



Frank Succeeds Slater As Head Of Physics Dept.

Former Head of Dept. Takes Newly Created Post of Institute Prof.

The appointment of Dr. Nathaniel H. Frank as head of the Department of Physics at the Massachusetts Institute of Technology was announced on Dec. 15 by Dr. George R. Harrison, Dean of Science at the Institute.

Dr. Frank succeeds Professor John C. Slater, who had been the head of the department for over twenty years. Dr. Slater was recently appointed to the newly-created and distinguished post of Institute Professor at M.I.T. and is now on a year's leave of absence to carry on research at Brookhaven National Laboratory on Long Island.

Born in Boston, Dr. Frank received the degree of Bachelor of Science from M.I.T. in 1923, and the degree of Doctor of Science in 1927, and has been associated with the Institute ever since. He served the Department of Physics as executive officer from 1949 to July 1951 under Dr. Slater.

Dr. Frank spent 1929-1930 in Munich, Germany, doing research in theoretical physics with Professor A. Sommerfeld, and in 1935 was a guest of the Institute for Advanced Study at Princeton. During World War II Dr. Frank contributed important service to research and to development in the war effort.

His war activities may be divided into two distinct phases: first, a period from May 1941 to January 1943 during which he was a staff member of the Radiation Laboratory at the Institute. His work at the laboratory comprised theoretical researches of phenomena associated with the propagation of microwaves.

The second period was after January 1943 during which he held the post of Expert Consultant, Office of the Secretary of War, with headquarters in Washington. In this post he was engaged primarily in the formulation and monitoring of technical programs.

Carols Will Ring Through Institute

A Christmas program to put the Institute into the proper holiday spirit has been arranged for Friday, December 21, the day before vacation. The lobby of Building 7 will be the scene of a half-hour ceremony, beginning at 11:45 a.m., which will include greetings from President Killian and Robert Briber, carols sung by the assembly, a Christmas reading, and selections by the Glee Club and the Horn Choir. To accommodate the program, the third class on Friday will end ten minutes earlier — at 11:45 a.m. These arrangements are tentative; a final program will be announced shortly.

Crimson Spirit Lags In Struik Defense

The first attempt of Harvard University students to form a committee to aid Professor Dirk Struik failed last Thursday night. Only two of the twenty-five students who had previously signed a Dean's Office petition for the committee showed up at the meeting called by Acting Secretary Stewart G. Bryant 2G. According to the Harvard Crimson, "Bryant blamed the poor reception on a 'fear of identification and possible labels of subversive activities.'"

To get Struik to speak at the University on civil liberties was to be the purpose of the undergraduate organization. However, Bryant announced that he was still planning to have Struik speak at Harvard sometime before Christmas.

F.S.S.P. Aids Point 4 Program; 5 Continents To Be Represented

The Foreign Student Summer Project of the NSA will be host to 80 scientists and engineers of 35 countries. The aim of the FSSP is to join in the drive to further better international understanding and to stimulate technological development of war devastated and underdeveloped areas by giving their technologists a short and intensive

course at the Institute. This objective has been referred to by the State Department as the first positive implementation of Point Four.

For the first time in four years all five continents are represented. All of the participants must possess a degree and two years' experience. The project is designed as an intensive "packaged" program. Every attempt is made to give them a balanced view of American life.

Program Includes Industrial Tours

The program is divided into three parts. First is an intensive 12-week course of study on special research projects of interest to their own countries. Then the participants will be taken on an industrial tour of New England by the National Association of Manufacturers. Later, opportunity is provided for a few weeks of individual industrial visits.

Fraternity Parties Give Cheer To Groups Of Boston Children



Photo by Chau

Pictured above as Santa Claus is Alan J. Block '54 of Alpha Epsilon Pi.

By Clifford E. McLain

Many children in settlement houses around Greater Boston have no chance to attend a real Christmas party; and so last year the custom of giving parties for these children was started among the fraternities through the efforts of the T.C.A. Boys' Work at the Institute. The parties have been very successful and this year almost every fraternity participated or plans to give a party soon.

Playing host to fifteen or twenty kids is something like experimenting with a miniature cyclone, but the fact is that the fraternity men enjoy the bedlam as much or more than the kids themselves. Games, movies, skits, refreshments, Santa Claus and toys are the program for these parties, which usually last for two to three hours.

Though some of the fraternities arranged for parties on their own,

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Danzberger, Kliment, Miller, Cicero, Peralta Will Form Managing Board, Vol. LXXII

Registration Data

Spring Term 1952

Registration Data . . . Spring Term 1952

Registration material for the Spring Term will be issued as follows:

FIRST-YEAR STUDENTS

Obtain material in Chemical Laboratory classes beginning January 7. Any not taking Chemistry obtain material in Room 4-258.

ALL OTHER CONTINUED STUDENTS (except special students)

Obtain material in Building 10 Lobby on Monday, January 7, from 8:45 a.m. to 4:30 p.m. After 4:30 p.m. obtain material at the Information Office, Room 7-111.

SPECIAL STUDENTS & STUDENT ENTERING GRADUATE YEAR

Have application approved by Admissions Office before obtaining material at the Registrar's Office, Room 7-142.

REGISTRATION MATERIAL FOR THE SPRING TERM MUST BE FILLED IN AND RETURNED TO ROOM 7-142 BEFORE 2:00 P.M., TUESDAY, JANUARY 15.

REPORTS FOR FALL TERM

Reports for Fall Term 1951-1952 will be mailed to the Term Addresses on Thursday, January 31. Students who wish to have their reports sent

(Continued on Page 4)

The managing board of THE TECH for the seventy-second volume will be: Alex H. Danzberger '53, General Manager; Stephen A. Kliment '53, Editor; Carroll F. Miller, Jr. '53, Managing Editor; Luis A. Peralta '53, and Arthur B. Cicero '53, Co-business Managers.

Edward F. Leonard '53, and Gilbert H. Steinberg '52, will compose the editorial board.

High-speed Computer Electronic Whirlwind Is Now In Operation

The Institute's Digital Computer Laboratory in conjunction with the Office of Naval Research has announced that Whirlwind I, an ultra-high-speed digital computing machine, is now in operation at the Institute.

One of the features of this fast electronic machine, the only large-scale computer of its kind in full operation in this country, is its electrostatic "memory," which exists in the form of specially designed electronic storage tubes.

With its ability to remember, act upon, and deliver information at a rate of 20,000 times a second, Whirlwind I, is the first machine suitable for supplying instantaneous instructions for such applications as controlling aircraft traffic patterns. Whirlwind also has many other applications for the study of industrial process control, insurance handling, inventory, economic analysis, census problems, and scientific and engineering computations.

Will be Used for Military Industrial Research

During the next year Whirlwind will be devoted to a variety of engineering, scientific, and industrial applications as well as to military projects sponsored by the Office of Naval Research and the United States Air Force.

Among the important studies to be made are problems of control where the machines, devices or systems to be controlled will operate at their own actual speeds. In such applications the computer receives a continuous flow of data to be processed instantaneously into instructions for operating the control system. For example, Whirlwind could be part of an air traffic control center, setting the flight pattern of hundreds of aircraft of varying types and speeds approaching the airport from several directions and leaving it for various destinations.

(Continued on Page 4)

The promotions were announced at the annual banquet of THE TECH, held last Friday evening at Howard Johnson's. Guests at the banquet included John Crider, former editor of the Boston Herald, Thomas L. Hilton, Assistant Dean of Students, John J. Rowlands, Director of the News Service, Professor Frederick G. Fassett, Jr., faculty resident of Baker House, and Charles Kane, Chairman of the Alumni Advisory Board on Publications.

Junior Board Announced

Other promotions included the appointment of Mark Caplan, '54, and Jerome Cohen, '54, Co-sports Editors, with John Margulis, '54, Associate Sports Editor. Sheldon L. Dick, '54, will be Exchange Editor, Hugh G. Gallagher, '54, Assignments Editor and Edwin G. Eigel, '54, Features Editor. Malcolm A. McLeod, '55, will continue to be Photography Editor and Arthur F. Eckert, '54, his assistant.

John F. D'Amico, '54, was promoted to News Editor, with John M. Dixon, '55, and Arthur Webster

(Continued on Page 4)

Students For Struik Sponsor Lecture On Civil Liberties Issues

Students for Struik has announced its first meeting to be held tomorrow, December 19, at 5:00 p.m., in Room 1-190. All M.I.T. students have been invited to attend and hear a lecture by Professor Harrison L. Harley, of Simmons College, on "Civil Liberties Issues in the Struik Case."

The committee will distribute literature dealing with the background of the case and the program and purposes of Students for Struik.

In announcing this meeting spokesmen of Students for Struik have stressed the fact that the committee speaks for itself only, an organization composed of M.I.T. students, and not as representatives of the Student Body, Student Government, Faculty, or Administration of M.I.T.

Poll Indicates:

Freshmen Protest Walker Food

By NORMAN G. KULGEIN

About 70% of the freshmen who have so far replied to the East Campus poll on contract feeding have expressed dissatisfaction with the current setup, Bennet Sack, '53, House Chairman revealed.

During the regular meeting of the East Campus House Committee on Dec. 12, it was decided to poll all Freshmen living on East Campus in regard to their opinion of the eating arrangements at Walker Memorial.

This action was prompted by the disclosure that Donald A. Pollock '55 would have to move from East Campus for failure to pay for commons meals at Walker. According to Institute ruling, all freshmen

residing on East Campus are compelled to take their meals at Walker.

The following four questions are being asked of the 231 freshmen: 1) Would you eat in Walker next term if given a choice? 2) What specific "gripe" do you have? 3) Would you write home to your parents asking them to write to the dean complaining about the quality of food you are getting? 4) Would you be willing to withhold payment next term of the \$132 for the commons meals fee?

At this time about 30% of the freshmen have been polled. 78% of these said that they would eat elsewhere if given the opportunity, while 72% said that they would

withhold payment of the commons meal fee next term.

The main complaint of the freshmen is that the food is invariably cold and the bread usually stale. Some felt that expensive extras could be done away with in the interest of economy. The freshmen included in this category fancy sauces, such as salad dressing comprised of mayonnaise and marshmallow, or baked ham topped with cooked pineapple and raisins.

The complete results of the poll are expected in a few days and will be presented to the Dean's office by Ben Sack, East Campus House Chairman.

The Tech

VOL. LXXI TUESDAY, DECEMBER 18, 1951 NO. 51
 Night Editor: Hugh Gallagher, '54
 Assistant Night Editor: Monro Weinstein, '55

DISSATISFACTION AT WALKER

The freshman class doesn't like contract feeding in Walker Memorial. Although the results of the poll being taken by the East Campus House Committee are not yet complete, it does not take a public opinion expert to attest that widespread dissatisfaction exists among those men who must take their meals in Morss Hall.

Making contract feeding a requirement for freshmen living in East Campus is an Administration prerogative; but as we said last spring, the spirit and philosophy behind campus living regulations should be that of providing the best facilities possible, thus drawing rather than forcing men into a cohesive living group.

Many of the complaints reiterate the feeling that the food as now prepared is loaded down with too many fancy accessories and that inculcating a few notions of simplicity into the chefs would be a big improvement. One freshman has been expelled from the East Campus for refusing to pay for commons meals which he refused to eat. Whether this is a "crank" case or not, the Administration should do something about the Walker situation by next term, either by dropping required commons meals or by bringing about a major improvement in quality.

ENGINEERS AND THE OVER-ALL MANPOWER PROBLEM

The following is a report prepared by THE TECH on the current national manpower situation.

You may look forward to a good position upon graduation, according to present statistics, if you are pursuing a course in the field of engineering or science.

This should not be selfishly regarded as a desirable situation, however; instead it should cause concern, for it indicates but one fundamental thing—there is a large shortage of engineers.

If you stop to consider the number of engineers lacking at present and the decrease in output of new engineers, in addition to their growing demand due to increased technical growth and intensified industrial and government research programs, I am sure you will agree that this concern is not unjustified.

Fortune magazine, one of the many agencies and organizations recognizing the problem, points out in an article that this deficiency, serious as it may be, is yet more serious in light of the fact that Russia is training young scientific and technical men at the rate of about 100,000 per year—or almost seven and one-half times our expected output in 1954.

The large number of job offers per graduate and the high starting salaries may increase more, if the successive decreases in the sizes of the graduating classes continue, as is expected, at least until 1954.

With an average annual decrease of 28% in the number of estimated graduating engineers through 1954, this represents an over-all drop from an all-time high of 52,000 in the 1950 classes to some 12-14,000 in 1954, or a 70-75% decrease.

Since half of the graduating engineers will in all likelihood be drafted, unless something is done about the present draft laws, this leaves industry very much lacking its necessary annual quota of 30,000 new engineers. The graduating engineers, however, will be sitting prettier than ever before, with industries and even government agencies competing highly for their services. Already they average three to five job offers and contracts with starting salaries of better than three hundred dollars per month are common, the best in history.

Why this shortage of engineers? There are several factors contributing to this shortage, the most significant probably being the indiscriminate drafting methods employed during World War II. This drain of potential engineers has already affected the profession, to the point where it is now short well over 60,000. This represents almost a 15% deficit according to a recent survey by an Engineering Manpower Commission. This figure is exclusive of military needs.

The effect of the heavy influx of veterans into engineering schools has now almost completely dropped off. This, combined with the reasoning that the significant decrease in the number of births in the depression era of the early 1930's would be reflected on present enrollment figures, accounts for another part of the shortage of engineers.

It is interesting to note, just as a sidelight, the use to which those engineers who are drafted are put. Rather than being placed in military research, design, or development, where their training could be put to good advantage, the majority of them are made to march with a rifle on their shoulder and do K.P. just as the other recruits. I do not infer that they are superior to the rest and therefore deserve partiality, but in view of their shortage—Why not make proper use of them?

As recently as last year, statistics were released by the Bureau of Labor Statistics which pointed toward an approaching oversupply of engineers. This false statement, with its wide circulation via the press, naturally found its way to high school students and advisers eventually served to discourage potential engineering school students. Why, in the light of the many warnings and predictions of a shortage, was a report such as this made?

Fortune magazine brings to mind the great post-war technical growth of industry. During the past decade, it explains, research and development have increased almost 500% in the industrial field and 1500% in government agencies, whereas the number of engineers produced in that time has scarcely doubled.

What will be done to alleviate this shortage? Better yet, what can be done about the shortage? A large, yet not effective, step along this line was taken when the Selective Service adopted a plan whereby a score of seventy or better on a special nationwide test would make a college student eligible for deferment from the draft. The most penetrating plan was proposed by the Scientific Manpower Advisory Committee, headed by Charles Thomas, president of the Monsanto Chemical Company. This plan, endorsed by all the leading engineering societies, proposes a national board with centralized power over the technical-manpower problem and would try to effect the diverting of technical men into critical positions. The committee also proposed a program designed to maintain an adequate flow of men into technical training.

Letters to the Editor

Dear Mr. Weber:

With considerable interest did I read THE TECH's summary of the article, "What Kind of Incentives?" by Crawford H. Greenewalt, published in the December 1951 issue of *The Technology Review*. In selecting the head, and in the early portions of THE TECH article, it seems to me that your staff has completely misinterpreted Mr. Greenewalt's message.

Careful reading of Mr. Greenewalt's article, as printed in *The Review*, will disclose that nowhere did he ask for "emphasis on profits" as your head claims. He did say: "What is important is that he (man) do his best, for only then can the nation reap the greatest benefits from his abilities." In order that these benefits may come to fruition, Mr. Greenewalt holds that the ancient, and almost forgotten, American custom of enabling a person to benefit from his own honest efforts and labors has proven to be sound. He believes, "That nation is strongest that provides whatever incentives are needed to make its people do their best. That nation is weakest that fails to utilize the tremendous power of self-interest."

Mr. Greenewalt makes the statement, "But for most of us, probably the strongest and most desirable incentive of all is financial gain—not of course in money itself, but because of what one can do with it." In so doing, Mr. Greenewalt is reporting a highly significant fact of human nature. He is not attempting to dictate moral or social conduct, as could easily be inferred from THE TECH's conclusion that Mr. Greenewalt believes "financial gain should be the strongest and most desirable incentive in a free country."

B. Dudley, Editor

Dear Sir:

Since all the references to my letter of December 11 in your "Letters to the Editor" column of December 14 are either critical or bemused, I feel I must answer.

First, before answering the letters individually, I want to state my stand on the Struik affair, categorically and clearly: 1) I have no conviction as to Professor Struik's guilt or innocence—and I do not see how anyone, unless he is privy to the secret evidence before the grand jury, can have such a conviction. In keeping with American tradition I assume Professor Struik's innocence unless he is proven guilty but this assumption does not amount to a crusading conviction. 2) I have no objection to any group which seeks to raise

funds to aid Professor Struik in his defense against the charges which he faces. I most emphatically protest against any effort to raise funds to aid Professor Struik in a defense against imaginary charges.

Turning now to the letters of last Friday, Robert Gladstone, '52, makes the general assertion that I have labeled the Struik Committee's statement of purpose as a "typical piece of Communist party-line writing." On the strength of this premise, Mr. Gladstone concludes that I am pre-judging the trial of Professor Struik. Communist party-line writing in matters of defense traditionally and inevitably seeks to cloud the issue by posing a defense to a non-existent charge while ignoring the true issue. The committee statement spoke of many things not included in the indictment against Struik and stoutly defended the Professor against these non-existent charges. On the basis of this, I noted the lamentable similarity of technique and commented

upon it. I do not hold Professor Struik responsible for the apparent irresponsibility of the Committee statement; consequently, I cannot see how my opinion of the Committee statement in any way pre-judges the guilt or innocence of Professor Struik. As a matter of fact, this explanation is offered only because I assume Mr. Gladstone had meant somehow to connect the Committee criticism with the issue of pre-judgment and inadvertently left out the middle of his argument.

Next, I would like to take up the letter signed by Messrs. Bruce Kellogg, '52, George Langer, '52 and Robert Lauffer, '52. In the first paragraph, after a quotation from my letter, they conclude by asking "Does Mr. Fitch mean to say that it is in contempt of court that an individual or group of individuals holds an opinion on the guilt of Professor Struik?" I feel that an expression of an opinion as to the Professor's guilt or innocence of the charges against him comes dangerously close to contempt of court: 1) The indictment against Professor Struik is based on secret

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Intramural Round Up . . .

With the advice and assistance of men representing 27 of the 40 teams which competed in intramural basketball this season, an all-star team was compiled for each of the six leagues. On most of the choices there was general agreement. Because there were so many teams and players, it is inevitable that many good men were passed up in favor of others.

In each league ten men were chosen, five on the first team and five on the second. The great number of forfeited games kept each team from playing every other in its league, but each man contacted gave his frank opinions on the merits of the individuals.

League One:

- First Team**
 F Bill Hecht, Delta Upsilon
 F Cliff Rounds, Delta Upsilon
 C George Barclay, Graduate House
 G Glen Maxon, Delta Kappa Epsilon
 G Wilbur Hankey, Graduate House

Second Team

- F John Pease, Phi Sigma Kappa
 F Tex Hlack, Delta Kappa Epsilon
 C Bill Lintner, Pegis Club
 G Chuck Mathews, Phi Delta Theta
 G Henry Van Gleson, Phi Sigma Kappa

League Two:

- First Team**
 F Cliff Herdman, East Campus
 F Ben Sack, East Campus
 C Bob Chamberlin, Burton Student Staff
 G Emil Tessin, Burton Student Staff
 G Bob Lait, East Campus

Second Team

- F Joe Brodzik, Phi Kappa
 F Bud Jacobs, Pi Lambda Phi
 C Dick Lane, East Campus
 G Ed Cole, Westgate
 G Bob Elliott, Burton Student Staff

League Three:

- First Team**
 F Bob White, Sigma Alpha Epsilon
 F Roy Westlund, Huskies
 C Ken Wilson, Huskies
 G John Funkhouser, Huskies
 G Bill Mueser, Sigma Alpha Epsilon

Second Team

- F Bard Crawford, Sigma Alpha Epsilon
 F Arnold Langberg, Burton No. 2
 G Ed Porter, Sigma Alpha Epsilon
 G Bill Horner, Sigma Chi
 G John Jones, Beta Theta Pi
 (Continued on Page 4)

Mr. Ivan J. Geiger Elected Chairman To E.C.A.C. For '52

Ivan J. Geiger, Director of Athletics at the Institute, was elected chairman of the Eastern College Athletic Conference at its closing meeting last Saturday in Washington. The ECAC has evoked considerable interest with its banning of post season bowl games and endorsement of limited televising of college football games.

As chairman, M. Geiger will head the only true athletic regulatory body in the East for the coming year. He will be assisted by Louis Andreas of Syracuse, Vice-Chairman. None of the conference edicts affected the Institute. A proposal to limit out-of-season practice, which would have affected Technology's crew, was turned down.

Varsity Wrestlers Pin Tufts Jumbos 20-14; Freshmen Team Also Wins Match

The Varsity and Freshmen wrestlers had a big day last Saturday when both teams beat Tufts College in one of the most crowd-pleasing matches yet. The Freshmen won their match by a score of 20-14 while the Varsity took theirs 17-11.

One of the outstanding Freshmen was Jack Kennedy who wrestled in the 130-pound class. He pinned his man in the first period. The most exciting part of the whole match was the last Freshman bout when Gislser (heavy) wrestled it out with his opponent for nine minutes with the score 16-14. If that match was lost the Freshmen would have lost but Gislser won a decision.

Outstanding men for the Varsity were three. First Jack Graef, who, for the second time, was "thrown to the tigers." As it happened in the match with Harvard, Graef, who wrestles in the 130-pound class, was put up against a 137-pounder.

Both times his opponents were captains. Graef has had no experience in wrestling and although he was pinned he deserves a lot of credit. A second outstanding man was John Riddell who won his decision in the 167-pound class. Seymour, the Engineer heavyweight, had no opponent to speak of and he won his matches in 2 minutes and 23 seconds by a pin.

The lineups and events as they took place are:

- Tech Freshmen**
 123 lbs., Nasatir—draw
 130 lbs., Kennedy—pin
 137 lbs., McAuliffe—pin
 147 lbs., Evans—was pinned
 157 lbs., Cutsky—was pinned
 167 lbs., Savin—won decision
 177 lbs., Brooks—draw
 Heavy, Gislser—won decision
- Varsity**
 123 lbs., Blanchard (Tufts) vs Meyers (Tech)—decision, Tufts
 130 lbs., Burns (Tufts) vs Wolfe (Tech)—decision, Tufts
 137 lbs., Capt. Vinton (Tufts) vs Graef (Tech)—pin, Tufts
 147 lbs., Mastoras (Tufts) vs Buckstaff (Tech)—decision, Tech
 157 lbs., Swain (Tufts) vs Robertson (Tech)—decision, Tech
 167 lbs., Moore (Tufts) vs Riddell (Tech)—decision, Tech
 177 lbs., Rieker (Tufts) vs Landy (Tech)—decision, Tech
 Heavy, Arlstar (Tufts) vs Seymour (Tech)—pin, Tech

Attention Wrestlers
 Next Tuesday at five o'clock there will be an important meeting of all wrestlers (varsity and Freshmen) at the cage. Be sure to be there.

Christmas Parties

(Continued from Page 1)

most took advantage of the Boys' Work Committee's offer to make preliminary arrangements with needy settlement houses. The fraternities furnished the transportation and the settlement houses sent a leader along with the group.

After the parties were over and the debris cleared away, most everyone agreed that it had been worth all the effort and that they would certainly give another party next year. Both the settlement houses and the T.C.A., not to mention the children themselves, expressed gratitude to the fraternities for these parties.

The Boys' Work Committee consist of Arnold G. Kramer, '52, Director; Dickson Chau, '53; Clifford E. McLain, '53; Robert A. Naber, '52, and Charles W. Sorenson, '52.

Fraternities which have already given parties are Alpha Epsilon Pi; Alpha Phi Omega; Beta Theta Pi; Chi Pi; Delta Tau Delta; Delta Upsilon; Kappa Sigma; Lambda Chi Alpha; Pegis Club; Phi Kappa; Phi Sigma Kappa; Pi Lambda Phi; Sigma Alpha Epsilon; Sigma Chi; Theta Delta Chi; MIT Student House. Theta Chi will have a party on Dec. 20.

Phi Kappa, having given a party for 65, holds the record for playing host to the greatest number of children.

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 Courses: Based on Physical Sciences
 Based on Chemical Sciences

The duration of each of the above undergraduate Courses is four academic years and leads to the Bachelor's degree, with the following exceptions: (1) Architecture, which is a five-year course leading to the Bachelor's degree; (2) Chemical Biology, Food Technology (Five Year Course), Physical Biology, and the Cooperative Course in Electrical Engineering, which extend over a period of five years and lead to the Bachelor's degree and the Master's degree; (3) Science Teaching, which is of five years' duration and leads to the degree of Bachelor of Science from the Massachusetts Institute of Technology and the degree of Master of Arts in Teaching from Harvard University.

Graduate study may be pursued in Textile Technology, Ceramics, Sanitary Engineering, and in most of the above professional Courses. The Master's and Doctor's degrees are offered in most of these fields.

For information about admission, communicate with the Director of Admissions. The Catalogue for the academic year will be sent free on request.

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Amdur and Gourley To Receive Awards

Dr. Isadore Amdur, Professor of Physical Chemistry at the Institute, has been elected to Fellowship in the New York Academy of Sciences. Dr. Amdur has received this honor in recognition of his outstanding achievements in chemistry.

A member of the Department of Chemistry since 1934, Professor Amdur did important wartime work in ceramics and optics, especially in research on methods of growing crystals.

At the Institute Ronald Gourley, an instructor in architecture, is the co-winner of the first prize of \$1,000 in competition for the design of a \$1,000,000 memorial union building at the University of New Hampshire. He collaborated with Dan Kiley of Franconia to win the \$1,000 award.

Registration

(Continued from Page 1)

elsewhere must call at the Registrar's Office not later than Tuesday, January 15. Duplicate reports for students who are under 21 years of age will be sent to the parents. No reports will be prepared for candidates for a degree in January 1952.

Promotions

(Continued from Page 1)

Haines, '54, as his associates. Managers will be Martin B. Mills, '54, Advertising, Robert S. Young, '54, Circulation, Stanley M. Bloom, '53, Sales, Klaus Zwilsky, '54, Treasurer. Charles H. Ehlers, '52, assisted by George L. Perry, '54, are in charge of personnel.

Former Herald Editor Gives Views
Mr. Crider, ex-editor of the Herald, spoke about his career in journalism which has included positions with the New York Times and Time magazine. His recent break with the Herald resulted from a disagreement over editorial policy toward Senator Taft, whom Mr. Crider openly opposes as a presidential candidate.

In speaking of Boston newspapers in general, he said that most of them stress the entertainment value of the news rather than trying to honestly evaluate it.

Letters to Editors

(Continued from Page 2)

evidence presented to a grand jury. 2) To divulge or make known grand jury testimony is unlawful. 3) I must assume that when someone passes on the guilt or innocence of Professor Struik, he does so by means of one of two yardsticks—either a vacuous hunch or a knowledge of the testimony to the grand jury. 4) I cannot assume that the learned members of the Struik Defense Committee could reach such an important decision on anything less than a knowledge of the facts. 5) I now leave it up to those who have formed a mental verdict as to the Professor's guilt or innocence—have they reached this belief without knowing anything of the nature of the evidence against him or are they unlawfully familiar with the grand jury testimony?

One other point needs to be hammered home to Messrs. Kellogg, Langer and Lauffer. They say, "with respect to prejudgment of the case, it might well be asked why the government of Massachusetts officially proclaimed a Philbrick Day. The State of Massachusetts (and it seems, Mr. Fitch) assumes that the trial is over and thanks to Philbrick, Prof. Struik convicted." I would like to point out that this is a plain case of jumping from a false hypothesis to a ridiculous conclusion. Let me quote from Bill Cunningham's column in the Boston Herald. "First off, and last off, that wasn't the way it was, at all, as . . . (he) could have discovered if he'd asked anybody who was there, or who had anything to do with the dinner. The affair honored Philbrick for his part in helping convict the 11 top Communists in that world-famous trial in New York. It was built entirely

Intramural

(Continued from Page 3)

League Four:

First Team
F Karl Epple, Alpha Tau Omega
F Ron Lovasz, Alpha Tau Omega
C Charles Brown, Phi Gamma Delta
G Joe Miller, Phi Mu Delta
G Dave Rados, Phi Mu Delta

Second Team

F Tom Stern, Baker No. 2
F Norry Hersey, Phi Mu Delta
C Jim Strawn, Phi Mu Delta
G Jack King, Alpha Tau Omega
G Chuck Lockerby, Sigma Nu

League Five:

First Team
F Paul Valerio, Walker Staff
F Paul Smith, Theta Chi
C Bob Ehler, Lambda Chi Alpha
G Stan Amstutz, Theta Chi
G Gilbert Mar, Walker Staff

Second Team

F Vic Macres, Walker Staff
F Garth Coombs, Delta Psi
C Ed Ort, Theta Chi
G Ralph Thornton, Student House
G Joan McNeilly, Lambda Chi Alpha

League Six:

First Team

F Bruce Martin, Theta Delta Chi
F Gino Scamandere, Baker No. 1
C Edner Selby, Baker No. 1
G John Mattson, Phi Kappa Sigma
G Mel Mattson, Phi Kappa Sigma

Second Team

F Don Sontag, Chi Phi
F Ken Wagner, Phi Kappa Sigma
C Nick Komes, 5-15 Club
G Bob Thulman, Phi Kappa Sigma
G Dick DiLorenzo, Baker No. 1

Following are the individual point totals in this season's intramural basketball games. The men listed are those who played three or more games and who averaged ten or more points per game. Some score sheets were not available, and thus totals are not complete in a few cases.

Name & Fraternity	G	P	A
Bob Ehler			
Lambda Chi Alpha	5	111	22
Chi Rounds			
Delta Upsilon	3	76	15
Bill Hecht			
Delta Upsilon	6	75	13
George Barclay			
Graduate House	6	67	11
Bob Chamberlin			
Burton Student Staff	5	59	11
John Mattson			
Phi Kappa Sigma	4	53	13
John McNeilly			
Lambda Chi Alpha	5	51	10
Paul Valerio			
Walker Staff	4	41	10
Jack Britt			
Walker Staff	4	41	10
Stan Amstutz			
Theta Chi	3	36	12
Charles Brown			
Phi Gamma Delta	3	33	11
Roy Westlund			
Huskies	3	33	11
Bob White			
Sigma Alpha Epsilon	3	32	11

Burton Student Staff gained the league two championship in a thrilling game with East Campus

last week as Don Surgenor scored a basket with only five seconds remaining and then made good a free throw to make the score 17-15. Despite Cliff Herdman's great playing, East Campus was downed by the surprising Burton men, as Emil Tassin and Bob Chamberlin sparked the clutch victory. Each team had won five successive games previous to this one.

Graduate House defeated Delta Kappa Epsilon 23-19 to give the Deks their first loss as against five wins and this threw the league race into a tie between the losers and Phi Sigma Kappa. Last night this tie was removed as the latter two teams met on the Walker Court. The Deks' Glen Maxon was not nitting in the game, and George Barclay, Al Gallagher, and Wilbur Hankey sparked Grad House to its victory.

The Huskies waltzed easily to the league three title as Lenox Club failed to appear for their game with the former school champions. Throughout the season Ken Wilson, Jonn Funkhouser, Roy Westlund, and Tom Hoffman formed a smoothly-working combination which was threatened only by SAE. In League Four, ATO had clinched the title by last week with five straight victories. With a well-rounded and hard-playing squad, they had disposed of their tougher opponents early in the season and finished on top with ease.

Theta Chi, threatened with a three way tie and playing without high-scorer Ed Ort, defeated Lambda Chi Alpha 41-38 last week in a game which was decided on Ed Chua's hook shot in the last 15 seconds. Lambda Chi, sporting the highest team average in 1M basketball with 42 points per game, was beaten largely through the play of Stan Amstutz, who dropped in 16 points.

Last night Baker No. 1 met Phi Kappa Sigma for the second time, after their first had ended in Baker's favor and had been protested successfully by the losers.

Last week, Baker failed to furnish referees and lost to Theta Delta Chi, who may possibly finish in a three-way tie due to the timely assistance of four forfeit victories. Phi Kappa Sig's four little men,

Wagner, Thulman, and John and Mel Mattson have been sparking the team's victories. Selby, Scalmandre, Riordan, and DiLorenzo have led the large Baker House squad.

*Indicates game yet to be played.
**Team withdrew during season.

League One	W	L
Delta Kappa Epsilon	5	1
Phi Sigma Kappa	5	1
Delta Upsilon	3	3
Graduate House	3	3
Phi Delta Theta	3	3
Pegis Club	2	4
Air Force	0	6
League Two		
Burton Student Staff	6	0
East Campus A	5	1
Westgate	4	2
Phi Kappa	3	3
Phi Lambda Phi	1	4*
Alpha Epsilon Pi	1	4*
Sigma Alpha Mu	0	5*
League Three		
Huskies	5	0
Sigma Alpha Epsilon	4	1
Sigma Chi	3	2
Delta Theta Pi	2	3
Lenox Club	2	4
Burton No. 2	0	5
League Four		
Alpha Tau Omega	5	0
Phi Mu Delta	4	1
Phi Gamma Delta	3	2
Baker No. 2	2	1
Sigma Nu	1	4*
Burton No. 1	0	4*
East Campus B	0	1
League Five		
Theta Chi	5	0
Walker Staff	4	1
Lambda Chi Alpha	3	2
Theta Chi	2	3
Delta Psi	0	5
Delta Psi	0	5
League Six		
Phi Kappa Sigma	4	0*
Baker House No. 1	3	1
Theta Delta Chi	2	2
5-15 Club	2	1
Chi Phi	1	4
A.U.C.A.	0	5
Chinese Student Club	0	1*

Whirlwind

(Continued from Page 1)

tions. It has also been used to produce the instructions for automatic control of large machine tools.

Whirlwind Has Achieved Expectations

Whirlwind has fulfilled the principal objectives of the project which were to achieve ultra-high speeds with a digital computer, high reliability in large electronic systems, and the application of a digital computer to control systems in civilian and military operations in terms of actual time and speed requirements.

Whirlwind will also be available to members of the faculty and graduate students of M.I.T. for research and instruction in the Electrical Engineering and other departments.

Automatic Operation

Whirlwind is an electronic digital computer. Once a problem has been inserted, the machine operates automatically. High-frequency electrical pulses travel along transmission lines from one element of the computer to another, causing electronic circuits to be turned on and off. The resulting electronic states of these circuits represent the numbers in the problem. Since Whirlwind selects, remembers and operates on all the digits of the number simultaneously, it can complete many thousand arithmetic operations per second. It can solve in fifteen minutes some problems which would require years of work by manual methods.

Every computing system has certain basic elements. In a typical manual system these elements might be the familiar desk calculator, an operator, a notebook for

NOTICES

Mountain Climbing Lecture
An illustrated lecture on "Climbing Mt. McKinley" will be given today by Bradford Washburn, noted glacial explorer and director of the Boston Museum of Science. The LSC talk will be held at 5:00 p.m. in Room 10-250. Admission is free.

L. S. C. Movie
"Great Expectations," based on Charles Dickens' famous novel and starring Jean Simmons and John Mills, will be presented on Thursday, Dec. 20, in Room 10-250 at 5:00 p.m. and at 8:00 p.m. Admission is thirty cents.

Christmas Dinners
By contacting T.C.A., students who stay here will be able to enjoy Christmas dinner at the home of some Technology family. Foreign students are especially welcome to this service.

Freshman Commentary On The SS Draft Test:

"It was easy," said the majority of the students who took the Selective Service College Qualification Test last Thursday. Ralph M. Shoffner, '55 said, "The test was definitely much easier than the college boards tests. I do not think that it was as easy for a technical man as I was led to believe. The mathematics was an insult."

Robert C. Hoffman, '55, felt that, "Although the math was very easy, the wording of the problems may have slowed down a few students."

"I didn't think it was too bad," commented James R. Bartsch, '55. Richard T. DiBona, '55, felt that "Any average high school senior could have gotten at least an eighty on the test." In general, the students who took the test felt that they could have done all the mathematics with only a limited knowledge of high school algebra. However, one unidentified student muttered, "I'm in the Army now."

entering incoming data and recording results, and messengers to bring in the problem and carry away the answers. On Whirlwind I, the arithmetic element corresponds to the desk calculator, the control may be likened to the operator, the storage or memory is the notebook, and the input and output are messengers.

Internal Memory
Of particular interest electronically is Whirlwind's internal memory section. By means of specially designed electrostatic storage tubes, a sixteen-digit number can be read into or out of the machine's memory in twenty-five-millionths of a second. Each electrostatic storage tube, like a television tube, uses a movable electron beam to distribute information over a surface. A high-velocity and sharply focussed electron beam "writes" a digit in the form of a charged spot on the storage surface. The same beam is also used to "read" the stored information. Still another guardian beam keeps digits "in storage" for as long a period as desired.

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that way, with one of that trial's lawyers brought on from New York to be the principal speaker. Struik's name was not mentioned at any time during the evening to the best of my remembering. So far as I know, and I was the toastmaster, it wasn't even thought of. The plan to honor Philbrick in that fashion was in the works before Struik was even indicted, and it would have gone through even if the Struik case had been tossed out of court. In other words, Struik didn't matter."

The final letter from Robert Steinberg, '54, is similar to the original committee statement in at least one respect—it has one pertinent paragraph followed by a number of erroneous deductions. Mr. Steinberg sums up my arguments as "1) that Prof. Struik has been charged with advocating the violent overthrow of the government of Massachusetts and the United States; (2) Nothing else matters; (3) Let's wait for the trial." Thus far I agree and am happy that Mr. Steinberg was able to capture the essence of my letter so succinctly. Unfortunately, he enlarges on these points as follows: (1) " . . . the state charged that Prof. Struik used 'the methods of the Communists in his teaching.' Mr. Fitch has stated that 'academic freedom' is not at stake, and in fact has nothing to do with the case." Academic freedom concerns itself with what goes into the teaching and so does the above mentioned charge of the state." This is, to borrow Mr. Steinberg's terminology, "muddy thinking." The charge against Prof. Struik is that he advocated the violent overthrow of the United States government. If the Professor did this in the classroom (which to my knowledge has not been alleged) then it is aca-

demie license, not academic liberty. If on the other hand, the Professor has held political conversations with students and if he limited them to the expression of his beliefs and if this expression did not encompass the advocacy of the violent overthrow of the government, they will not figure in evidence as Mr. Steinberg knows perfectly well. (2) Mr. Steinberg states "A Pastor was discharged from his parish because he stated his belief in Struik's innocence." Mr. Steinberg could find, if he bothered to read the statement by the Church Board, that they had been considering the removal of Reverend Abbe for several other reasons and that his recent statements on the Struik case were only the final straws. But most important, the rightness or wrongness of the treatment of Reverend Abbe is an entirely separate issue and has nothing whatsoever to do with the trial of Professor Struik. The remainder of Mr. Steinberg's letter is filled with sweeping generalities which indicate that he either did not try or was unable to understand my criticism of the committee. In either case, my recommendation to Mr. Steinberg is that he read my letter more carefully.

In conclusion may I: 1) call once again on the seven Institute professors who signed the committee statement to explain their reasons for doing so; 2) publicly express my appreciation to those members of the faculty and student body who have written to me at my home in support of my views; and 3) again borrow from the same column by Bill Cunningham to say that "It would be a very nice thing if we all just shut up, but I'm not shuttin' unless the facts are left in shape."

John Fitch '52