetic nuclear collisions to combine two nuclei, the nuclei have merged completely, like two drops of water forming a larger drop.

## Key to Understanding

At certain "resonant" bombarding energies, however, a carboncarbon nucleus can be formed which is a kind of nuclear Siamese twin with the two carbon nuclei joined at their surfaces. Its structure is determined not only by the "liguid drop" properties of nuclei, but also by the behavior of the individual protons and neutrons at the surface.
The nucleons presumably go into new orbits which stabilize the cigar-shaped nucleus, and permit ts fleeting existence. (The nucleus
lives about $10^{-21}$ seconds.)
"This interplay of the collective aspects of nuclear motion and the motion of the individual surface nucleons within the nucleus is the key to understanding this new deformed nuclear structure," said Eric R. Cosman, associate professor of physics in the MIT Department of Physics and a member of the staff of the Laboratory for Nuclear Science.

## Experimental Work

 Authors of the report are Professor Cosman; Thomas M. Cormier and Anthony Sperduto, LNS staff researchers; Karl A. Van Bibber and Glenn R. Young, MIT physics graduate students; J. Erskine and L.R. Greenwood of Argonne; and Ole Hansen of the Bohr Institute.The work was funded by the federal Energy Research and Development Administration. The (Continued on page 6)

## Henry Steele Commager Named Visiting Professor



CLOUD CLEANING. Workmen at MIT appear to be lost in the clouds while they wash the outer surface of MIT's J.B. Carr Indoor Tennis Center preparatory to painting. The air-inflated structure formed from heavy-duty fabric is $\mathbf{2 1 2}$ feet long, $\mathbf{1 2 0}$ feet wide and $\mathbf{4 0}$ feet high and covers four tennis courts. Dedicated in 1971, it was the gift of Mr. and Mrs. J.B. Carr of

Wilkes Barre, Pa., and Palm Beach, Fla., and their son and daughter-in-law, Mr. and Mrs. Davis B. Carr of West Palm Beach, Fla. Painting of the outer surface will protect the fabric from ultra violet light and prolong its expected service life. Workmen tie themselves to the structure's ridge with ropes while wielding long-handled scrub brushes.

## Message Unit Costs Rising

Local telephone calls will cost MIT $\$ 316,000$ this year, and a proposed rate increase could boost that another 35 percent next year according to Morton Berlan, MIT telecommunications, superintendteleco
ent.
As

As an institutional customer and user of CENTREX, MIT does not benefit from flat rate service or free message units allowed resi
dence customers, Berlan said. Each message unit now costs the Institute $8.25^{\boldsymbol{4}}$-the highest unit rate of all major US cities with measured telephone plans.
Proposed rate increases before the Massachusetts Department of Public Utilities would raise the cost-per-unit to $11^{k}$, if approved, according to Berlan
He urged employees to make
better use of MIT tie-lines to such places as Harvard, Wellesley, Massachusetts General Hospital, and Draper Laboratory as one way of curtailing local telephone costs. A listing of off-campus access codes appears in all staff and student telephone directories.
"Every call that is dialed 9 plus even digits costs MIT message units," Mr. Berlan said. "By contrast, the percentage of Cambridge residence telephone customers with free local service is 85 percent."

One of America's most distinguished living historians, Henry Steele Commager, will be at MIT as visiting professor in history
Professor Commager, emeritus professor and Simpson Lecturer in History at Amherst College, will teach "Foundations of American Nationalism, 1774-1815" (21.413)a new undergraduate subject-in the fall term.
Professor Commager's career spans almost 50 years. He is author or editor of more than 60 books on American intellectual and constitutional history as well as documentary history from the age of discovery to the present.
Professor Commager graduated from the University of Chicago in 1928. Among his best known works are: Documents of American History (1934); Majority Rule and Minority Rights (1943); America in Perspective: The United States Through Foreign Eyes (1947); Freedom and Order: A Commentary on the American Political Scene (1947); The American Mind: An Interpretation of A merican Thought and Character Since the 1880's (1950), and Freedom, Loyalty and Dissent (1954). His most recent works include: The American Enlightenment (1974); Jefferson, Nationalism and the Enlightment (1974), and Defeat of America: Presidential Power and

## 1923, and received the master's <br> Pulitzer Winner John Hersey To Teach Here This Fall

John R. Hersey, Pulitzer Prize
winning novelist and journalist, winning novelist and journalist,
will teach at MIT during the coming fall term.
Mr. Hersey, a lecturer at Yale University, will be visiting professor in writing and literature in the MIT Department of Humanities and will teach a seminar-"The Writer's Craft" (21.740)-in fiction writing. The subject takes its title from a recent book of essays edited by Mr. Hersey. He will spend three days a week at MIT and his seminar will be limited to 12 to 15 undergraduates.
A writer of what he describes as "contemporary chronicles," Mr Hersey has written more than 16 books in fiction and journalistic forms. His A Bell for Adano won the 1945 Pulitzer Prize for fiction and Hiroshima was an account of the lives of six atom bomb survivors. Two recent books by Mr .

Hersey are: The Algiers Motel Incident about an incident during the 1968 Detroit riots, and The President recounting a week the author spent with President Ford. His other books include: The Wall (1950), A Single Pebble (1956), The War Lover (1959) and White Lotus (1965).

Born in China, he graduated from Yale in 1936, studied at Cambridge University in England, and worked as an assistant to the late Sinclair Lewis before becoming a war correspondent in World War II

## Close Exhibit

An exhibition of drawings and paintings by artist Cynthia Close is currently showing at the MIT Faculty Club, through Sept. 26. Ms. Close is married to Peter M. Close, athletic instructor and sports information director.

## INSTITUTE NOTICES

##  styles will demonstrate their differing use of color, texture, and layout. Use of video equipment to document the camera's view of videotape. Weekly projects and final major project required. Finished art technique not necessary-however students must be willing o explore suggested collage, color rendering, model working and/or photography tech- niques. Students will supply their own materials and art supplies. Permission of instructor required. Hours to be arranged. W. Fregosi, Leave name and number in Rm $14 \mathrm{~N}-407$ or call $\times 3-4441$

Fall Prereq.:
3-9.6


#### Abstract

vailability of Funds: or materials and supplies requests within reason. 2) Generally available for overhead waiver requests when faculy or departments get if you're asking for significant wages from UROP itself. Promise: If you've been inventive, resource ful, persistent, and responsible in ekeing out research support for your UROP work but find you can't swallow, we'll manage it.


## Foreign Studies

Fulbright-Hays Full Grants
Available to US citizens Available to US citizens who have comwill not have the doctorate degree before the beginning date of the grant. The grants offer study in 50 countries, but the applicant mus specify only one. Sufficient knowledge of the appropriate language is necessary to com
municate with the people of the host country and to carry out the proposed study . country covers round-trip transportation, tuition books, health and accident insurance, and a maintenance allowance for one academic year, based on living costs in the host country Graduate School Office, Rm. 3-136, x3-4860 Deadline: Sepiember 26, 1975
Winston Churchill Foundation
The Winston Churchill Foundation offers scholarships in engineering, mathematics and
science at Churchill College. Cambridge University. England. About 10 awards are given each year to outstanding men and women who are US citizens between the ages of 19 and 26 and who hold a bachelor's degree from a US college. At the time of application the student must be enrolled at one of the 28 participating
universities. MIT nominates two candidates Churchill Scholars have the option of spending one year at Cambridge working toward a certificate or diploma, or three years for the PhD. Applicants must have taken the Gradute Record Examination no later than October 18. 1975. Graduate School Office, Rm
$\times 3$-4860. Deadline: November 3, 1975 .

Marshall Scholarships
Marshall Scholarships
The Marshall Scholarships enable US The Marshall Scholarships enable US
citizens under the age of 26 who are graduates of US colleges and universities to study for a degree of a university in the United Kingdom for a period of at least two academic years.
Candidates will be selected for distinction of Candidates will be selected for distinction of
intellect and character, as evidenced by their intellect and character, as evidenced by their
activities and achievements. A total of 30 activities and achievements. A The award averages $\$ 3700$ per year. Married persons are
and
digible for Marshall Scholarships but eligible for Marshall Scholarships but preference will be given to those who intend to
remain unmarried. Graduate School Office, remain unmarried. Graduate School Office,
Rm. $3-136, \times 3-480$, Deadline: October 15,1975 , The following brief descriptions of selected graduate fellowhips have been received re-
complete desc
melia Earhart Aerospace Fellowships
The Amelia Earhart Fellowships warded to women for advanced study and reearch in the aerospace sciences. Grants of $\$ 3.000$ win be assistance in the best qualified ear. A bachelor's degree in a science qualifying a candidate for graduate work in some phase of aerospace and related sciences the basic requirement of the fellowship. Applications must be filed by January 1, 1976.

## Justice

The National Institute of Lew En and Criminal Justice is making available imited number of graduate research fellowships to doctoral candidates who are writing their dissertations. Dissertations must be in a najor area of criminal justice or topies elosely related to criminal justice. Application eadline: November 15, 1975.

The Latin American and Caribbean Learning ellowship In Social Change
To provide opportunities for scholars to social change programs, the Inter-American Foundation announces the availability of a small number of pre- and postdoctoral research fellowships. The fellowships are open o doctoral candidates in the social sciences and professions. To be eligible, candidates must have a mackground with specialization in at least one academic discipline or problem area (e.g., rural credit, producer and consumer cooperatives, nutrition, housing. regional planning, non-formal education
etc)
Candidates must be able to write and etc.). Candidates must be able to write and American area. Doctoral candidates must be enrolled in higher educational institutions in the US and have fulfilled all degree re quirements other than the dissertation at the time of the award. Stipends for research vary from country to country. Field research is normally supported for a nine-month period months as an intern under the auspices of the Inter-American Foundation. Deadline: De-

## MIT Club Notes

Mit Baha' issociation**-Meeting Mon, Sept 8, 5pm, Rm $8-105$ to get acquainted and make plans for year. Pot Luck pienic 6pm. All are elcome
MIT/DL Bridge Club**-ACBL Duplicate Bridge. Tues, 6pm, Walker Memorial Blue Rm.
MIT Choral Society**-Directed by John Oliver. Open rehearsals Mon, Sept $8 \&$ Thurs, Sept 11, 7:30pm, Rm 10-250. $1975-76$ season will
for Double Chorus and Beethoven, Mass in C
Major.
mIT Concert Band-Short organizational
meeting Registration Day, Mon, Sept 8, 5pm,
Stu Ctr West Lge. Old \& new members asked
to attend. Regular rehearsals start Wed, Sept
10, 8pm \& Mon, Sept $15,7: 30 \mathrm{pm}$, Kresge.
Repertoire of contemporary music includes
large number of original manuscripts.
Players at all levels welcome.
Strategic Games Society-Sat, 1pm-lam,
Walker Rm 309 \& 318. Offers opponents and
discounts on merchandise to members plus
gaming \& periodical library. Info: Paul Bean,
$266-6108$.
Student Homophile League*-Gay Lounge, $\mathrm{Rm} 50-306$, open daily for lunch \& random ther hours, x0745 Dorm (x6745 Dorm after witch-over.) Tom, Contact Line, x3-5440, provides info, referrals counseling or just
talking to gay persons. Meetings 1st \& 3rd Sun every month, Gay Lge, Consult bulletin board, Bldg 3, for info. Gay pub-crawling tour Thurs

## Religious Activities

The Chapel is open for private meditation 7am-11pm daily.
Christian Worship Service*-Sun, 10:45am Chapel. Refreshments following service. Islamic Society**-Prayers Fri, 1pm, Kresge rehearsal rm B.
Prayer Time**-Lunch hour Bible classes led by Miriam R. Eccles. Fri, 1-2pm, Rm 20E-226 All are welcome

## TECH TALK

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Time Notes Seismologists

Faculty and alumni in MIT's Department of Earth and Planetary Sciences (Course XII) are prominent among leading seismologists referred to in a major cover story on earthquakes and earthquake prediction in the Sept. 1 issue of Time magazine.
Moreover, the magazine credits MIT research carried out in the 1960s as a key element in seismologists's improving ability to predict some earthquakes.
Faculty and alumni cited include: Dr. Frank Press, Robert R Shrock Professor of Geophysics and head of the department; Dr. William F. Brace, Professor of
geology and an alumnus (SB XIII '46, SB I' 49, PhD XII '53); Lynn R. Sykes (SB SM XIII (60) and Christopher H. Sykes (PhD XII '67), both now at Columbia University's Lamont-Doherty Geological Observatory; and Amos M. Nur (PhD XII '69) of Stanford University
The magazine said Dr. Brace
and associates, while studying and associates, while studying mechanical strains, discovered that as rock approaches its breaking point, there are unexpected changes in its properties-electrical resistance increases, seismic waves passing through it slow down. This understanding is now proving essential as seismologists develop prediction techniques by watching for the events that signal the coming of an earthquake.

## Freshmen Welcomed

(Continued from page 1 ) step in implementing decisions made last spring to seek to increase the total undergraduate student body at MIT by about 10 percent over the next four years in order to make maximum use of
existing facilities. Added to 3,000 existing facilities. Added to 3,000
upperclass students expected back from last year, the new freshmen will bring total undergraduate enrollment for 1975-76 to slightly less than 4,200 . Freshmen classes on the order of 1,100 to 1,150 will be admitted over the following three years so that the undergraduate enrollment will level out at between 4,400 and 4,500 by the 1978-79 academic year.

Chancellor Paul E. Gray, in announcing the growth plan to the Faculty last spring, said MIT will be able to absorb additional students without diluting the students without diluting the
quality and effectiveness of teaching.
"We will need a small increase
in the teaching staff, particularly at the instructor level, to accommodate the additional freshmen," Dr. Gray said. "What we really will be doing is increasing as much as is reasonable and prudent the productivity of our existing facilities and resources-our class-

Mime Troupe

## To Perform

Noon hour events, held weekly in the Rogers Lobby
(Bldg. 7), will resume, Wednesday (Sept. 10) with two performances-at noon and again at $12: 30 \mathrm{pm}$-by Boston's National Mime Theatre. All lobby events are open to the public free of charge. The mime troupe-directed by Kenyon Martin, a wellknown figure in American mime, will perform a series of classical mime vignettes from their repertoire work, "Beyond Words."

## New Deadlines Affect <br> Registration Procedures

## Several changes in registration procedures will take effect with

 the start of the fall term.Class cards replace the former roll cards. The class cards are for roll cards. The class cards are for not affect registration in a subject.
The end of the fifth week of the term-October 10 this year- will be a major deadline for all students. After that date no subjects may be added. Moreover, credit standing-such as listening or junior/senior pass fail-may not be changed.
An exception to adding subjects will be allowed when an instructor certifies that a subject does not

## rooms, laboratories, libraries,

 physical plant."Dr. Gray said an important element in enabling MIT to increase the undergraduate student body starting this year was the recent completion of a new residence building that will provide on campus housing facilities for an additional 300 undergraduate students.

## J.S. Waugh Wins Langmuir Prize

Dr. John S. Waugh, Arthur Amos Noyes Professor of Chemistry at MIT since 1973 and a member of the MIT teaching staff since 1953, has been named recipient of the 1976 American Chemical Society's $\$ 5,000$ Irving Langmuir Award in Chemical Langmuir Award in Chemical
Physics for contributions to the analysis technique of nuclear magnetic resonance and its application to chemistry and physics. The award, recognizing Dr. Waugh's pioneering work with NMR methods-particularly of solids, will be presented at ACS's solids, will be presented at meeting in New York next April.
the term.
The fifth week of the term is also the deadline for undergraduates to register for reduced loads if they expect a reduction in tuition. This includes students registering for thesis only. Students must submit a form for "Application for Light Load Undergraduate Term Program." There will be a $\$ 25$ charge for late submission of this form.
The drop date has also been changed. Dropped subjects must changed. Dropped subjects must the end of the term-November 21 this fall.
A statute of limitations has been adopted by the Committee on Academic Performance for petitions to change student records. Petitions for changes in records more than a year old will be
accepted during 1975-76, but normally will be refused thereafter.
Likewise, undergraduates will
have 1975-76 to make have 1975-76 to make up any inbefore. After this year, the faculty rule on incompletes will be strictly enforced.
These and other modifications in the registration procedure are given in detail in a Supplement to the Guide for Undergraduates and Faculty Counselors, and the Graduate School Manual September, 1975. Copies of the supplement are available from faculty counselors Performance office, Rm 10-191.

## Obituary

## Howard J. Werne

Howard J. Werne, 19, a resident of MacGregor House who would have been a sophomore at MIT this term, was killed in an automobile accident in his home town, Evansville, Ind., Aug. 22.
Police said Werne was alone in a car that struck a utility pole on an Evansville street. He died of a skull fracture three hours later. Funeral and burial were in Evans-
ville. ville.


## Brilliant x-ray Source Made First Appearance in 1917

came from historical records of sity. When the Harvard Universighted optically, and was seen to increase to its optical radiation a thousand-fold, Professor Rappaport suggested to his colleagues at Harvard that they search these records.
The search revealed that the same object had shown a similar outburst of visible radiation in 1917. This suggests, Dr. Rappaport said, that the object may be similar to stars called recurrent novae.
These recurrent novae are be lieved to be two stars in close orbit, one a regular star and one a highly condensed white dwarf. As gravity pulls matter off the
regular star onto the white dwarf,
the density and heat become so great that hydrogen nuclei pulled onto the dwarf fuse, creating an explosion similar to an enormous hydrogen bomb.
The explosion cools the star, and it then takes years before enough heat builds up to set off another explosion.
Dr. Rappaport believes that in the case of the new x-ray source, the partner to the regular star may be a neutron star rather than a white dwarf. Neutron stars are so dense that the atoms in the center are crushed; the interior of the star is just one giant atomic
nucleus. nucleus.
In such a case, matter spiraling onto the tremendously dense neutron star would heat up enough to emit bursts of x-rays as well as
isible light.
The SAS-3 experiments are under the direction of Dr. George W. Clark, professor of physics in the Department of Physics and the Center for Space Research at MIT Co-investigators are Professor Rappaport; Professors Hale Bradt and Walter H.G. Lewin, of the Department of Physics and the Cen ter for Space Research; and Dr Herbert H. Schnopper. Also work ing on interpreting the SAS-3 data is Professor Paul C. Joss.
The star was first sighted optically by Dartmouth College astronomers Forrest I. Boley and Richard L. Wolfson using the McGraw-Hill Observatory at Kitt Peak, Arizona.
The observatory is operated by
the University of Michigan, MIT
and Dartmouth. It was set up pri marily to coordinate optical and $x$-ray study of $x$-ray sources, and particularly to take advantage of SAS-3's unique ability to locate sources of $x$-rays to within 10 or 20 are seconds-five or 10 times more precisely than has been done before.
The rewards of this collabora tion have been swift and impres sive: the new $x$-ray source is only one of a series of findings made since the satellite and observatory began operation less than four months ago.
"This has worked exactly the way we dreamed it would," Pro fessor Rappaport said
ctor of the Latin American Teaching Fellowship Program for the Tufts University Fletche School of Law and Diplomacy. He has also worked with the US AID mission to Peru.
Phinney, former assistant director of alumni relations and graduate of Johns Hopkins University in 1955, was director of the MIT Alumni Center of New York from its establishment in 1963 to 1972. Previously he was Assistan to the President and director of development at Pacific Universit (1958-63). Since 1972 he has been Regional Director of the Alumn Fund for the metropolitan New York area.

Singal is a graduate of Harvard '58, Yale Law School '61, and the Sloan School of Management '63. From 1963 to 1968 he was vice president for research, planning and development at Federal Dis tillers, Inc., in Cambridge. He re turned to MIT in 1968 as staff asso ciate for estate and life income plans and in 1972 was appointed plans and in 1972 was appointed
Institute Secretary for Charitable Institute Secretary for Charitable
Trusts-a position he will retain in part as district officer
his wife, who have been associated with the Institute community nearly 50 years. The three new ap pointees are the second group of young faculty to hold the two-year appointments.
Corporation Chairman Howard W. Johnson and MIT President Jerome B. Wiesner said at the time the fund was established that it would provide new horizons in research and career development for younger faculty. Concurrently it also provides funds needed by the faculty members to involve undergraduate students directly in their research.

There is no more fitting way for us to honor this man and this woman for the devotion, affection and warm friendship they have given freely to young people at this university over a period of nearly half a century," Mr. Johnson and President Wiesner said.
Professor Grodzinsky, 29, 0 Cambridge, recei
Medal for effective teaching as a graduate stutor and instruc-1972-74. He re-

# THE <br> INSTITUTE <br> CALENDAR <br> September 3 through <br> September 14 

## Events of Special Interest

Blood Drive - Sponsored by TCA. Walk-ins only, help relieve Labor Day shortage. Wed, Sept 3, 9:45am-3:30pm, Stu Ctr Rm 491. Admission: 1 pint. Note: those who gave at July 11 Emergency
drive not eligible.
Orientation 75 - Graduate Student Council invites graduate students to meet faculty, administrators, other students. Thurs, Sept students to meet faculty, administrators, other students. Thurs, Sept 4, beginning 9:30am, Kresge, Welcomed by Dean Kenneth R.
Wadleigh, Graduate School, \& Dean for Student Affairs Carola Wadeigh, Graduate School, \& Dean for Student Affairs Carola
Eisenberg. Information Midway with representatives of student organizations 10:30am, Sala. Pienic, Killian Court, 12:30pm; tickets $\$ 2.25$. Department open houses, 2pm. Reception 5pm, Bush Bldg Lobby, attended by President, Chancellor, Provost, other members of Academic Council.

Alumni Officers Conference - Fri, Sept 12, opens with reception, 5 pm , Stu Ctr; dinner, 7pm, duPont Gym, with Corporation Chairman Howard W. Johnson, co-chairman of Leadership Campaign, speaker. Sat, Sept 13: Welcome by President Jerome B. Wiesner; discussion at Kresge by Vice President Constantine B. Simonides, Chancellor Paul E. Gray, Alumni Association executive vice president James A. Champy. Morning program concludes with panel including Dean Alfred H. Keil of the School of Engineering; Dean Kennetth R. Wadleigh of the Graduate School; Dean Emeritus Irwin W. Sizer of the Graduate School; Dean William L. Porter of the School of Architecture and Planning; \& Dean for Student Affairs Carola B. Eisenberg. Awards Program during luncheon, Walker Memorial, presided over by Howard L. Richardson, '31, president of the Alumni Association. Program on "The Human
Brain: The Relationship of Physical Structure and Behavior", Dr. Brain: The Relationship of Physical Structure and Behavior", Dr.
Hans-Lukas Teuber, head of Department of Psychology; Dr. Ann M. Hans-Lukas Teuber, head of Department of Psychology; Dr. Ann M.
Graybiel, psychology \& brain science; Dr. John Robert Ross, Graybiel, psychology \& brain science; Dr. John Robert Ross,
linguistics; $2: 30 \mathrm{pm}$, Kresge. Conference concludes with gymnastic linguistics; $2: 30 \mathrm{pm}$, Kresge. Conference concludes with gymnastic
team exhibition, duPont Gym, \& social hour, Stu Ctr. Conference team exhibition, duPont Gym, \& so
Chairman, George J. Schwartz, '42.

## Community Meetings

MIT Women's Forum** - Meetings Mon, 12n, Rm 10-105 (Tues in "Wase of holiday). Mon, Sept 8: Vera Kistiakowsky will speak on Edinburgh Conference on Physics Education." Nominations accepted for Women's Advisory Group representatives until Fri, Sept 12. Send names to Betty Campbell, Rm 24-017, x3-6067.

MIT Club of Boston - September Luncheon Meeting with Jonathan Kozol, author. Thurs, Sept 11, 12n, Aquarium Restaurant, 100 Atlantic Ave, Boston. Reservations: Ms. Kiirats, x3-3878.
MIT Diet Workshop** - Thurs, $12 \mathrm{n}-1 \mathrm{pm}$, Stu Ctr Rm 491.
English Conversation Classes - For wives of visiting faculty, wives of staff and students from foriegn countries, offered by Technology Matrons. Registration Thurs, Sept 18, $10 \mathrm{am}-12 \mathrm{n}$, Rm 10-240.
Classes Tues \& Thurs morn for 10 weeks. Fee: $\$ 20$. Babysitting classes Tues \& Thurs mo

## Social Events

MIT Chinese Students' Club Welcome Party - Meet new and old members, find out what CSC does. Informal discussions, Chinese refreshments. Sat, Sept 6, 7:30pm, A shdown crafts lge. Free.

Rock Revival ${ }^{* *}$ - Sponsored by Student Center Committee with Little Watter \& his golden oldies. Fri, Sept 12, 9pm, Sala. Admission: $\$ .75 /$ couple, MIT or Wellesley ID required. Free beer \& punch, live DJ.
24 Hour Coffeehouse* - Enjoy relaxing conversation, piano playing, games, inexpensivie food, candy, drinks. Open 24 hours per day, 7 days per week, Stu Ctr 2nd fl lge.
Over 30's Singles Club - Lunchtime meeting in Stu Ctr East Lge (small dining room off Lobdell) Fri, 12:30-1:30pm. New members wallon. Erica,

## Movies

Mad Adventures of Rabbi Jacob** - LSC. Sat, Sept $6,8 \& 10 \mathrm{pm}$ Kresge. Admission \$.50, free for frosh.

Apna Desh* - Sangam. Indian movie with English subtitles. Sun Sept 7, 2:30pm, Rm 10-250. Admission \$.50.

The Cheerleaders** - LSC. Mon, Sept 8, 5:30, 8 \& 10:30pm, Kresge. Admission $\$ .50$, ID required.

Chinatown** - LSC. Fri, Sept 12, 7 \& 10pm, Kresge. ID required.

Paisan (Rossellini)* - Film Society. Fri, Sept 12, 7:30 \& 9:30pm Rm 6-120. Admission \$1.
The Sting** - LSC. Sat, Sept 13, 7 \& 10pm, Kresge. ID required
Klute - MidNite Movie. Sat, Sept 13, 12 m , Sala. Free, MIT
Wellesley ID required, Wellesley ID required, 2 persons/ID.
It's a Mad (etc.) World** - LSC. Sun, Sept 14, 7 \& 9:30pm, $R_{n}$ 26-100. ID required.

## Theatre and Shows

The Fantasticks* - MIT Musical Theatre Guild. Sept $5,6,12$ \& at 8 pm , Sept 13 also at 3 pm , Kresge Little Theatre. Tickets: $\$ 1.5$ advanced sales \& reservations, $\$ 2$ at door. Speical free performan
for freshmen ONLY Sun, Sept 7, 3pm, Kresge Little Theatre. Info x 3-6294.

MIT Musical Theatre Guild seeks director, music director, designe \& tech people for fall show, "South Pacific." Info, x3-6294.

## Lobby 7 Events

National Mime Theater* - Wed, Sept 10, 12n. Free.

## Exhibitions

Faculty Club Art Exhibit* - Works by Cindy Close exhibite during Sept.

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

MIT Historical Collection* - Permanent exhibition, open Mon-F $9 \mathrm{am}-5 \mathrm{pm}$, Bldg N52, 2nd floor.

Freshmen are encouraged to attend departmental lectures a seminars. Even when these are highly technical they provi students one means to learn more about professional work in department and field
*Open to the public
**Open to the MIT community only

Send notices for September 10 through September 21 to $t$ Calendar Editor, Room 5-111, Ext. 3-3279, before noon Frida

## IFAC Congress Draws 1,400 from 35 Nations

MIT took on a cosmopolitan air mately 1,400 persons from 35 na


Attending the opening session of the sixth world congress of the Inter national Federation of Automatic Control last week are (left to right) Cambridge Major Walter Sullivan; Nathan Cohen, chairman of the US Organizing Committee for the congress; Dr. Hartley Rogers, Jr., associate provost; and US Secretary of Labor John T. Dunlop. The congress attracted 1400 participants from 35 nations.
world congress of the International Federation of Automatic Control.
The congress, devoted to "Control Technology in the Service of Man," included twice-daily plenary sessions, 63 technical sessions, and a number of round table discussions.
Among those attending the opening session Monday (Aug. 25) were Cambridge Mayor Walter Sullivan; Dr. Thomas E. Crooks, director of the Harvard Summer School; Dr. Hartley Rogers, Jr. associate provost of MIT; and US Secretary of Labor John T. Dunlop, who gave the keynote address. Dr. Dunlop commended the federation for attention to social concerns. He stressed the importance of automatic control in developing cheaper and more efficient ways
of producing and delivering goods and services.
But he warned participants against imputing their own values and assumptions about work to others. He said "most men and women find their real lives in an outside activity," not in their jobs. Several MIT researchers spoke in the technical sessions and round table discussions. In addition, Dr Jay W. Forrester, Germeshausen Professor of Management in the Alfred P. Sloan School of Manage ment, outlined the case for limits to growth in a talk on "World Dynamics" in the plenary session Monday afternoon.
Chairman of the US Organizing Committee for the 1975 congressthe first held in the United Stateswas Nathan Cohen, a 1927 graduate of MIT in electrochemical

## Hardest Part Was Learning English, Cosmonaut Says

The hardest part of preparing for the Apollo-Soyuz flight was not reconciling two different technical systems, but learning English, Soviet cosmonaut Nikolai N Rukavishnikov, flight engineer for the back-up Soyuz crew, told IFAC participants last week
Speaking in English, Rukavish nikov explained that it was decided that Soviet cosmonauts should speak English, and the Americans speak Russian, on the theory that it is easier to speak a foreign language than understand

He brought down the house with his imitation of the first attempts of the Soviet cosmonauts to speak English, their heavy accent contrasting strangely with the idiomatic phrasing of "I read you loud and clear."
But eventually, he said, the Russians and Americans even evolved their own language, with expressions like "ochen okay" for "Aokay.
Rukavishnikov conceded Amer-
ican astronauts learning Russian also had a difficult task
Program Chairman was Boris N. Petrov, member of the USSR Academy of Sciences, and chairman of InterCosmos, the Soviet equivalent of the National Aero
nautics and Space Administration.
Also participating were Dr . Also participating were Dr . Walter Haeussermann, associate director for science at NASA's George C. Marshall Space Flight Center in Huntsville, Ala.; Sam Carlisle, president of the Interna-

Soviet academician Boris N. Petrov (center), chairman of the Soviet space agency, answers questions about US-Soviet space cooperation Listening intently are (left to right) Dr. Victor P. Legostayev, Soviet deputy technical director of the Apollo-Soyuz program; Soviet cosmonaut Nikolai Rukavishnikov; and Chester M. Lee, US program director for the Apollo-Soyuz program. The four spoke in a morning panel on the Apollo-Soyuz flight last Thursday, during the IFAC world congress.
 deputy technical director of the Apolo-soyuz program; Soviet cosmo
tional Measurement Confedera tion (IMEKO); Dr. Victor $\mathbf{P}$ Legostayev, deputy technical di rector for the USSR of the ApolloSoyuz program; and Captain Chester M. Lee, US program director for Apollo.
Captain Lee showed NASA films of the flight last July, including dramatic shots of docking and shots of the earth. He also mentioned some of the results of the flight's scientific experiments including the discovery of two new sources of extreme ultraviolet radiation, measurements of helium flow in the solar system, the growth of crystals in space, and studies of the solar corona.
Both Soviets and Americans on the program agreed that the Apollo-Soyuz flight was valuable in improving cooperation between scientists and engineers of the two nations.
The technical difficulties that were overcome-particularly developing docking gear-will also improve space flight safety, they said, and could make possible more joint flights in the future.
engineering and retired vice president of Leeds and Northrup Co. of Philadelphia
Among MIT persons who planned the congress were George $C$ Newton, Jr., professor of elec trical engineering; Henry M. Paynter, professor of mechanical engineering; Wallace R. Vander Velde, professor of aeronautics and astronautics; and John E. Ward, lecturer in the Department of Electrical Engineering and Computer Science
IFAC officials late in the week issued a resolution encouraging "greater understanding of the world as a dynamic system," so that natural resources can best be used to promote the "life, health and well-being of all peoples of the world.'
IFAC president presiding over the congress was Dr. John C Lozier of Bell Telephone Laboratories. The new president, who wil preside over the next IFAC world congress in Helsinki in 1978, is Dr U.A. Luoto of Finland

IFAC, founded in 1957, is a world-wide federation of 38 mem ber organizations, each represent ing national scientific and engineering societies concerned with automatic control. Previous world congresses have been held in Paris, Warsaw, London, Basel and Moscow

## NRP Adds Grad

 Student SeminarSelected graduate students wil be admitted to continuing work sessions at MIT's Neuroscienc Research Program in Jamaica Plain during the coming term Sessions involve 15 or so invited scientists from throughout the world working on issues at the frontier of neuroscience research Any faculty member may nomi nate graduate students for admis sion to "Seminar in Neuroscience Research Topics" (20.515). Fina selections will be made in early September. Selected students wil take part in proceedings and prepare proposals for future sessions. Contact Professor Mac V. Edds at 522-6700. 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 A ssistants fo
Women and Work (10.215), and Minority Affairs (10.211), and in the
Personnel Office (E19-239) DURING THE SUMMER MONTHS, AN INTER IM LISTING OF NEW POSITION LOCATIONS ON THE WEDNES
DAYS WHEN TECH TALK IS NO 13, 27). Personnel interviewers will
refer any qualified applicants on all
biweekly iobs Grades II-IV as soon an biweekly jobs Grades II-IV as
possible after their receipt in Person
nel. Persons who are not MIT employees
should call the Personnel Office Employees at the Institute should
continue to contact their Personnel continue to contact their Personnel
Officers to apply for positions for which they feel they qualify.

Dick Higham
Pat Williams
Pat Williams
(secretary - Dixie Chin)
Virginia Bishop
Sally Hansen
Jack Newcom
Evelyn Perez
Evelyn Perez
(secretary - Susan Bracht)

## Ken Hewitt

Carolyn Scheer
(secretary - Ellen Schena)
$3-4278$
$3-1594$
$3-1591$
$3-4266$
$3-4275$
$3-4269$
$3-6512$
$3-6511$

Admin. Staff, Asst. Director in the
Admissions Office will interview prospective students, assist in review and evaluation of applications, travel
to meet with students, high schools, Educational Counselors; aid in preparation of publications, maintain considerable correspondence, participate in
planning, with particular emphasis on minority students. Experience in
administration or administration or minority programs
strongly preferred; a background in high school guidance or math/science
teaching will be considered. A75-49 (9/3).
Spons Res. Staff, Economics/Policy Analyst will conduct analysis of public
policies regarding government regula tion of private industry and consumer environment, and also federal expenditure on research, development and
demonstration in the energy field Analysis is to focus initially on the automobile industry; other areas will
include synthetic fuels, conservation practices. Must have policy analysis and/or management U.S. Federal programs, training and/or experience in microeconomics in political science with policy analysis orientation. D75-161 (9/3).
Spons. Res. Staff, Medical Technolo
gist/Technician gist/Technician in Clinical Research
Center will perform lab procedures in 12 -bed center and for a large volume of out-patients. ASCP registration, ence in clinical chemistry, hematology,
and urinalysis and familiarity with lab instruments required. Bachelor's degree
in Biology or Medical Technology preferred. D7 5-109.


Spons. Res. Staff, Project Engineer, in Clinical Instrumentation, Harvard-MIT Program in Health sciences and Tech
nology will have responsibility for development of a full-body plethysmo graph and respiratory gas analysis
system which incorporates a dedicated microprocessor; develop re
lated programming; assist in design and development of lab microprocesso matrix and software system to develop
other instrumentation using dedicated Elec. Engineering, Bachelor's degree in level course work in control and
physiologic modeling required. Cand dates should also be experienced in design of complex peripherals fo
microprocessors and machine-languag programming
D75-147 (8/20).

Spons. Res. Staff, Project Engineer, in Biomedical Engineering Center for
Clinical Instrumentation, Harvard-MIT Program in Health Sciences and Tech
nology will develop a portable pro grammable microprocessor and soft-
ware necessary to analyze cardiac arrhythmias; contribute to design and development of laboratory micropro cessor matrix and software system to
develop other clinical instrumentatio incorporating dedicated micropro cessors. Masters degree in Elec. Eng.,
experience in designing analog-digital systems incorporating microprocessor and in machine language micropro-
cessor programming required. Experi
ence in real-time instrumentation system, familiarity with medical instru mentati
$(8 / 20)$.
Spons. Res. Staff, Staff Engineer, in the Biomedical Engineering Center fo解 nology will develop general purpose peripherals for microprocessor systems and use of peripherals; assist with prototype production engineering,
printed circuit design. Bachelor's degree in Elec. Engineering, experienc programming microcomputers, ability to construct electronic circuits
required. D75-146 $(8 / 20)$.

Spons Res. Staff, Director of Publications in the Joint Center for Urba
Studies: edit Center papers, mono graphs, books, reports; supervise publí cation production and distribution prepare research proposals. 3-5 years
experience in professional editing and writing, abily field, Bachelors and Masters degree in field requiring strong language skill (8/20)

Spons. Res. Staff, in Project MAC
Math Lab, will have responsibility fo DEC PDP10 hardware maintenance and development of ITS time sharing system software. Two years experience
with ITS system and LISP language required. D75-138 (8/20)

Spons. Res. Staff, Nuclear Engineering;
will assist in several research projects on nuclear medicine; Duties include responsibility for rout ine maintenance
of counting equipment. BSc or MSc in chemistry, ability to conduct indepen handling of radioisotopes desirable. D75-140 (8/20).
Spons. Res. Staff, Executive Editor, in the Meteorology Dept, will be respon-
sible for preparation and completion of second draft and final copy of physical oceanography atlas; will work with
board of editors and scientific editor board of editors and scientific editor
but will have responsibility to complete project without detailed
direction. University training in ocean direction. University training in ocean-
ography or related field, previous work ography or related field, previous work
experience among scientists required. Familiarity with oceanographic ter minology, editorial work and graphic material layout also necessary. Position is for 1 year, but may be extended.
D75-144 $(8 / 20)$.

Spons. Res. Staff, Tech. Asst., in
School of Humanities and Social Science Oral History Laboratory will
handle project design, document research, interviews, documentation assist lab director with oral history research; catalogue documents; create
and maintain filing system; assist and maintents in research projects. BA in history of science, or history with
strong science background, experience with historical document research and handling required. Interviewing experi-
ence in oral history field ence in oral history field desirable
Position is full time, but could be
converted to part-time to accommo-
date selected candidate. D75-145
$(8 / 20)$ Spons. Res. Staff in Project MAC will
be member of 2-person headquarters
team which provides overall fiscal
support to research lab: contract
administration; budgeting; costing;
payrolls, invooice administration; ;eport
preparation. Relevant experience
required. Familiarity with MIT
accounting procedures helpful.
D75-142 (8/20). Spons. Res. Staff in Center for Space
Research will participate in the analysi Research will participate in the analysis
and interpretation of data obtained and interpretation of data obtained ments such as IMP H \& J, MVM and
MTS. Ph.D. with strength in plasma physics, familiarity with data analysis
and interpretation required. D75-143 and int
$(8 / 20)$.
to five years secretarial experience,
including two at high level. Excellent typing technical preferred, shorthand,
ability to organize, set priorities. MIT experience valuable; ability to handle
pressure and volume pressure and volume important.
B75-457 $(9 / 3)$. Secretary IV, in Resource Develop-
ment, Office of the Vice-President, will perform general secretarial duties phone skills and error-free typing phone skills and error-free typing work under pressure. B75-451 (9/3).

Secretary IV to Associate Professor in
the Optical and Infrared Laser Research Group; will type correspon-
dence, manuscripts (some technical) arrange meetings, and traver arrangements. Good shorthand and excellent typing required. Ability to communi-
cate and to deal with students and staff important. B75-384.
Admin. Staff, Directory, Secondary techical education Project, Office of
the President and Chancellor, will assume leadership of MIT's collaboration with Boston Schoo schools, grades $6-8$ and $9-12$ will facilitate work of MIT faculty, stu dents and staff in a variety of areas long-range planning, identification and materials, coordination and evaluation of pilot projects, fund-raising, and school personnel, parents and students. Graduate degree in science or engi neering, or equivalent experience working knowledge of current develop-
ments in technical education, experience with innovations in urban public
school system required. A $75-48(8 / 20)$.

Acad. Staff, Tech. Asst., in Biology will assist in tissue culture research
using chick embryo cells, both fibroblasts and early embryonic
mesenchymal cells: prepare cells of culture, media; carry cell lines through involved in biochemical analysis o Experience in related chemistry fiel required. Lab experience strongly
preferred. Knowledge and/or expericulture desirable. C75-23 (9/3).

Academic Staff, Tech. Asst. in Nutri-
tion and Food Science laboratory of Neuroendocrine Regulation will per-
form assays of brain neurotransmitters, enzymes and amino acids; teach assay methods to students and others; niques; oversee lab maintenance. Will
use fluorescence assay, scintillation counting and spectrometry methods. Masters degree in biochemistry or
related field required. C75-22 (9/3).

Admin. Asst., Exempt, in Medical Psychiatrist-in-Chief in overall ad minis trative operation of service including supervision of 4 departmental secre-
taries; may perform some confidential secretarial functions. Good variety of administrative activitie required. Previous supervisory experience and a history of progressively
responsible employment desirable.

Tech. Asst. IV in School of Humanities ratory Social Science Oral roject design, ratory will handle project design, mentation; assist lab director with oral
history research; catalogue documents; create and maintain filing system; assist lab director with oral history research
catalogue documents; create and main tain filing system; assist students in science, or History, with strong Science background, experience with historical document research and handling
required. Interviewing experience in oral history field desirable. Position is
full time, but could be converted to part time to accommoda
candidate. B75-432 (9/3)

Technical Assistant $I V$ at the Creative Photography Lab, Architecture Dept. will maintain equipment, supplies
facilities of the Lab during evening hours; prepare set up equipment,
chemicals; interact with students. Produce slides, help with exhibitions. Must
be a working photographer. Duration of psoition renewe
term. B75-462 $(9 / 3)$.

Accounting Asst. $V$ in Comptroller's Acctg. Office, Benefits Accounting
Section, will process pension accounts and payments; handle member billing; roll system; calculate benefits due members. Accuracy with figures, some machine, calculator, knowledge o accounting and general offic
dure required. B75-404(8/20).
Secretary $V$, in Mechanical Engineering
to the MITsing Program will coordinate workload of two secretaries, independently
respond to inquiries about the pro gram; prepare agenda, arrange larg
meetings and related social gatherings meetings and related social gatherings
Handle arrangements, correspondence publications for international con-
ferences. Monitor accounts; type, edit, proofread technical papers, proposals
Make appts, domestic and foreig

Secretary IV, headquarters secretary in Ocean Engineering will perform secre Admin. Officer and several students; arrange appointments, travel; maintain Exfidential files; answer phones. with MIT procedures required. Tech nical
Secretary IV to two faculty members Division: perform duties including general secretaria dence, reports, theses; maintain files and accounts; answer phones. Typing
skill and willingness to learn technical

Secretary IV, to Executive Director
 draft, machine, and shorthand dicta-
tion; organize and maintain files. arrange travel and appointments research subject material. Excellen yping, organization and English grammar skills, initiative required. Appli-
cants should have previous secretaria experience and flexibility to work overtime. Shorth
help ful. B75-351.

Secretary IV, to the Institute Secretary for Foundations will be responsible for
office purchases, budget accounting maintain file on philanthropic found tions; research and reference materials maintain communications with top
level Institute offices. Excellent secre level Institute offices. Excellent secre-
tarial skills; ability to organize; discre tion. Knowledge
B75-455 $(9 / 3)$.

Secretary IV in Civil Engineering Transportation Systems Division wi perform general secretarial duties for
faculty member: type correspondence reports; maintain files and accounts edit; share office duties with other
secretary. Position includes student contact.
B75-296.
Secretary IV, at the Committee on the
Visual Arts will type general corresponpe gerran minutes. Will also take notes at
seminars, do library research, coor dinate seminar activities and field dence. Will assist CVA project coordi written material: reports, grant applic tions, and research findings. High level
of independent work; good judgment excellent typing, research writing graduate seminars, solid background in the history of Art or of Frenc
literature preferred. B75-460 $(9 / 3)$

Secretary to Harvard-MIT Program in Health Science \& Technology wil
perform secretarial duties for inter institut ional research group working on scribe from oral and machine dictation arrange travel; administer grant; edi and type manuscripts. Excellent secre-
tarial skills including shorthand reeduired. College training, familiarity able. B75-420 (9/3)
Secretary IV to two Industrial Liaiso Officers will handle secretarial dutie related to program which provides
liaison between private industry and
MIT frequent contact with member com-
panies. Will transcribe machine dictation; compile statistics; maintain files fill requests for publications, symposia information. Good typing skill, 1-2 yrs experience and ability to use dictatio ecment desired. B75-426 (9/3). Secretary IV, in the Medical Depart
ment to two physicians. Answer telephones, schedule appointments and scribe case histories. When necessary maintain files and records and chaperone pelvic examinations. Excel-
lent typist; previous experience,
preferably in medical area, required.

## Secretary IV, to 2 Regional Directors

 Alumni Fund, will type correspon-dence and other material; Develop and
maintain doner maintain donor file; arrange travel
several years experience required.
Public contact background helpful. B75-380 (8/20).
Secretary IV, to 2 Political Science faculty members. Duties include typing
varied material and answering routine correspondence independently; order books, films; maintain records; student contact. Excellent secretarial skills plus 2 years responsible secretarial experience required. College and/or secre-
tarial school
training preferred.

Secretary IV, to several academic staff members and others involved in Center to industrial and shcial application of technology: take shorthand dietation, letters; arrange appointments and travel; act as key operator for xerox machine; assist other secretaries as required. Excellent shorthand, typing
skills, previous secretarial experience skills, previous secretarial experience
required, Bachelors degree, facility (8/20).
Secretary IV, to academic staff member and others working on Center for Policy Alternatives programs related to
industrial and social applications of technology: take shorthand dictation type varied material; compose routine letters; arrange appointments and travel; assist other secretaries as
required. Excellent shorthand, typing ${ }^{\text {skill }}$ required. Bachelor's degree, 33 years secretari).

Secretary IV in Department of
Athletics will handle varied secretarial duties including some work for faculty members; will type correspondence the athletic program to students and others. Ability to deal well with all types of people, excellent typing skill
required. B75-402 $(8 / 20)$.

## Secretary III-IV, Analytical Studies and Planning Group, to work on

 arious projects for centraladministration and faculty commitees type reports, schedule meetings, maintain files and financial records, general project assistance. Excellent typing,
proofreading skills. Ability to set priorities and work under pressure. Will work with several staff me
hours week. B75-441 (9/3).

Secretary III-IV, temporary, will assist
Industrial Liaison Officer in prepara tion of Directory of Current Research;
coordinate incoming correspondence maintain records and files; assist in preparation/typing of manuscripts; proofread. Organit communica tion, typing skill required. Key
punching ability, or willingness to
learn, preferred. Must be able to learn, preferred. Must be able to schedule. 20 to 40 hours/week, dependi
$(9 / 3)$.
Secretary III or IV, for the Creative
Photography Lab will type course Photography Lab will type course
materials, manuscripts, correspon and provide information to student and visitors help with budgets and cize and install exhibitions. Familiarity with field of photography very useful.
Position renewable at the end of each academic year. B75-463 (9/3)

Secretary III-IV, to faculty members
and several graduate students in Ocean Engineering: type varied materia including techical reports, class notes arrange travel and appointments; main-
tain files and records on research Excellent technical typing skill, ability to work independently and under
pressure required. $2-3$ years secretarial experience, including some at MIT
desirable. Shorthand
preferred

Secretary III or IV, in Physical Plan
will handle requests for use of the Student Center, Kresge and the Chapel Type, answer phones, bill for LSC
movies, other events. Assist students keep records; Ability and attitude to
deal with members of the MIT facilities. Good others using the

Positions Available

## Continued from page 5 )

accounting procedures; maintain group calls and messages; act as receptionist. Typing, organization skills, ability to Secretarial experience and/or college training require

B75-386 $(8 / 20)$.

Secretary III-IV, to faculty and staff member in Artificial Intelligence Lab:
will compose short memos, letters; type proposals, manuscripts; organize
and maintain files; will assist other secretaries in publication typing and
maintenance of library. Typing, organimaintenance of library. Typing, organi-
zation skills required. Will be trained to computer-edit manuscripts. Editing and or proofreading skill desirable. 35
or 40 hours week. B74-385 ( $8 / 20$ ).

Secretary III-IV, to faculty and other members of research group in Elec-
trical Engineering and Computer Scireports, including technical materia reports, including technical material,
arrange travel, meetings; perform other
general secretarial duties. Technical typing, shorthand or machine dictation
typill required. B75-389 (8/20).

Secretary III (Floater) in the Medical Department will have primary respon-
sibility for relieving absent secretaries in department. Will help out with
heavy work loads - transcribe case
histories, handle cole histories, handl
and mailing and mailing part-time staff and help out in
department business office. Flexibility, good typing and ability to learn
medical terminology required. Some previous experience. B75-450 (9/3).

Secretary III in Aeronautics and
Astronautics will type correspond technical reports, and other material for faculty, research staff, students,
perform varied other secretarial duties; arrange travel, maintain files; act as receptionist; distribute library
materials. Ability to work independently and under pressure, good typing
skill required. B75-424 $(9 / 3)$. skill required. B75-424 (9/3).
Secretary/Receptionist III, in Office of
the President and Chancellor will she duties of reception area, typing, mail, duties of reception area, tephones, on a weekly
xeroxing, and teleptasion basis between reception desk
rotation and secretarial area. Excellent opportunity to learn secretarial procedures.
Good accurate typing necessary; flexible, pleasant personality to deal with visitors to the offices. $371 / 2$ hour
week. B75-458, B75-459 (9/3).
Secretary III to two faculty members,
in the fields of management science and marketing, Sloan School: will take and transcribe dictation; type course
material, manuscripts; file: answer material, other secretarial duties as
phones;
required. One secretary office; applicant should have excellent typing, skill and ability to meet deadlines.

Secretary III, part-time, in 2-person office in Operations Research center:
perform general secretarial duties for faculty member; assist Admin. Asst. in
performing general office functions: performing general office functions:
coordinate seminars, workshops, type technical reports. Ability to handle willingness to learn required. 20 hrs/wk. B75-417 (9/3).

Secretary III in Materials Science and
Engineering will handle varied duties Engineering will handle varied duties
related to administration of academic program: type brochures, correspon
dence to prospective students, othe material; arrange committee meetings; handle varied admissions procedures; maintain student records. Typing and
organization skill, ability to transcribe machine dictation and to handle
detailed work required. B75-394

Library Asst. IV, part-time, in the Energy Laboratory reading room: will
have responsibility for organization of have responsibility for organization of
facility: complete circulation file; prepare publications for library system;
recall books for classification. Duties
after organization phase will include file maintenance, new acquisition pro cessing. Typing skill required. College training, science and language (French,
German) background preferred. Interest in energy and some familiarity with subject area helpful. Position is for 20 hrs/wk during organization phase
(approx. $3-6$ months), and will be reduced to 8 .
B75-409 $(8 / 20)$.
Sr. Library Asst. IV, in Barker
Engineering Library Processing Office Engineer ing Library Processing office monographs, serials and MIT report series. Verify and prepare catalog
records; supervise card corrections and card catalog filing, theses processing play; assist at catalog information play; assist at catalog information
Desk. Previous library experience in
cataloging/processing department, cataloging/processing department,
some graduate library science courses, some graduate library science courses,

organization and typing skill required | organization and typing skill required |
| :--- |
| College degree preferred. | College

$(9 / 3)$.
r. Library A sst. IV, in the cataloguin section will catalog monographs in all
languages, all fields, using LC copy terminal, or from NUC. Will implement MIT cataloging practices and proce-
dures; catalog added, second copies. dures; catalog added, second copies.
Recatalog books from Dewey Decimal system to LC classification. Maintain files and records. College grad, library experience of value, not essential,
Accurate; some typing, ability to interpret complex directions. B75-461 ( $9 / 3$ ).

Library Gen. Asst.
Library will perform in Scirculation desk Library will perform circulation desk
duties (charge books, provide procural duties (charge books, provide procural
information to users; file and type cards); sort, distribute and receive
material; maintain statistics. High school graduate or equivalent with good clerical aptitude, typing skill,
ability to handle strenuous ability to handle strenuous activity required. Some college training desir-
able. Afternoon and night shifts, varying schedule including weekend duty. B75-428 (9/3).

Technical Artist IV, in Graphic Arts:
will size photos, paste up copy and will size photos, paste up copy and prepare finished mechanicals for black
and white and color separations and white and color separations for
offset printing; make pencil and ink drawing changes; operate head liner and typesetting machine. 1-2 years working experience in above areas, strong
paste-up skill, knowledge of printing paste-up skill, knowledge of printing
processes, type and leroy lettering processes, type and leroy lettering
required. $40 \mathrm{hr} / \mathrm{wk}$ B75-390 $(8 / 20)$.

## Computer Operator IV in the Office of

 Administrative Information Systemswill operate IBM Model 145 and associated peripheral equipment under
DOS/VS. Must have good knowledge of DOS job control, multiprogramming experience and ability to follow standardized operating instructions. Minimum 1 year experience required.
12 midnight-8am shift, $\quad$ B75-195 (5/21), B75-427 (9/3).
Acctg. Clerk IV in Graphic Arts to handle all accounts payable functions.
including billing and related clerical duties. Thorough knowledge of accounts payable procedures
(invoicing, pricing, etc)., facility in
working with figures, working with figures, ability to us business school graduate or 3 yrs. related experi
B75-422 $(9 / 3)$.
Senior Clerk IV, in Telecommunica
tions Office will prepare, issue tions Office will prepare, issue and
follow-up telephone orders, provid ifformation to users, maintain inventory of telephone equipment, handle
other clerical duties. Experience in. office work, familiarity with a tele phone company helpful. B75-443
$(9 / 3)$. Acctg. Clerk III in Nuclear Engineering
will assist Admin. Officer and Admin. Asst.: type, file; compile data; prepare records and reports; maintain budget records; check and process statements;
prepare cash vouchers; collect and prepare cash vouchers; collect and
deposit xerox charges. Ability to deposit xerox charges. Ability to
perform complex work with minimum perform complex work with minimum tion skill required. Previous secretarial and/or clerical working experience required. B75-413 (9/3).
Accounts Payable Clerk III in Comp-
trollers Acctg Office will process invoices: apply discounts; $;$ audit invoices; prepare records for keytape entry. Candidates should be proficien with figures and with use of adding
machine. B75-425 (9/3)

Sr. Clerk III, in Comptrollers Account ing Office, Transfer Voucher Section:
will type vouchers; charge and credit will type vouchers; charge and credit
projects; file; research problems; recon cile accounts. Working knowledge of
bookkeeping, typing skill bookkeeping, typing skill required.
B75-431.

Sr. Clerk III, Alumni Assoc. will assist
in processing, billing, mailing of Tech in processing, billing, mailing of Techspecial orders, reconcile checks.
Typing, general office skills. Typing, general office skills. Accuracy,
altertness essential. Some telephone altertness essential.
work. B75-440 ( $9 / 3$ ).
Sr. Clerk III, in the Registrar's Office will assist in student registration, verification of student status, registra-
tion corrections, student requests and tion corrections, student requests and
filing, using IBM terminals. Type fotices to degree candidates. Excellent typing, accuracy with figures. B75-449
$(9 / 3)$. typing,
$(9 / 3)$.

Sr. Clerk III in Student Loan Section,
Comptroller's Acctg. Office: will typ all office correspondence; maintain address records; record payments prepare notes; answer borrowe inquiries on phone and in person; file
verify accounts; typing experience verify accounts; typing experience
grammar skills, ability to operate adding machine, legible printing adding machine, legib
required. B75-393( $8 / 20$ ).
Sr. Clerk III in Physical Plant Work Control Center will prepare work orders, process requisitions, accept and
process work requests via telephon and personal contact; disburse petty cash; clear utility shutdowns; monito Autocall alarms, receive and dispatch page messages; occasionally use 2 -way radio equipment. Ability to type and
use adding machine, good telephone use adding machine, good telephone
manner and some familiarity with maintenance/construction terminology
required. Office experience, ability to
react effectively in emergency situa-
New Nuclear Structure (8/20)
Senior Clerk III in Purchasing will maintain requisition log; type purchase
orders; numeric and alphabetical filing: orders; numeric and alphabetical filing;
may operate folding may operate folding equipment.
Accurate, fast typing, ability to handle Accurate, fast typing, ability to handle
detailed work required. B75-362 (8/6).

Clerk Typist II, part-time, in Lab of
Animal Medicine, Medical Animal Medicine, Medical Department will assist secretary with genera
clerical duties (type, file, answer phones, do errands). Good typing skill required. 15 hours/wk. B75-435.

Messenger II part-time in OAIS will deliver computer input and output material from computer facilities to programming area. Perform miscel-
laneous tasks such as filing, xeroxing, answering phones. $25 \mathrm{hrs} / \mathrm{wk}$. $10 \mathrm{am}-3 \mathrm{pm}$. B75-453 (9/3).
Jr. Comp. Op. II, in Center for Space Research will operate Minicomputer
system used to support satellite operasystem used to support satellite opera-
tions: data reception; program processing; maintain associated log books, tape libraries, hardcopy files. High school graduate or equivalent required. Some college training and computer
experience helpfut. Candidates should experience helpful. Candidates should
be able to follow instruction and adapt be able to follow instruction and adapt
to procedure changes. B75-416.

Clerk-Messenger II in Office of Spon-
sored Programs will perform messeng sored Programs will perform messenge duties between OSP and several cam-
pus locations twice daily, and make pus locations twice daily, and make
additional deliveries as required; handle office incoming and outgoing mail maintain xerox machine and postage meter; file; record and mail notices; type forms. Dependability, flexibility to perform various duties, typing skill
required. B75-395 (8/20). requi
Waitress/Waiter, Set tables, take orders, serve food and beverages on banquet
trays. Clear and reset tables. Dust chairs, wipe table clean. Experience is helpful but not necessary.
11:00am-3:00pm M-F ( 6 positions: H75-110, H75-111, H75-112,

Laboratory Asst. in the Cell Culture Center will wash laboratory glassware
and utensils (by hand or machine) and utensils (by hand or machine);
may involve the use of chromic acid cleaning solutions. $20 \mathrm{hrs} / \mathrm{wk}$. H75-93 ( $9 / 3$ ).

The following positions have been
FILLED since the last issue of Tech
Ta

| B75-356 | Sec. V |
| :--- | :--- |
| C75-19 | Acad. Staff. |
| B75-359 | Sr. Clerk IV |
| B75-341 | Sec. IV |
| D75-101 | Spons. Res. Staff(Cncl |
| B75-398 | Sec. IV |
| D75-116 | Spons. Res. Staff |
| B75-379 | Sr. Clerk III |
| B75-376 | Sec. IV |
| B75-368 | Tea Host/Hostess II |
| B75-365 | Sr. Clerk III |
| B75-364 | Sec. IV |
| B75-391 | Sr. Clerk Recep. III |
| B75-234 | Sec. IV |
| D75-123 | Tech. Asst. |
| D75-145 | Spons. Res. Staff(Cncl |
| B75-397 | Sec. IV |
| B75-360 | Sec. III |
| B75-314 | Sec. II |
| B75-299 | Sec. IIIV |
| B75-331 | Keypunch Oprtr |
| B75-371 | Sec. IIIIV |
| B75-372 | Sec. IV |
| B75-343 | Sec. IV |
| B75-346 | Sec. V |
| B75-361 | Sec. III-IV |
| B75-345 | Sec. IV |
| B75-378 | Sec. IV |
| B75-364 | Sec. IV |
| D75-103 | Spons. Res. Staff |
| B75-401 | Sec. IV |
| B75-392 | Sec. V |
| B75-412 | Sec. III |
| B75-405 | Sr. Clerk III |
| B75-408 | Sec. IV |
| B75-933 | Sec. IV |
| B75-400 | Sec. III (Cancelled) |
| B75-373 | Sec. IV |
|  |  |

The following positions are on HOLD pending final decision:
$\begin{aligned} & \text { B75-330 } \\ & \text { Sec. }\end{aligned}$ III

| B75-330 | Sec. III |
| :--- | :--- |
| B75-352 | Sr. Clerk III |
| D75-23 | Spons. Res. Staff |
| B75-253 | Sec. IV |
| B75-254 | Sr. Clerk IV |
| B75-265 | Sec. IV-V |
| D75-130 | Spons. Res. Staff |
| B75-399 | Sec. III-IV |

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

## Assn. (6/25) A $75-26$, Dist. Officer. Resource

A75-26, Dist. Officer. Resource
Develop. (7/9)
Off. (6/25)
A75-35, Regional Rep., Alum
Assn. (6/25)
A75-38,
tial Alum
(7/9) Operations Mngr., Medica

| $\begin{array}{c}\text { A75-41, Proj. Mngr., } \\ \text { Admin. Inf. Syst. } \\ \text { A75-44, } \\ \text { Aroj. Pl Planner, }\end{array}$ | Planning |
| :---: | :---: | :---: |

Office ( $8 / 20$ )
eriments were conducted at Argonne near Chicago and at the Brookhaven National Laboratory in New York.
Details of the shape of the deformed nucleus are still to be worked out.
"We can't tell exactly what it looks like-it may be more like a pear or a dumbbell than a cigar, Dr. Cosman said. "That will be a
challenge for nuclear theorists and for continued experimental work."

Other Reactions
Also still to be answered is why such a nucleus ever exists. If two nuclei are intimate enough to join at the surface, why would they hold back from total fusion?
As two nuclei approach, they experience opposing forces: they are attracted by the very strong nuclear forces that operate be tween protons and neutrons, and they are repelled by their like electrical charges and by the centrifugal force as they begin to orbit one another
Normally, once the nuclei get close enough, the nuclear forces win out, and the nuclei merge to arrive at the lowest energy level. Possibly the deformed nucleus is created when the outer-most neutrons and protons rearrange themselves into new orbits to reach a preliminary low energy state. To get to the still lower energy state of complete merger (or complete separations), they would need an extra shove of energy.

Although the deformed state lives only for an extremely short time, it is a fascinating object in itself and by understanding its unusual structure and formation it may serve as a guide to what will happen in other interesting nuclear fusion reactions," Dr. Cosman said.

The stabilizing effects of in dividual surface nucleons in nucleus, which could explain the carbon-carbon state, has been theorized to give rise to similar much longer-lived and even stable states in very heavy nuclei. The theoretical model is the basis on which physicists for years have predicted the existence of stable superheavy elements, much heavier than uranium. If superheavy nuclei can be made in a nuclea fusion reaction, they could serve as extremely compact sources of

| BIW |
| :--- |
| $(6 / 25$ |
| Res |
| Elec |
| $(7 / 9)$ |
| $(7 / 9$ |
| $(7 / 2$ |
| $(7 / 23)$ |

B75-190, Tech. Asst. IV, Arch (6/25)

B75-263, Sec. IV, Div., for Stdy. \& Res. in Ed. (6/25) IV, Res. Lab. B7e. (6/25)
B-273, Sec. IV, Mt. SC. \& Eng (7/9)
B7
$(7 / 9)$ 75-289, Sec. IV, Energy Lab ${ }_{(23)}^{\text {B7 5-290, Sec. HII-IV, Energy Lab }}$ B75-306, Sec. IV-V, Physics (7/23)
B75-308, Sec. IV, Tech. \& Culture Seminar, $(8 / 6)$
B75-318, Sr. Clerk IV, MIT Press (8/6)
B75-320, Sec. III-IV, Chem. Eng. (8/6)
B75-334, Sec. IV, Humanities ( $8 / 6$,
B75-338, Sec. III, Alum. Assn B75-338, Sec. III, Alum. Assn.
B75-339, Sec. IV, Mech. Eng. $(8 / 6)$ B75-339, Sec. IV, Mech. Eng. (8/6)
B75-342, Sec. IV, Jnt. Cntr, Urb. $(8 / 20)$
B75-349, Sec. IV, Sloan $(8 / 20)$ B75-354, Sec. IV, Sloan ( $8 / 20$ ) B75-358, Sec. V, Resource Dev
$\left.\begin{array}{c}(8 / 20) \\ \text { B75-362 }\end{array}\right)$ Sr. Clerk III, Purchasin B75
$(8 / 20)$
B75
(8/20)
B775-366, Secretary IV, Chemistry
$(8 / 20)$
B75-375, Tech. Asst. IV, RLE
$(8 / 20)$

## ACAD STAFF:

C75-14, Asst. to Dir., Cent for Adv Eng. Study ( $6 / 25$ Admin. Off., Mech. Eng (8/6) ${ }^{(75}$ C75-18, Admin. Off., Hith, Sc. \&
Tech. (8/20) C75-20, Tech Asst., Nutrition \&
energy for nuclear reactors.
Accelerated Cargon Nuclei The insights we gain by fusin two light nuclei like carbon and carbon could certainly be helpful when someday we try to fuse two heavy nuclei like uranium and uranium to produce a superheavy element," Dr. Cosman said.
Further studies of the carbon carbon fusion reaction may also help astrophysicists understand the evolution of stars, he said Since the deformed nucleus can be created at relatively low bombarding energies, it could help astrophysicists determine the probability that two carbon nuclei wil fuse at low stellar energies.
This in turn could help them
predict the density of other elements created in a chain of reactions in which carbon plays a key role.
Evidence of the existence of the short-lived nuclear molecule is based on studies of protons given off as it dies. Stationary nuclei lodged in carbon foil were bom barded with accelerated carbon nuclei from a Van de Graaff type particle accelerator, with bom barding energies ranging from 12 MeV to 65 MeV (million electron volts).

## Corroborates Recent Finding

# CLASSIFIED <br> ADS 

 successive issues. All ads must be
accompanied by full name and Inst tute extension. Only Institute exten sions may be listed. Members of the community who have no extension the Tech Talk office, Room 5-111, and presenting Institute identification. Ad may be telephoned to Ext. 3-3270 or mailed to Room 5-105. Please submit 5. They will be printed on a first come first served basis as space permits.

For Sale, Etc.
Dbl bd, hdbrd, dress, dsk, ehr, shlvs.
Neil, x8241 Dorm.
Swim pool, $18 \times 4^{\prime \prime}$, Bauer 99 hcky skates, sz $91 / 2$; hcky pants; Stingray trntbl; GI Joe collection. x8-1418 Draper.

Maple
Draper
Precision Rieffler draft set, $24 \mathrm{pc}, 30$ yrs, $\$ 100$ or best; 7 " reel tapes; assor hsepints. Diane, 536-5889.

Lg colonial sofa, $\$ 70 ; \mathrm{K}$ tbl, leaf, armchr, $\$ 15$; lamps, $\$ 10$; end tbls, $\$ 3$ 3 K chr, $\$ 7.50 ;$ bksess, $\$ 5, \$ 2$; makeup mirror, $\$ 5 ;$ plant $\operatorname{lmp}, \$ 15$, groc ca
garb can, free. Call, $536-0158$ evgs.

Acco Press printout binders; shelving for printout, cards; magnetc computer tapes, racks; bk shlvs; packimg boxes;
notebk cvrs \& misc office supplies. Call, 547-3336.

Lg solid, expand DR tbl w/mtch chrs \& cab, $\$ 50, \$ 35 \mathrm{w} / \mathrm{o}$ cab; solid sofa, free,
take it away; dresser. Call, $492-0776$

Hand made wint steeple clock, chimes $\mathrm{hr} \& 1 / 2 \mathrm{hr}, \$ 200$. Tony, x8-4602

TV, 19" b\&w, UHF, VHF, w/std, $\$ 65$. David, x3-3408.

Nikon telephoto lens, 300 mm f4.5 w/UV fltr, leath case, $\$ 225$ or best Nikon slide copier \& bellows, $\$ 75$ o

Pr f ski boots, sz $81 / 2-9 \mathrm{~N}, \$ 5$; guitar \$5; hamster Habitrail set, \$8. Joan

Lvg state, must sell: 8,000 BTU AC, $\$ 120 ; 20$ fan, $\$ 5 ; 2$ snows, J78x 14 mtd, $\$ 1$ /ea; rnd dining tol, 4 chrs, x3-2517.

DR tbl, $\lg$ w/3 lves, fruitwd, carved $\$ 90$; dbl bed w/matt, spr, frame, nrly nw, $\$ 170$; wardrobe, $\$ 15$. Gail

Tires, Seberling G78x 15 mud-snow, fit
Toyota Land Cruiser, less 5 K , \$155 Toyota Land Cruiser, less 5 K, $\$ 155$

Magic Chef $20^{\prime \prime}$ gas stove, oven nds
thermo control, $\$ 25$. Izzy, x8-2878
thermo control, \$25. Izzy, x8-2878
Draper.
Playpen, $37 " \times 40^{\prime \prime}, \$ 15 ;$
$57 ", \$ 50$. Bob, x $3-7085$.
Lg mtt
sweener;
desk; cabinet; vac; carpet sweeper; sm bkcse; fluor lites; pots \&
pans; plates; all cheap. Bill, $\times 3-3512$

Design Research crib \& matt, tk nw, 70. x3-7330.

Furn: rugs; tbls; chrs; dresser; lamps;
Lt oak dinette set, Drexel, lovely buffet, 4 chrs w/grn uphol seats, drop leaf tbl seats $6, \$ 150$ or best. Call, 862-8315.

Rugs, nylon shag w/pads, $9 \times 12,1$ red,
1 gold, just clned, still rolled $\$ 95 /$ ea Joyce, x 3-3525.

Riding lawn mower, 5 hp Briggs \&
Stratton eng, $\$ 100$. Larry, x3-4749.
M 3 spd bike, ugly but working, w/chn, $\$ 18.50$. Susan, x3-6737.

Marantz 1060 stereo amp, 30 W RMS/ch, less $0.5 \%$ THD, smooth cln
power, perf cond, best. Mark, x3-3157.
Matt \& box spr, dbl sz \$50; 3 drwr bureau, $\$ 12$; port stereo phono, $\$ 20$.
$\times 7618$ Lir.

Fold-up bed, $\$ 25$; dining tb
cupbrd, $\$ 175$. Per, x $3-3920$.
Stp bags; typwrtr tbl; crtns. x3-7902.

Port 19" Sylvania color TV, gd cond,
$\$ 149$; rotating TV tbl, $\$ 6$; indr RCA color TV antenna, $\$ 13$. Jose, x $3-6466$. Maytag auto washer \& dryer, exc cond, $\$ 175 /$ both. $x 7771$ Linc.
Dbl bed, box spr \& matt; tbl \& 2 chrs Stavros, x3-7107.
Pr Dunham hiking boots, sz $11 \mathrm{M}, \mathrm{nw}$
$\$ 55$, worn once, $\$ 25$, Dick, $\times 5548$ $\$ 55$, worn once, $\$ 25$. Dick, x 5548
Linc.

HP 45 , mint cond, yr old. Jane Dennis 4848932 .
Admiral 12 cu ft ref/frzr, $\$ 100$; wint Sp desk $/ \mathrm{bkcse}$ unit $\mathrm{w} / \mathrm{chr}, \$ 150$; GE
6,000 BTU AC, $\$ 125$; other hshld items. Mike, x5773 Linc.
Attractive dresser w/mirror, $\$ 20$;
painting NY skyline $\$ 15$, painting
x3-4911 NY skyline, \$15. Jane,

Bikes: Raleigh 10 spd, $\$ 65$; f \& m 3
spds, \$25. x3-5117.
Beyer M-500 mic, omnidirectional, ideal for roling, vocalist, interviews, films, $\$ 70$ Tim, x 7569 Linc. $^{2}$
Sears Allstate nw mt1 stud XST snows,
2, G78x 14 or $8.25 \times 14$, 2, G78×14 or $8.25 \times 14$, blk wall, exc cond, $3 \mathrm{~K}, \$ 69 ; 4$ alum trlr jacks, $\$ 12$;
2 stl trlr jacks, $\$ 6 ;$ old hand push mower, $\$ 4$. Call, 862 -5585.

Pool fltr; 19 \& $23^{\prime \prime}$ color TV. Paul, x8-1357 Draper.
Scope cart: HP testmobile mdl 116-A, \$15. Call, 547-1834.

Mod sofa \& 2 ottomans, 3 mos
Bikes: $m 10 \mathrm{spd}, \$ 60$; $3 \mathrm{spd}, \$ 40$. Dr.
Gilsen 8 hp snowblow, 3 frwd spds,
rev, lk nw , best. Mike Flynn, x 3 -6275.
71 Alcourt AMF sunfish, gd cond, incl sails, rudder, daggerbrd, Hosclaw trlr $\mathrm{w} / \mathrm{lites} \&$ lic plate, best over $\$ 500$. Jeff, $\times 3$-6726.

Gold $9 \times 12$ shag carpet, $\$ 25$; refrig,
45. Tony, x3-4622.

CCM Super Tacks skates, sz 3, used
yr, $\$ 45$ nego. Gene, x 7736 Linc. yr, $\$ 45$ nego. Gene, x 7736 Linc.
Sears AC, 3 yrs, 6,000 BTU, $\$ 65$. Yves,

Lafayette Criterion 25A 2 way spkrs,
$8^{\prime \prime}$ woofer, $2^{\prime \prime}$ tweeter, 25 W , exc cond, 2 pr, $\$ 25$ tweeter, 25 W , ex

Alum screen storm door, $36 \times 80, \$ 10$.
GE stainless stl 4 brnr cook top w/26" winc.
Push along baby walker, w/blks, $\$ 5$; baby wood rock horse, $\$ \$$; Hoddler "Tot-Grd" safety car seat, $\$ 5$; b\&w all chnl TV, \$30. Jeff, x3-7001
Stereo sys, Scott 299 amp , Rec-O-Cu trntbl, 2 spkr sys, best. Bob, x3-3990
Radial, 4, mtd Saab 96 whls, 2 Pirellis, 2 Veith, all v gd cond, $\$ 100$. David Morse, x3-1795.
Long dresses, sz $10 \& 16, \$ 8$; $f$ wht tap dance shoes, asst sz , $\$ 4$; hifi w/amfm tuner, 4 spd trntbl, blond cab, $\$ 70$
x8-4095

Integrated stereo $\mathrm{amp}, 75 \mathrm{~W}, \$ 75$ or best. Paul, 536-5 146.
Upright piano, gd cond, $\$ 200$. Gary,
Hanhart stopwatch, 0-30 sec, 0-15 min accurate to $1 / 10$ sec, shock, dust, accurate ortected, $\$ 25 ; 15$ yr old TV,
water proter
nds antenna, no UHF, best. Gary, 267-7416.
Wrought iron K set, tbl w/leaf, 6 chrs,
$\$ 50$. Bob Raddocchia, Old Towne 19' canoe, $\$ 125$. Lou $\times 8$-3584 Draper.
Computer card file cabs, 12 drwr A 25 Windsor St, open Tues \& Thurs, 25 Windsor St , open
$10 \mathrm{am}-2 \mathrm{pm}, \mathrm{x} 3-4293$.
Sg1 matt \& frame, $\$ 10$; chrs. Call,
$734-5392$.
F bikes, gd cond, blu: 3 spd, $26^{\prime \prime}$ whis, $\$ 30$; sgl spd, 24" whls, $\$ 20$. Jim,

Sears Kenmore port auto dishwasher, $1 k$ nw, orig \$170, \$100. x0272 Dorm.
Hi qual qn sz matt, box spr, frame, ${ }^{2}$
yrs, exc cond, $\$ 90$ or best. Larry, yrs, exc
x 3 - 7578.

Twn bed, matt, box spr \& frame, exc cond, $\$ 30$; dbl gooseneck flr lamp, $\$ 3$; tbl lamp, \$3; end tbl, \$3; bdsprd w/mtch covered blstrs, \$5. Sharon

Pr E78x 15 Kelly-Springfield bias belted tires, $1 / 4^{\prime \prime}$ tread left, $\$ 35$ or best x3-6823.
player, \$200. Betty, x7289 Linc. Plant sale toda
$\mathrm{Rm} 13-4078$.

Armstrong flute, nw pads, exc cond, \$120; m sz $61 / 2$ hiking boots, worn

Radio amateur rcvr, AX-190, w/orig box, lk nw, \$95. Melvin, 492-7141,
evgs.

Wd desk w/glass top, $32 \times 17 \times 27 \mathrm{hi}$, drwrs, $\$ 17 \mathrm{incl}$ chr; blu-grn uphol
platform rocker, w comf, $\$ 15$. Keith platform rocker, $w$
Stevenson, x3-1357

Fuji finest bike, 25', Phil Woods hubs Gran Compe brakes \& endshifters, $\$ 325$ firm. Call, 522-7044.
Hammond L112 organ, dbl keybrd,
full stops, bench for music exc cond, full stops, bench for music, exc cond,
best. Lorraine, x3-1601.

Moving: baby things, incl carriage, inf seat, johnny pump up, playpen. Call, 492-6042, aft 6 pm .
Mastrwrk Sol State stereo, w/am/fm $\$ 15$; dbl bd w/ hd \& ftbrds, box spr firm foam matt, $\$ 40$; bureau w/mir $\$ .50 /$ ea. Sharon, x3-6695.

Bed w/matt \& box spr, \$30; nite tbl, $\$ 5$; lamp, $\$ 5$; chr, $\$ 4$. Spiro, x $3-6780$. Playpen, crib, baby carriage. Semira,
$494-8444$.

TV, $\$ 20 ; 2$ side tbls, $\$ 3 / \mathrm{ea}$; sm radio, \$6. Call, 646-9437.

Raleigh 5 spd $26^{\prime \prime}$ bike, v gd cond, $\$ 60$ or best. Call 734-2340, evgs.
Remington man typwrtr, \$25; Magnavox port stereo, $\$ 30$, antique oak desk, $\$ 6$,
$536-2558$ evgs.
TV, b\&w, RCA 16", \$40; lamp, \$2 hotplate, $\$ 5$; lg wd crate, $\$ 5$; toaster,
free $\mathrm{w} / \mathrm{TV}$ purchase, $\mathrm{x} 3-5602$.
71 Camel Oasis III tent trailer, slps 6 incl $11 \times 14$ screened canvas rm, used $6 \times$, no reas o
$\times 3-1351$
Draper.
Camera, Graphic .35 mm , w/50 $/ 5 m$ f3.5 lens, $\$ 20$. Paul, x $8-4374$ Draper

Twn beds, matt, box spr, frames, hdbrds, $\$ 40 / \mathrm{ea} ; 90$ " brn contemp LR couch, $1 \mathrm{kw}, \$ 150$. Bill, x $8-4422$
Draper.

## Vehicles

' 65 Chevy, 6 cyl, auto, 4 dr , nw tires
nw tune-up, $\$ 200$ or best. Tom, x8-3969 Draper.
65 VW. bus, conv camper, reblt eng,
blower, $\$ 450$ or best. Peg, $\times 8.159$, blower,
Draper.
' 66 Chevy Malibu, auto, $4 \mathrm{dr}, 6 \mathrm{cyl}$, nw tires, exc cond, $\$ 400$ or best. Call,
$354-6360$.
'66 Olds F-85, 20 mpg, V8, b nw
brakes, runs well, smooth rides brakes, runs well, smooth ride,
tires, $\$ 350$ or best. Call, $868-3704$.
'66 Mustang, w/Sears AC unit, \$250. x3-1718.
' 66 VW , gd run cond, nds minor work, $\$ 400$. Call, 628-4876.
' 69 Merc Cougar, blu w/wht hrdtp, p st
\& br, snows, exc cond, $\$ 1,090$. Call, \& br , snow
$926-9884$.
'69 Chevelle, 6 cyl, 2-dr, hrdtp, auto, p str, radio, blue w/wht vinyl top, gd run
cond, snows, $\$ 800$. Alberto, $625-2819$
' 69 Pont Cat, $2 \mathrm{dr}, \mathrm{p}$ st \& br, auto,
exc tires, eng perf, $\$ 800$ or best. Tom,
' 69 Olds Delta 88 conv, p st \& br, 350 V8, gd mileage, well cared for, $\$ 400$. ' 69 Triumph TR6, amfm, gd run cond, $\$ 1,000$ or best. Call, 547-1637. '69 VW sqbk, 38 K , auto, nw tires, gd
mech cond, $\$ 1,100 ; 8$ bk cses, $36-80$ adjust, $\$ 35 /$ ea; humidifier, $\$ 20$; roll away bed, nrly nw, $\$ 25$; Burroughs add mach, $\$ 30$. M. Freeman, 484-3017.
'69 Saab, V4, 2 dr, 4 cyl, 4 stroke, spd std, 42 K , exc mech cond, around
' 69 Ply Road Runner, 383 cu in eng, barrel carb, nw 4 spd trans, reblt
motor, hi perf parts, bekt seats, nw int rug \& console, must see, $\$ 2,500$ or
best. Bob Saliga, $\times 7454$ Linc.
' 70 MGB-GT, wht, 55 K , exc cond $\$ 2,000$ or best. Joanne, x3-4791.
70 Maverick, $60 \mathrm{~K}, 2-\mathrm{dr}$, auto, 6 cyl , blk vinyl rf, 2 nw tires, 2 snows, nw br, nw elec sys, perf cond, $\$ 780$ or bes
'70 Ply Duster, v gd cond, radial snow
ac, $47 \mathrm{~K}, \$ 1,200$. Booky, x3-1658.
70 Olds Cutlass, 4 dr sed, ac, amfn
runs well, $\$ 1,000$ or best. x $3-2772$
'71 Capri, 80 K, exc int, rt rear qrtr
argued w/truck, still gd run cond \& used daily, $\$ 975$. C. O'Neal, x 3-4301. 71 Ford wgn, entry sed, sm V8, auto, ' 71 Tbird, 4 dr , It gold w/wht roof, all power, ac, stereo, leath, $53 \mathrm{~K}, 16 \mathrm{mpg}$ Linc. 72 Vega htchbk, nw eng still under wrnty, amfm, nw ww tires, exc cond ' 72 Pinto, auto, 20 mpg , exc cond, 30 K, sgl ownr, \$1,750. Paul, x3-3418.
'72 Mustang Grande, metallic blu, p st
\& disc br, am, 30 K , nw shocks, exc $\&$ disc br, am, 30 K
cond, best. x $\mathrm{K}-3312$.
${ }^{\prime} 72 \mathrm{VW}$ sed, blu, v gd cond, orig ownr, serviced dealers schedule, nw tires, 50 $\mathrm{K}, 30 \mathrm{mpg}$, must sell, $\$ 1,850$ or best.
' 73 Ford Torino, V8, auto, $p$ st, lo
mileage, exc cond, best. Bill, x 366 mileage

74 Mustang II Ghia, under 10 K ,
amfm stereo, sunrf, defogger, red/blk vinyl, std; compl furn for sm apt; reas. Call, 237-4033, evgs.

74 Toyota land cruiser, 4 dr wgn, whl drive, 4 spd, 6.5 K , lk n.
$\$ 5,100$. Landry, 58857 Linc.
' 71 Honda SL 100 mtrcycl, 5 spd, 3 K ,


73 Yamaha 350, recent eng ovrhl, all
stock \& gd cond, $\$ 650$. Nelson,
$782-7689$. -
73 Honda CB1
$\$ 575$. x113 Linc.
'74 Yamaha $500,6 \mathrm{~K}$, perf cond luggage rack, sissy bar, $\$ 1,400$ or best
$\times 3-3880$.
'74 Yamaha 250 NY , lites \& title, exc
cond. Call, 581-0774.
73 ATCO travel trir, 1 k nw, slps 6

## Housing

Camb, $11 / 2$ BR, $\lg$ LR, $K$, full B, reas Camb, BR, LR, K, B, spac, safe nbrh w/TV security sys, ac, terrace, Ig closets, sub $9 / 8-10 / 31$ w/opt, $\$ 240$ incl
ht. x $3-7329$.

Hyde Park, apt in home, Cleary Sq Hyde Park, apt in home, Cleary Sq
area, 4 rms, mod, ww, nw cab K w/stove \& refrig, nw tile B, nr T, q
pref, $\$ 180$. Harold, x7505 Linc.
Malden, $85 \mathrm{rm} 5 \mathrm{BR}, \mathrm{lg}$ cabinet K LR, DR, full bsmnt, sgl garage, mint \& Linden Sch, ask $\$ 36,000$. x 3 -1466.

Nwtn Ctr, rent entire hse ( $\$ 450$ ) or indiv BR's ( $\$ 100 / \mathrm{ea}$ ) w/K priv, 9/1-12/1. Rene, x3-7026.
Stoughton, 4 yr old twnhse, $3 \mathrm{BR}, 1 / 2$ B, AC, patio, garage, pool, tennis,
clubhse, $\$ 36,000$ or ise opt $\$ 395$, Steve, x8-4321 Draper.
Madison, NH, Eidelweiss yr rnd home, cath ceils, LR, DR, K, 4 BR, 2 B, fully
insulated, $\$ 36,500$. June, x 7103 Linc

Highland Lake, Stoddard, NH, 2 seclu Ikfrnt cott, all facil, frpl, elec, scr porch, rowboats, avail Labor Day.
Columbus Day, wkends, $\$ 125$ \& $\$ 100 / \mathrm{wk}$. Call, $\times 3-1566$. $\$ 125$

Owl's Head, Penobscot Bay, Me cottag.
Linc.

## Animals

Beaut snow wht m Grmn shep, 8 mos all shots, nds nw home, pls, owne
became seriously ill. Ariana, $284-5651$ evgs.

Nice cat, b\&w m, 8 mos, nds nw home, not allowed in our apt bldg, free. Call,

Gldn rtrvr m pup, whelped 6/27, AKC disposition. $\times 356$ Linc. wonderf

Free kittens, gray f calico, blk f, b\&w m , mother a gd mouser. Carrie,

Free kittens, esp bred for affection \& personality, gray \& wht, b\&w, some
toed. Call, $738-4795$, dys.

Toots, yng blk f cat, avail for adoption, wl be spayed if nw ornr desires, present F cat, spayed; 4 m kittens; free

Lost and Found
Found: calico f kitten, about 8 wks , n Eastgate, can't keep. Linda, $494-8256$

## Wanted

Nd prsn to do body work on rusting 84 Draper
Full sz cello, exc cond. Ruth, x8-3637 Daper.
Porsche 914 repair info: maint U hv done, or name of a reliable, cheap
mech. Ken, 492-6983. Intermed tennis partners, play wkdays
c. noon. Marie, x3-6208.
mechanic to help me learn about
Tires, H78-15, belted. Larry, x7500
Liv-in child care, It hsekpg, in exch for sep quarters (K \& B) in oceansd home 30 min MIT, full or pt -time, cpl or sgl . Marilyn, x3-1385.
Pt-time research asst/typist, pref w/Spanish ability. Kevin Kinsella,

Driving to San Fran mid-Nov, nd riders to share $\exp \&$ driving, allow 6 dys travel. Terry, x3-7135.
F looking for sgl apt, max $30-40 \mathrm{~min}$ commute to Linc. Barbara, x7436 W1 pay about $\$ 20$ for old, beat up banjo. x3-3282.
Cheap bikes, 2. Pervez, x3-4897
Apt in Arl, Lex, Woburn, 2 BR , by
$11 / 1, \$ 180-\$ 200$ incl ht. x $3-7163$.
KLH 42, whole or part, working or not, price depends on cond; solenoid
cassette drive; cheap computer; photovoltaic cells; 1 lg Kelty Serac back
$494-8888$.
VW eng for bug, 6 V . Doug, x8-1376
Adults to provide after sch care for Kindergarten chldrn, Morse Sch (nr Westgate), approx $51 / 2 \mathrm{hrs}$ daily, nd car Child Care office, x3-3953.

## Roommates

 F rmmate, 20+, share 1 g mod 2 BRBkIne security apt nr T \& Cldg Crnr shops, pkg space safe lot, $\$ 140+u t i l$
$\mathrm{x} 3-5264$.

M or f to share sunny 6 rm apt, qt st nr Oak St, Bri, w/post-doc, d \& d, pkg, no
smokers pls, $\$ 125+$ util. Marvin x3-1660.

F Iran grad sks f grad w/apt to share n MIT Manzar, 494-8467

M grad stu, 1 or 2 , shr nw renov apt Som, $4 \mathrm{BR}, \mathrm{w} / 2$ others, $\$ 275$ heated.
Kim, x $\mathbf{x}-6050$. First-yr EE grad stu sks f rmmate quiet, non-smoker. Karen, collect

F sks f w/apt to shr, Tang or Ashdown MIT grad stu sks 2 qt m for mod apt Wtrtwn Sq, ww, d\&d, AC, nr T. Jerry

M or f, own BR in 3 BR Beac apt n Bkine, avail $9 / 1, \mathrm{~g}$ rms, K frpl, at, blk
$\mathrm{T} \&$ shops, 15 min walk MIT, pre non shops, $\$ 110$ walk MIT, pref x 3 -7220.

F, 25 or +, non-smoker perf, share $51 / 2$ rms w/30 yr f grad stu, compl furn ex 2nd BR, $25 \min$ walk MIT, $\mathrm{nr}^{25}$ T
Cambport, $\$ 105+\mathrm{ht} \&$ util. Joan x-673.
M , working or grad stu, share lg 4 BR Bkine apt w/3 others, $24+$, AC, mod K

## Magnetic Technique Aids Surgery

al-MIT Francis Bitter National Magnet Laboratory team has developed a new method to correct certain cases of a congenital defect which prevents babies from wallowing food
The method, described in the latest New England Journal of Medicine, offers a new approach for some babies born with esophageal atresia, a blockage of the tube which carries food from the mouth to the stomach.
Esophageal atresia occurs about once in every 2,000 to 3,000 births. In about $80 \%$ of babies born with this malformation it can, in the first few days of life, be repaired directly by major chest surgery. However, in about $20 \%$ of such newborns the ends of the esophagus are too far apart to be joined safely.

For these unfortunate babies, the problem has been managed in recent years by a lengthy, major operation that involves constructing an artificical esophagus from a piece of large intestine, or from a section of the stomach, brought up into the chest, usually at about a year of age.

Neither of these methods, however, has proven as satisfactory as swallowing in the natural manner, through one's own esophagus. Therefore, Dr. W. Hardy Hendren, MGH Chief of Pediatric Surgery and Professor of Surgery at Harvard Medical School, developed in collaboration with J . Richard Hale a new method for treating infants with these prob lems not suitable for direct repair Hale is a staff scienists at the MIT Bitter National Magnet Laboratory.

A metallic "bullet" was inserted into each end of the esophagus, the ends of which were initially several centimeters apart. The patient was then placed in an electromagnetic field arranged to draw the two metal "bullets" to gether, thereby stretching the

## Seminar Offered On Simone Weil

An undergraduate seminar (21.935) on Simone Weil (1911-
1943), whose philosophical writings, journals and social activities in France attracted widespread intellectual attention in the 1930s and early 1940s, will be offered in the Deparfment of Humanities during the Fall term. George Abbott White, visiting lecturer and an authority on Miss Weil's life and work, will direct the seminar In conjunction with the department seminar, meanwhile, the MIT Seminar on Technology and Culture headed by the Reverend John Crocker, Jr., MIT Episcopa chaplain, will sponsor during 1975-76 four public lectures dealing with Miss Weil's work. Among lecturers will be the writer-psychiatrist Robert Coles and Miss Weil's brother, the distinguished mathematician Andre Weil of the Institute for Advanced Study at Princeton. Lecture dates will be announced later

## esophageal ends so that they could be safely joined at a surgical oper-

 ation several weeks laterIn collaboration with colleagues Norton Pierce, Lawrence Rubin and Robert Weggel at MIT, Hale constructed the magnet device complete with a small crib which could fit into the center of a large magnet. The first relatively crude machine required the space of two hospital beds. Since then a smaller unit has been constructed.
The magnet machine was timed to go on and off intermittently, painlessly pulling the ends of the esophagus together for 60 seconds and relaxing the pull on the "bullets" for 90 seconds. Thus in a period of 24 hours this stretched the two ends of the esophagus approximately 600 times.
The esophageal ends moved steadily closer to each other during a period of weeks. Subse quent exploration through the chest revealed that the esophagus could be safely joined, resulting in normal swallowing for the babies Before that date they had been fed artificially by a tube through the abdominal wall into the stomach.
The first infant to undergo the new procedure died eight months later from unrelated causes. A second patient, Chad Stephen, son of Mr. and Mrs. John Stephen of South Attleborô, is thriving. He is now a robust, healthy, 13-monthold baby.
Sometimes, Dr. Hendren said, babies esophageal atresia have multiple malformations, but generally speaking, an infant with a successfully repaired esophageal atresia can lead a normal life
Success in treating this condition has more recently led to the use of this electromagnetic stretching procedure to facilitate repair of a second malformation termed imperforate anus. This condition, like esophageal atresia occurs once in every 2,000 to 3,000 births
In the most severe cases the rectum ends blindly several centimeters above the baby's bottom and is frequently complicated by a second problem, an abnorma communication with the urinary tract. Treatment has usually involved a temporary colostomy on the first day of life, diverting the colon (large intestine) to the abdominal wall, and then repairing the defect at six months to a year of age. Results have not always been satisfactory

## Innovation Show

The MIT Innovation Center will hold its second annual exposition Wednesday, Sept. 10, from 2-5pm in the Marlar Lounge (37-252). Center projects to be displayed include a new type of frame for racing bicycles, an electronic game package for home television, a new method of cleaning oil tankers and a new process for testing the purity of gold bullion. Faculty and participating students will be on hand to answer questions. Admission will be restricted to members of the MIT Community.

Using the same electromagnetic
device which successfully device which successfully stretched the esophagus in two babies, the lower colon was
stretched down to the bottom permitting a more simple correc tion of the malformation from below.

The MGH-MIT team believes this will give a more satisfactory functional result but emphasizes that a greater experience with this method will be needed before hard and fast conclusions can be reached. This work was supported in part by the MGH Pediatric Sursical Pesear Surgical Research Fund and the National Science Foundation's
program of Research Applied to National Needs (RANN)

## McLellan Named

 In AdmissionsJulia C. McLennan, who has been associated with the MIT Admissions Office for 30 years, has been appointed associate director of admissions, effective July 1

Announcement of the appointment was made by Peter H. Richardson, director of admissions.

The promotion of Ms. McLellan recognizes the increasingly ac-
tive role she has taken in the admissions process over the past several years," Mr. Richardson
 said.

She has played an instrumental part in a variety of special recruit ing programs, such as careers conferences for minorities and women. Her support in arranging programs introducing young people and their advisors to educa tional opportunities offered at MIT has been invaluable," he said
In her new position, Ms. McLel lan will continue as the senior administrative staff member in admissions, but she will become in creasingly more involved in other aspects of the admissions process Ms. McLellan has been assistant director of admistration of the office since 1970

## Strobe Stolen

A strobe light and water drop machine were stolen from a popular stroboscopic display in the lobby of the Fairchild Bldg. (Bldg. 36) recently. Campus patrol placed value of the equipment a $\$ 500$. The display belonged to Dr Harold E. Edgerton, Institute Pro fessor Emeritus and director of the Stroboscopic Light Labora tory.

## APS Elects Shapiro

Dr. Irwin I. Shapiro, professor of geophysics and professor of phys ics in the Department of Earth and Planetary Sciences and the Department of Physics, is among 46 scientists recently elected Fellows of the American Physical Society

## TSP Launches Credit Subjects

ences and several are available for Distribution credit. Subject descriptions are included unde Course XXI listings in the MIT Bulletin for 1975-76.
Included among these offerings
"Chinese Science and Natural Philosophy" taught by Professor Nathan Sivin, will use historical and anthropological studies of medicine and other achievements of traditional China to understand
modern-day Western Science. "Emergence and Growth of New Research Fields: A Social His tory," taught by Professor Charles Weiner, will explore the interaction of individuals, ideas, institutions and national environments in the formation and development of research fields. The focus is on developments since 1930
"History of Nuclear Engineering: A Case Study in the Interaction between Technology and Society" taught by Professor Irving Kaplan, presents the physical basis of the large-scale applications of nuclear energy and of
the problems arising from these applications.
"Alternative Technologies" taught by Professor Langdon Winner, contrasts present assumptions about technology and social relations with theories of past cultures and experiments in progress.
"Growth and Sructure of Urban Environments" taught by Professor Joel Yellin is designed as an upper-class seminar addressing historical and theoretical perspectives on urban structure and growth as affected by technologi cal change.

## Softball Champions



Metallurgy emerged this season as the overall winner of the MIT Summer Softball League, beating Haley's Train, composed of players from throughout the university, in the final playoff game. The overal champion was picked from a playoff among teams that played during the summer in the League's East and West Divisions. Metallurgy tied for first with Ashdown and Chemistry in the regular season East Division Transportation won the regular season in the West Division with an undefeated record. The Summer Softball League, with Sam Benichasa of the Draper Laboratory as commissioner, has grown from 12 teams in two divisions to 38 teams in five divisions in just three years. Members of the winning Metallurgy team (shown above) are: front L-R, Tom Tiearney Jerry Moscovitz, Steve Hansen, Steve Warner and Bob Fontana; standing L-R, Bill Sherry, Nick DeCristoforo, Jim Carisella, Tom Pollak and Dick Salzbrenner.

Photos by Calvin Camphell


Champion in the intermediate competition playoffs in this year's MIT Summer Softball League was Toxicology, a team drawn from the MIT Department of Nutrition and Food Science. Toxicology defeated the Cosmic McMuffins, drawn primarily from people who work in Bldg. 13 Regular season winner in the intermediate division, known as the Central Division, were the Leftovers, made up of players from through out the university. Another team from the Department of Nutrition and Food Science, this one known as the "Food and Nuts" with Mary Montgomery as captain, won playoffs in the League's "picnic style" slow pitch competition, known as the South Division. Regular season winner in the South Division were the Smokers, all ex-Burton House residents. Toxicology included (above): front L-R, Rich Saunders, Bill Thilly, John Groopman, Mike Arnold, and Jim Flink; standing L-R, Tom Hansen, J.P. Montgomery, Bob Reynolds, Wayne Siegel, Tom Kensler, Dennis Moran and Ken Grant.


Champions in the Summer Softball League's slow-pitch North Division were the Tubers, a team made up primarily of people from the Theta Delta Chi fraternity heuse. They defeated the Flying Freaks, primarily civil engineering graduate students, in the final game of the playoffs. The Tubers also finished first in the division's regular season play. Tubers (above) included: front L-R, Alan Weinstein, Dave Fox, Howard Herzog, Bob Webber and Jim Fisher; standing L-R, Bob Schreiber, Peter Terwilliger, Mike Eissenstat, Dan Geer and Dave Wall.

