Friedman awarded PhD in mathematics at age 18—only three years at MIT

By Pat Sz,

Harvey M. Friedman from Highland Park, Ill., has been awarded the degree of Doctor of Mathematics by MIT for work he did since he entered, during his sophomore year, in 1964. He completed the first three years of his undergrad-uate program in Cornell University, New York, and the final three at the Institute in 1967.

Because of a Department of Mathematics, the requirements for admission to the Graduate School was waived. After a year of grad-uate course work on his major thesis, entitled "Systems of Set Theory and Analyis," he passed the General Examinations of the Graduate School in early June and defended his thesis before a three-member examining committee August 31.

The award was made Friday by the MIT's Department of Mathematics to the 18-year-old PhD candidate. Friedman, who was selected because of his achievements in "combinatorics, logic and set theory," plans to finish his dissertation during his last year at MIT and then return to Cornell University to complete his Ph.D. in mathematics.

"I am very grateful to MIT for the opportunity to study here," Friedman said. "I plan to continue my work in combinatorics and set theory, and I hope to contribute to the field in some way."
New classroom features balcony

(Continued from Page 1) 5 hours for use as a study room for those in the course.
The classroom area stresses color and light and includes the possibility of glass doors opening to an outside terrace or balcony. The furniture would be casual and allow flexibility in its use during and after class. Although classes are being held in 7-102, the room is not yet completed. New student furniture, the blackboard, and door hooks have yet to be installed.

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Hallowed tradition of "pinning" a girl is now...
Letters to The Tech

Vol. LXVIII, No. 21
Sept. 26, 1967

Editor

To the Editor

Your editorial of September 15 was read with interest, particularly since our office is also directly involved in the matter. However, your statement, "... nor has any department, social or otherwise, ever been requested either for admissions or afterward," is not true. For a number of years, and most recently in the past three years, aid recipients have been asked to volunteer answers to a number of questions related to this type of information.

Our problem is one of meeting the variety of terms associated with several hundred gifts and bequests designated for financial aid purposes. Although MIT encourages prospective donors to continue to ask, and recipients to volunteer answers to any such questions for whatever reasons he may have, we hope that the students to whom we address our questions (nearly 50% of the undergraduates) understand that their rights to personal privacy and personal rights would have the same effect. Although the statements of our scholarship and loan program, with all aid recipients sharing the consequences.

The Tech

Talking Rock

By Steve Grant

The attention focused on the San Francisco scene can be expanded to include the Doors. Although they are from Los Angeles, they have played the Bay Area дискотеки and can be generally identified with such groups as the Jefferson Airplane. The Doors are led by Jim Morrison, writer and lead singer. He and Ray Manzarek, who learned organ at UCLA and developed a basic blues background which is the foundation of the group's music, met in 1966. Drummer Robby Krieger and guitarist John Densmore joined the group a year ago and are the most versatile performer group in rock. (The Beatles, although they are the easiest to divide up, are too diversified and groupiiy oriented to be limited to one or two.)

First album

Their first album, an Elektra LP, is a masterpiece. It is

WTBS sponsors Fall jazz concerts, beginning Oct. 11

This fall WTBS will once again present avant-garde jazz concerts on campus. This series starts Wednesday night (October 11), at 8:30 p.m. in Kresge Auditorium with a free concert on the lawn in the Lobby of Building Ten starting today, or by calling 446-4400.

DID YOU HAVE A NICE SUMMER?

IF YOU HAD A NICE SUMMER, IT COULD HAVE BEEN BETTER, AND IT COULD HAVE BEEN WORSE.

By Paul Johnston

College World

By Paul Johnston

It's happening out at Baldwin

The professors are signing up undergraduates to help them gain insights into fields other than their own. And why not? A few professors have asked it all the way through their PhD's without even a basic course in chemistry or math.

It all started when Professor John B. Moore, a philosopher, felt the need of a little knowledge of basic economics to do further research in his own field.

Placed a filler

Accordingly, after conferring with the Dean about his plight, Dr. Moore was placed under the care of George W. Lindenberg, a senior in economics, for three hours of tutoring each week.

The results were twofold. First, George, who had been

Focusing on the Versatile Doors

WJB Sanders

The humorous "Alabama Song" written by Kurt Weill. "Back Door Man," a powerful rhythm and blues not at all inferior to the soulless Blues Project version. In addition the album contains some outstanding original material. This album reached number 2 on Billboard last week, although it certainly net dis number one.

First single

Their first single, "Break On Through to the Other Side," failed to make Billboard's Hot 100, so it was decided that the next single - "Light My Fire" - to make the top 20. It was too sophisticated and too long to be a single, but cut to two and a half minutes from the original seven, it made number 1 for three weeks. The large version of this song has the most powerful kine

The opening lead of the 6 of spades was won by East's K, of spades was won, and a successful dummy play was made by Diamonds led against Ace and drew trumps in the second round. Two more rounds of hearts brought low from the East, but East held the ace. On the next trump, West and dummy got rid of low hearts, but East was allowed to throw aces.

The analytical minded reader might like to search the play after other opening leads. It possible to throw the dummy to win the next trick, since the defense will then have to throw away the high card and lose the trick. Moreover, should the declarer lead diamonds, East would have to take the second heart and lose the trick. Moreover, should the declarer lead diamonds, East would have to take the second heart and lose the trick.
A report condemning the Boston Housing Authority for negligent mismanagement has been released as the thesis topic of Mrs. May B. Hipshman, an MIT graduate student. In addition to the criticism of the actual operations of the BHA, the document went on to criticize the apathy and corruption of this situation by Boston residents.

Her paper was based on research done over a four-month period and sponsored by three groups: the Citizens Housing and Planning Association of Metropolitan Boston, the Massachusetts Planning Committee on Discrimination in Housing, and the Metropolitan Committee on Housing of the United Church of Christ.

Mrs. Hipshman's document called for immediate action in the form of better qualified appointees to the Board of the BHA, the termination of daily salary payments, the establishment of a new hiring system, and more efficient maintenance programs, and more equitable rent scales. The report advocated the appointment of more qualified men to the Board, four of the five members having been appointed by Mayor Collins. Mrs. Hipshman claims that an estimated $100,000 could be saved by the elimination of per diem salaries and that the Authority has shown more interest in rent collection than improvements.

Use of radiation to be studied by MIT satellites

Two satellite experiments are being designed at the Lincoln Laboratory to find out whether certain radiations in the earth's atmosphere can be used for navigation near earth.

Variations to be observed

Under the name of Project PROFILE, the project is funded by the Air Force Space Command, with the launches planned for 1970 and 1971. The satellites will attempt to measure infra-red and ultraviolet radiations along the earth's limb in order to discover what significance may be attached to seasonal and geographical variations in these radiations. It is hoped that some way they may be used to detect the actual limb of the earth.

In order to determine the exact position and orientation of the satellites at all times, PROFILE missions will use inertial navigation equipment aboard them furnished by unmanned APTOLLO flights. The experiments will be incorporated in a larger satellite and launched with a THORAD (Thor Agena D) booster.
Mills named to head information systems

Mr. Richard G. Mills has been appointed to the newly created position of Director of Information Processing Services for the MIT campus. He will coordinate the growth and development of all the various installations on campus, including the LNR, CERL, Project MAC, and the Sloan School Faculty.

Mr. Mills received his BS in Electrical Engineering in 1964, at which time he was already working on the Whirlwind I machine. Currently, Mills is currently Assistant Director of Project MAC, and a Lecturer in Electrical Engineering.

Mr. Mills job, beyond administration of the main facility, will include him as an affilite as a member of Faculty and Administrative Councils.

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**Inttramural football**

By Joel Hennessey

Inttramural football opened the fall season with nine games last Saturday and Sunday. Saturday in A Leauge, Delta Tith defeated Theta Chi, 7-0. Inept defensive play allowed the field at the half in a scoreless tie. However, the Delta Tith backfield of George Busby '68, Bruce and Larry Whisheford '69 started in causing one bomb for the points and another for the one yard line. Burton struck once more in the first two periods and finally in the final quarter to win 14-0. Delta Tith picked up the middle six points.

Burton could not manage any kind of offense and the air was filled with Clu's aerial artistry. Burton now presents itself as a definite threat in the championship race.

**BETA, Betas roll**

The two favorites in the intramural competition, Alpha Epsilon Pi and Beta Theta Pi, emerged unscathed with victories after two tough but well-earned contests.

The Betas stared down the first half of the season with an offensive threat from starting Phi Delta. However, Betas' right end Denny Albright, junior signal caller, led the team to an early lead. The offense continued to march on and scored in the fourth quarter, a swing that ended up in a tie for the championship.

**Tech skaters lose in Melrose league**

By Booth Rhodes

An understrength MIT hockey team lost its first game Monday night 6-7 to the solid team from Melrose High. They were beaten 5-2 by the Elks Club. Tech's skating team, comprised of last year's varsity who were unable to play in this first game. The Elks lost only 2 points out of the top five, and the Elks' goalie also scored. Last spring in the same league, the MIT undergraduates两项 out on top in rough-and-tumble games with the same team. In spite of this initial setback, the skaters are looking forward to a successful finish to the season.

**Golfers open fall season with Montreal tournament**

By Steve Winders

Thursday, the varsity golf team of MIT opened their fall campaign in the St. George's Tournament. This competition, one of Tech's second last year, only thirteen strokes off the pace. Coach McCormack will take six of the thirty-six man tournament. Standings are determined by the best two or three men's scores of each team. The engineers will also host their annual Fall Saturday and Sunday.

**Tech sailors place 2nd in Danmark Cup races; Berliner nabs top honors**

By Linda Sanger

This weekend, the varsity sailing team battled to a second-place finish to fifteen teams from around the world. This was a very strong international competition for the Danmark Trophy. The first-place team in this tournament was one comprised of Coast Guard Academy, Virginia Tech, and Butch Silsson, 1969 National Intercollegiate Champions. This was a strong showing for MIT sailors. Included among the rest of the teams were England, Sweden, Oxford College, Cambridge, and the British Universities Sailing Association. From Mexico and many colleges from New York and New England.

The Betas stumbled through the first half of the season, a second place, and 17 points ahead of third place Oxford. However, in the next race Tech was disqualified and ended up in a tie for the second place. 36 points. This put the Betas in fifth place for the season on a penalty kick in period three.

**Booster hit by injuries losses**

By Paul Seiter

Haas Hall graduation and injury losses, the varsity soccer team opened its season Wednesday at Holy Cross in a game that must be dubbed a successful note. In spite of the initial setback, the skaters are looking forward to a successful finish to the season. As was previously announced, the engineers will also host their annual Fall Saturday and Sunday.

**Adjut out for season**

By Paul Seiter

Rick Gailey '73, this year's assistant coach, voiced the strain of a near miss in one of last year's losses: "Unfortunately, the coaching staff was unable to tell the truth, Gavino Clay '68 suffered a suspected ankle sprain and will be lost for the season. No Russell '80 will also be lost, because of academic pressure.

Despite these setbacks, team spirit is high and outlook optimistic. Saturday, Rick Gailey '73, Ryn Gavigan '72 in an exhibition scrimmage at Lexington High. George Emery '68 tallied the first goal of the season, and Jack Rodder '72 the winning score on a penalty kick in period three.

Commenting on the game, team captain John Robb '70 stated that the squad showed the best teamwork that he had seen in his three years of experience at MIT. Robb was shuffled to his right back from forward to fullback this season, while Jeff Reynolds '99 manned the all-important goalie position.

Coach McCormack successfully engineered a new strategy during the season, a 4-3-3 alignment which paid off. MIT had four goals, two fullbacks, one halfback and three forwards.

Tech in new league

As previously announced, the engineers will be competing in a newly formed Greater Boston Intercollegiate Soccer League this fall, with their stiffest opposition expected to come from Boston College and Bentley College. Tech faces Friday's game, an opportunity to face the Tufts game also happens to be the first league contest.

But this was a great opportunity to get to know some of our league opponents. The team will play against Harvard and Middlebury.

All things considered, the engineers have a solid team which is capable of finishing the season well. If the squad can maintain their form, they should have a successful season.