
, Professor Schell

## IN MEMORIAM

For 38 years, Prof。Erwin H. Schell helped shape the careers of men who went on to become national figures in business and industry. When he died, on Jan. 3, he was 75. He was known and revered throughout the Institute and by hundreds of Industrial Management students with whom he corresponded, long after they ${ }^{\text {'d }}$ left MIT. His annual, special lecture to the seniors on qualities necessary for success in business administration came to be called "Professor Schell's Million Dollar Lecture. " Later, with some general letters to graduates, it was published as a book. Though he wasn't a sailor, he was instrumental in establishing the dinghy fleet and Sailing Pavilion. He was a pioneer in executive development programs and noted for his varied and extensive research into business and economic problems.

PROPELLENT
When Raymond Johnson was project technician for the Naval Architecture propeller tunnel, he constructed all the propeller models tested there. Last summer, Ray left that spot to become foreman of the Mechanical Engineering Machine Shop and Naval Arch. Model Shop in Bldg。5. Now nearing a quarter-century of MIT service, he feels that his work is more exciting than ever; one of its greatest aspects, he says, is innovation -there ${ }^{\text {'s }}$ always a new project, or a new technique.

In the propeller tunnel, to help marine engineers understand intricacies of propeller design, models are mounted on rotating shafts and submerged in a stream of water. Often Ray compiled and plotted measurement data on propeller thrust, torque, revs and water velocity. For a long time he and Prof. Frank M. Lewis were the only hands on deck, and much important work was done. During World War II they tested a model airplane wing to analyze destructive effects of water, and conducted underwater sound research, in addition to the routine of sponsored research and graduate thesis projects. The tunnel itself, on two floors of Bldg. 3, has observation portholes, and at every Open House, recalls Ray, some visitor would liken it to a washing


Ray Johnson (right) \& Aubrey Rigby in shop
machine. Since 1955, Prof. S. Curtis Powell has been director of the tunnel.
In Ray's new domain, there are three men who make instruments and apparatus for graduate theses and sponsored research projects. Their work has included prototype braille printers and readers, high-speed cameras and textile-testing equipment. Down the hall in the ship model shop, hulls and models are made and repaired.

The variety which Ray enjoys at MIT, he's found in hobbies, too. To date he has built two houses for his family and one for a neighbor, two cabin cruisers, and a large assortment of furniture. He's a musician -- an organist -- and photographer. The Johnsons have three children, and they live in Peabody.

LIS COURSES
Applications for two Lowell Institute School supplementary courses are due on or before Monday, Jan. 25 in Room 5-111. "Circuit Design for Digital Computers" -- dealing with the practical problem of constructing them --- will be taught by Paul E. Wood, Jx. (Lincoln). Clas ses will be on Tuesday and Friday evenings, from 7:15 to 9:15 in 3-133, beginning on Feb. 2. Prerequisite: Completion of at least the equivalent of LIS ${ }^{\boldsymbol{1}}$ Electrical Course.
"Introduction to Signal Analysis, " with Prof. Alvin Drake (EE), will emphasize the use of frequency domain and correlation techniques for study of signal processing in linear sys tems. Completion of the LIS two-year program, or its equivalent, is prerequisite. This course will meet Mondays and Thursdays at $7: 15 \mathrm{p}$. m. in $3-359$, starting on Feb. 8. Both courses will last about 15 weeks.

The second semester for the regular two-year Mechanical and Electrical Courses starts on Feb. 1 .

## TUITION ASSISTANCE

Gathering statistics as the first semester closes, the Office of Personnel Relations reports 380 MIT employees have been studying job-related courses in various Greater Boston schools and colleges.

From the Instrumentation Lab's Group 37 alone -- the NMD group -- there are 22 of 38 draftsmen taking evening courses, and 15 of them are under tuition assistance.

Photo by Herman Goslyn

"Firebugs" (left to right) Norma Jones, Joan Ginn, Tom Sheahen

## PLA YERS

The MIT Community Players are starting off the new year with a production of "The Firebugs, " by Max Frisch. Director is Bill Harris (Lincoln), and many employees and students are involved onstage and back. To see their work, on Jan. 20, 21, 22 or 23 , you can get tickets in Bldg. 10 lobby ( noon to 2 p. m。) for $\$ 1.50$, or make reservations at Ext。2910. All performances will begin at 8:30 p.m. in Kresge Little Theater.

## CREDIT REUNION

On Saturday, Jan. 23, the MIT Credit Union will hold its annual meeting and dinner at the Faculty Club. A pre-dinner social hour will go on from 6 to 7 ; after dinner and the business get-together in the penthouse, there'll be dancing until midnight. Tickets, $\$ 4$, are available at the Credit Union Office, E19-601, or by calling Ext. 2844.

## DOWN FOR THE COUNT

Along with microfilmed documents like the order to drop the first atomic bomb on Japan，and the U．N． Charter，there ${ }^{8} 11$ be two MIT Press books（micro－ filmed）in a Westinghouse Time Capsule next fall： Norbert Wiener ${ }^{\circ}$ s＂Cybernetics，＂and＇Management and the Computer of the Future，＂by Martin Green－ berger．

The capsule is planned to supplement a 1938 model，and－－with twice as much information－－


PHYSICAL PLANT shops are settled in their gleaming E－19 quarters．Man－ ning the stockroom：Edward Perkins will be buried alongside it at the N．Y．World＇s Fair Westinghouse pavilion in October．Longi－ tude and latitude of the capsules will be on record in libraries，museums and monasteries around the world．In addition，a 7－ton granite monument is planned to guide future archeolo－ gists to this compiled cross－section of our civilization，including such artifacts as a bikini bathing suit，laser rod，＂Beatles＂record，and about 750,000 signatures collected at the Fair as a genealogical record of family names．

An MIT member of the distinguished Selections Committee was Dr．Vannevar Bush．

## OVER THE TRACKS

The Institute has bought from the N．Y．Central Railroad a block－long section of its Grand Junction Branch right－of－way which runs eastward from Mass．Ave．to Main St．and ranges from 72 to 82 feet in width；and has agreed to purchase three other sections of the right－of－way west of Mass．Ave。in the next three years．Each one is 500 feet long．The Boston and Al－ bany Division，which operates that branch of the railroad，will continue to use one track of the four now on the right－of－way．

The property will allow the Institute sufficient room for economical building construction on sites we already own in that area．

Purchase of the land by MIT has no relation to proposals that the railroad right－of－way be used as a route for the Inner Belt．If such a route were followed，its land would be subject to eminent domain proceedings regardless of ownership．And since the land would not be wide enough for a highway right－of－way，additional land－takings from campus would be neces－ sary，involving destruction of buildings and a drastic tightening of our boundaries．

## HERE AND THERE

MIT＇s contribution to the special Cambridge Red Cross blood drive on Dec．29： 14 v olun－ teers， 13 pints of blood accepted．And，believe it or not，United Fund donations are still coming into the coordinator＇s office．The total is now approaching $\$ 107,000$ ．For those who pledged，payroll deductions start this month．

The Thirsty Ear，Grad．House contribution to Cambridge night life，has this schedule coming up：Jan． 15 and 16，The Trip Jacks；Jan。22，Monk Myers Trio；and Jan。23，Bob Gahtan （billed as an＂anti－technologist＂folksinger）．Shows start at 8：30 p．m．

Taking a southern tour，Iceland ${ }^{\text {s }}$ s National Basketball Team is coming to Cambridge this week．Sponsored by the People to People Sports Committee，Inc．，they ${ }^{\text {i ve }}$ been in the U．S． since Dec．28．They＇ll be entertained at a Grad House dinner on Friday，Jan．15；then go on to a Boston Celtics game．On Jan．16，they＇ll play MIT＇s varsity team in Rockwell Cage，with more footwork afterward at a Sock Hop．The game starts at $8: 15 \mathrm{p} . \mathrm{m}$ ．and everyone is welcome．

If you＇ve wanted to see more of Dr．Harold Edgerton＇s remarkable strobe photos，there＇s an exhibit underway in the Museum of Science until April 4．It＇s called＂Frozen Motion．＂

## FOR SALE ETC.

18" top-grain cowhide briefcase, 1 g capacity, exc cond. Coris, ext 2110 or $491-3577$ evgs. Misc record albums, $50 \notin$ ea; beige lined drapes, $\$ 10$. Merz, ext 2461 or 536-7212. Tape recorder, used 12 times, mod T2000 Revere, $\$ 100$. Ext 781 or LO6-2493 evgs. Tires: $5.60 \times 15,5$ Continentals, 2 Dunlops, about $10,000 \mathrm{mi}$ tread, $\$ 25$. Delaney, Ext 7126 Linc.
Baby carriage, folds to car bed, matt, linen; foam baby jump seat; play pen w/pad; chrome walker, $\$ 17$ for all. 489-1098.
Dachsund puppies, German stock, long hair, AKC registered. K17-3640. Woman's figure skates, new, size 7, \$10. Moore, 868-6581 or Ext 6328.
Elec range, GE, very good cond, $\$ 50$. Frank Coolidge, ext 3531.
Soprano, alto and tenor recorder instruction: children \& adults. 646-1911. American Flyer S-gauge model trains. EM9-9512.
Pair 5 to $6^{\prime \prime}$ micrometers, Brown \& Sharpe w/standard, $\$ 15$. Mickey, ext 3565. 3 wire-haired terriers, AKC reg, 6 wks old. MI3-2696 evgs.
Sofa and chair, very good cond, incl slipcover, brown, $\$ 60$ or best offer. Sandi, Ext 123 Linc.
Westgate mother will care for your baby in her own home. 491-4071.
Secretary desk, $\$ 20$;fluorescent desk lamp, $\$ 5$; 2 -way flr lamp, $\$ 8 ; \mathrm{K}$ or bar stool, \$4. Halpern, ext 5567 or 926-1340.
Mahog DR furn for traditional home, thle, 2 arm and 4 sidechairs, inlaid credenza in exc cond. Ext 191 or AL4-5324.
Klipschorn Thorens turntble, best offer. Kornfeld, ext 30406.
Alpa 6 sgle lens reflex cam, 28 and 50 mm lenses, rec overhauled, calibrated. Alex Parker, ext 240 Linc.
Hoover sweeper (Lark) w/attachments, like new, $\$ 20$ firm. BI4-5266.
Smith-Corona Electra 12 port typewriter;Douglas-Snyder precision roller skates, ladies size 8. 846-0129.
Elec bench tool grinder; bench drill press up to $1 / 2^{\prime \prime}$ drills. Turgis, ext 3940 or 935-2396 evgs.
Semi-auto apt wshr, $\$ 10$;woman's bowling ball w/Fiberglas case, used twice, $\$ 25$, value $\$ 40$. $277-8344$.
LR sofa, 2 chairs, best offer. Charles Sonnenschein, ext 3926 or 484-5636. Royal port typewriter, $\$ 40$. Ext 4118.
Canon EX f 1.2, brand new, list $\$ 350$, asking $\$ 280$. M. Dixon, ext 30262.
Blk butterfly chair, sling needs repair, $\$ 3.50$. Mrs. Ginn, ext 2476 .
Will type theses, etc. Joyce Giorgione, ext 3354.
Mod LR set, couch, 2 chrs, coffee tble, $\$ 120$. Harman, ext 5053 or RI2-4261 evgs.
Sensitive comfortable hi-fi headphones, $\$ 7$. Ext 4133 or 354-2681. R. Domnitz.
Will type reports, etc. Margaret Harrington, 254-4151.
Bundy clarinet, exc cond, $\$ 75$; antique 1914 sax, good cond, $\$ 50$. 444-9596 evgs.
Dble bed, Conant Ball, birch, mattress and box spring, $\$ 25$ or best. 862-8690.
Upright piano for sale, exc cond. IV9-0739.
Heavy custom-made Fiberglas drapes, $78^{\prime \prime}$ long, 3 pr triple, 2 pr dble, like new, on traverse rods, $\$ 45$. 484-9438.
Gretch trumpet. 275-0759 evgs.
Ski rack for MG-TD. Paul Jamison, ext 2553.
Going back to Europe, household furn for sale. 864-7769.
Flute in C, good cond, best offer. Peter Heller, ext 4829.
Will care for child (2-5) in my home, weekdays. 864-4685.
32' Baltzer Jonesport sedan cruiser, new $75 w$ ss $R, \$ 4,800$. W. Mann, ext 3584 .
Blk miniature poodle, male, AKC reg, all shots, 4 mos, $\$ 75$. J. Sullivan,
ext 7712 Linc or 369-2917.
40" doctor's tble, make it into a bar; misc trunks; piano. Miss Smith, TR6-1036.
Lady's stretch ski pants, blk, size 12 tall, worn once, $\$ 22$. Andrea Julian, X 84224.
21 " Zenith console TV, $\$ 60 ; 2$ cordovan night stands, $\$ 25 / \mathrm{ea}$. Mr. Maccarrone, X30357. Dble bed, $K$ chairs, tble, desk, TV. Also ' 55 VW, 2nd eng, R, snow tires, $\$ 380$. X2688.
' 64 Honda $50 \mathrm{cc}, 300 \mathrm{mi}$, elec starter, brand new cond. Bill Annand, ext 2815.
New glass fish. rod, reel, line, $\$ 8$; Fiberglas hockey stick, $\$ 5$; hockey skates, used once, 8 , men's, $\$ 6$. Barry, ext 3757 or 776-3321evgs.
Dble decker bed, $\$ 60$, ( 2 twin beds with springs). Bruce McCallum, ext 3679 . Brand new cover for compact car. Judy, ext 737.
Regina elec broom w/rug pile dial, latest mod, never used, sacrifice. 395-9159.
Must sell MCX -3 transcvr w/AC power supply, astatic 10D mike, PTT type G stand, $£ 325$. F. Barrows, ext 2537.
Nylon rug, $9 \times 12, \$ 10$; folding baby bathinette, $\$ 10$. 354-5458.

Rek-O-Kut $331 / 3$ turntble w base, ESL arm, GE cart, incl, $\$ 60$. Alan, ext 5853 Linc. '54 Lincoln hdtop, good cond, with 6 tires. Santos, ext 3717 or $471-0961$ evgs. 663 Monza coupe, maroon, powerglide, 12, 000 mi , $\$ 1,500$. Fred Liljeholm, 20A -018.
'54 MGTF (classic), new motor, body perf, \$1,100. L06-0163.
'54 Pontiac, new battery, snow tires, R\&H, best offer. 876-1994 (6-9 p.m.)
'55 Ford convert V-8, good motor, new tires, \$125. 524-6892.
'55 Lambretta, runs but needs work. Hal, ext 2115.
' $56 \mathrm{VW}, 68,000 \mathrm{mi}$, perf internal cond, new batt, snow tires, $\$ 250$. Antoinette, ext 3648 or TR6-2209 evgs.
'57 Plymouth, \$250, 4-dr, V-8, auto shift, snow tires, good R\&H. Gardner, ext 5597.
' 57 Ford wagon, clean, $4-\mathrm{dr}$, auto, V-8, belts, good tires, R\&H, $\$ 250$. Ext 6404.
'58 Rambler $4-\mathrm{dr}$ sedan, grey, std shift, new trans, shocks, exhaust sys, $\$ 500$ firm. Chuch, ext 2805 or $625-0271$ evgs.
'58 Rambler American, auto, $\mathrm{R} \& \mathrm{H}$, seatbelts, exc cond. Gus, ext 2537.
'58 VW sedan, $80,000 \mathrm{mi}$, R, ski racks. 547-5798 evgs.
'59 Olds 2-dr, 7 tires, exc mech cond, $\$ 695$. J. Hawkes, exts 7654 or 5504 Linc.
'59 Hillman Minx, needs starter, motor and distrib repair, $\$ 25$. Fred, ext 4948.
'60 Anglia, Eng. Ford, all-winterized, snow tires, 28 mpg. Ext 104 or 862-6039.
' 60 VW, blue, good cond, $\$ 795$. Walter, ext 5589.
'62 Galaxy 500 convert, hi mileage, low price. Ext 30381.
' 62 Chevy II, auto trans, 6 cyl, 4 -dr, exc cond, R\&H, 2 sp tires, snow tires, seat belts. H. Ishii, ext 2189 or $868-9580$.
' 62 Tempest $4-\mathrm{dr}$, auto, R\&H, orig owner, $30,000 \mathrm{mi}, \$ 1,095$. 648-7416evgs. '63 VW, price 3?, lower than everybody's. BE2-9736.
'63 VW, sunroof, $30,000 \mathrm{mi}$, exc cond, reg serviced, $\$ 1,300$ or best offer. 924-6047. ' 63 Corvair $500,33,000 \mathrm{mi}, 102 \mathrm{hp}, 4-\mathrm{spd}$, body damage, $\$ 1,250$. A. Conrod, ext 6111. ' 63 Hillman, exc cond, will haggle. LA7-5508 after 5 p.m.
'64 VW, fully equipped, 9, 000 mi . Ext 7186 Linc or UN4-3040.
Sublet: Feb. 1, 1st flr apt, Brighton, $3 \mathrm{rms}, \mathrm{lg}$ LR, K, BR, new Danish mod furn, B w/shower, built-in oven, stove, $\$ 130 / \mathrm{mo}$ incl ht. Ext 4271 or $232-5674$ evgs.
Sublet apt, 1 BR, air-cond, disposal, pool, pking, avail Feb 1, brand new, Arlington, $\$ 125 / \mathrm{mo}$. Miss Schwartz, ext 6304 or MI6-1955.
6 lg lst flr rms in new 2 -fam, mod K, htd G, Watertown, $\$ 160 / \mathrm{mo}$, built-ins. Ken Britting, ext 5011 or 923-0147.
Brighton 6-rm mod apt, 10 min from MIT. 536-9534 or 254-8211.
Sublet apt, 852 Beacon St. 527-8382 or 527-6218.
Sublet 2-rm furn apt with pking, Commonwealth Ave, $\$ 85 / \mathrm{mo}$. 734-9893.
5-rm apt, heated, pking space, Arlington near Linc Lab. M18-0568.
Beverly $6-\mathrm{rm}$ ranch, $3 \mathrm{BRs}, 11 / 2 \mathrm{~B}$ 's, oversize $\mathrm{G}, 10,800 \mathrm{sq} \mathrm{ft}$ lot, all appliances, 35 min to Camb, $\$ 16,900$. Ext 30341 .
Wanted: Boston CORE desperately needs donation of typewriter, usable or repairable cond. HI5-9458.
Wanted: trans bet MIT or Boston \& Portsmouth, N. H., weekdays. Callanan, ext 2429. Wanted: couch which converts to dble bed, in good cond. Dan Diamond, 491-4358.
Wanted; rides to New Haven, Conn. on wkends. Paula, ext 5442 or 262-1663 evgs.
Wanted; used enlarger for 35 mm film. Jack, ext 5921.
Want to trade '61 Corvair Monza, 4-spd, R\&H, for comp car, auto trans. Shih, ext 2624.
Wanted: temporary home for a squirrel monkey. Irene, ST2-9849.
Wanted: baby crib. Ext 4400 or $868-8030$, Mrs. Smith.
Wanted: fourth girl to share furn Camb 2 BR apt, K , LR, B, \$47. 50/mo. 354-7142 evgs.
Wanted: babysitter close to Central Sq; auto or semi-auto wshr, filled and
drained through sink. Mrs. Wang, 876-0488 evgs.
Wanted: ride from Lynn to MIT, mornings only, 9. Fran, ext 4832.
Wanted: ride from Somerville to MIT, hours 9 to 5. Ext 4671.
Wanted: used, inexp port record player. VO2-1943.
Wanted: attrac rm w/hB, K'ette or K privs, Jan 30-Feb. 28 for visiting librarian close to Harvard School of Design. KГ7-5717.
Wanted: ride to Wilmington, Vt, Fri p.m., back Sundays,during ski season. Will pay. M. Farmer, ext 2371.
Wanted: male rmmate to share hse next golf course, 15 min bike ride from MIT, $\$ 43 / \mathrm{mo}$. Erwin, ext 4028 or WA $4-8005$ evgs.
Wanted: 6 year crib. P. Tobin, 876-1392.
Wanted: moderately priced monaural music system. Hein, ext 5759.
LOST: Purple angora hat on Dec. 23 between Central Sq. and Rm 3-241, MIT. Reward for return to Mrs. Edwardson, ext 4669.

Tech Talk is published every two weeks. Send news and ads to Mrs. Linde, Room 3-339, Ext. 2701. Next Deadline: Jan. 19.

## CORRECTION

The December 30 issue of Tech Talk stated that "Four M.I.T. men were chosen to head colleges" and lists John Hrones, '34, as one of them. It should have stated that Dr. Hrones, former Professor of Mechanical Engineering at M.I.T., had been appointed Provost of Case Institute of Technology, where he has been a member of the Faculty and Vice President for Academic Affairs since 1957.

From the Office of Public Relations

December 31, 1964

