Math Instructor Programs

Thorpe, 704 Beat Blackjack

By Jeff Leveinger '63

Edward O. Thorp, an instructor in MIT's Mathematics Department, has recently published a preliminary results of a study on "A Favorable Strategy for Blackjack." Intrigued by the pos-
sibility that the same techniques used to analyze the standard gambling games, Thorp has vis-
tualized every major casino in the world and has made the largest analysis of any sort of gambling game.

The result is - 21% for a one player game. In addition, Thorp has analyzed the consequences of analyzing the future moves of the player, using his own method of computer analysis.

The Carnegie Corporation of New York announced Monday the award of a $475,000 grant to MIT for studies in connection with the Center for International Studies. The grant is to be used for research on the development of nations and the problems of international relations, particularly in the emerging nations in Africa and Asia.

Eight fellowships annually will include both professional and student associates for the Center for International Studies. The members participating in this program will be sociologists, historians, economists, political scientists, and anthropologists.

The existing programs in the Center will be set the pattern for the new program, work has been carried out on the economic development of India, the Middle East, and the postwar society in the postwar period, the structure of German politics, and the economic and political development of the new nation of Israel.

Part of the work is guided toward an improvement of United States policies toward these emerging nations. The Center is now doing work under the direction of the Senate Foreign Relations Committee on the effects of American foreign policy.

Goldwater Lectures On Conservatism At Kresge Tonight

Republican Senator Barry M. Goldwater of Arizona will speak tonight at 8 p.m. in the Kresge Auditorium. The lecture is sponsored by the Lecture Series Committee. Senator Goldwater's topic of "Conservatism" is said to be the most outspoken proponent of the conservative school of government currently in the public eye. He is the author of the best-selling political work, "Conscience of a Conservative."

The name of Senator Goldwater was placed in nomination in opposition to that of Vice President Nixon for the Presidency at the Republican Convention, and although he did not receive the nomination, his name appeared in the November election when unpledged electors from Louisiana cast their votes for him as Vice President. Senator Goldwater's address will be titled "Principles of Constitutionalism" and is expected to be well attended.

In 1960 the Physical Plant consumed 1,686,466 gallons of oil, 26,160,000 kWh of electricity, 360,000 cu. ft. of gas and 5,675 cases of paper towels.

MIT Offers Course On Arms Problems

Thanks to the efforts of Dick Stein and Board of Overseers member L. F. Bloomfield, who is associated with MIT's Center for International Studies and a former member of the State Department as well.

Enrollment of the courses was made available to anyone interested, as no prerequisites were required "other than a general knowledge of current events." Due to this, as well as to the fact that students from Harvard, MIT, and other institutions can enroll, the group taking this course will come from varied backgrounds.

The course will be centered about weekly seminars, with lectures by noted speakers arranged if possible. The two-hour weekly sessions will commence with a lecture by Professor Bloomfield, preceding then to discussions with groups of six or seven, each group being chaired by a faculty member.
What would YOU do as an engineer at Pratt & Whitney Aircraft?

Regardless of your specialty, you would work in a favorable engineering atmosphere.

Back in 1925, when Pratt & Whitney Aircraft was designing and developing the first of its family of history-making powerplants, an attitude was born—a recognition that engineering excellence was the key to success. That attitude, that recognition of the prime importance of technical superiority is still predominant at P&W today.

The field, of course, is broader now, the challenge greater. No longer are the company’s requirements confined to submarines, oars, and horns, fully displaying the maturity, freshness, and wit of its eighteen-year old composer.

Prokofiev’s Symphony No. 5, Op. 100, is a large and brooding epic “about the spirit of man”, composed at the height of World War II. Its chief climax comes in the third movement, Adagio, which in its stark, bleak orchestration and loping, spell-binding rhythm has always sounded to me like a scenario to the earlier moments of an Alfred Hitchcock movie. Leinsdorf conducted the graduates with degrees in mechanical and aeronautical engineering excellence.

Pratt & Whitney Aircraft today is concerned with the development of all forms of flight propulsion systems for the aerospace medium—air breathing, rocket, nuclear and other advanced types. Some are entirely new in concept. To carry out analytical, design, experimental or materials engineering assignments, men with degrees in mechanical, aeronautical, electrical, chemical and nuclear engineering are needed, along with those holding degrees in physics, chemistry and metallurgy.

Specifically, what would you do?—your own engineering talent provides the best answer. And Pratt & Whitney Aircraft provides the atmosphere in which that talent can flourish.

Development testing of liquid hydrogen-fueled rockets is carried out in specially built test stands like this at Pratt & Whitney Aircraft’s Florida Research and Development Center. Every phase of an experimental engine test may be controlled by engineers from a remote blockhouse (inset), with closed-circuit television providing a means for visual observation.

At P&W’s Connecticut Aircraft Nuclear Engine Laboratory (CANEL) many technical talents are focused on the development of nuclear propulsion systems for future air and space vehicles. With this live mock-up of a reactor, nuclear scientists and engineers can determine critical mass, material reactivity coefficients, control effectiveness and other reactor parameters.

Representative of electronic aids functioning for P&W engineers is the on-site data recording center which can provide automatically recorded and computed data simultaneously with the testing of an engine. This equipment is capable of recording 1,200 different values per second.

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For further information regarding an engineering career at Pratt & Whitney Aircraft, consult your college placement officer or write to Mr. R. P. Azinger, Engineering Department, Pratt & Whitney Aircraft, East Hartford 8, Connecticut.
In addition to the traditional water fights during Reading Period, several Burton House residents underwent “a moving religious experience.”

Volunteer helpers are needed this term to work with the Institute's Centennial Week to be held this term. Most of the work will be needed during the spring vacation. Anyone interested should contact Ira Jaffe, Undergraduate Association President, or leave a message at Extension 2006.

The Foreign Opportunities Committee (MIT Peace Corps, Foreign Jobs, etc.) is also looking for new members. Those interested in serving on the Committee should notify Ira Jaffe.

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Yes, a man age 30 can get $5,000 of Savings Bank Life 5-Year Renewable Term Insurance for only $2.85 monthly. For age 20 it’s $2.25; 25, $2.50; 35, $3.45; 40, $4.35. Annual dividends reduce these costs even more! Ask for folder giving rates at your age.

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APO Supplement To Be Distributed

Alpha Phi Omega is now preparing the spring term supplement of the Undergraduate Telephone Directory. It will include those students whose names were omitted or incorrectly listed originally or who have changed addresses since publication of the Directory.

In order to facilitate preparation of the directory, off-campus residents are requested to sign the lists on the Institute bulletin boards.

Institute Helpers Needed For Vacation

Students Voice Opinions About Nazis Movement

Students voice opinions about Nazis movement

- Photos by Conrad Grandisnhower ’64, (top right).
- Curtis Wilk ’63 (top left, side).
- Many members of the MIT community turned out despite cold winds and rain to demonstrate against the picketing by Lincoln Rockwell and his American Nazi Party at the Saxon Theater in Boston, where the movie Exodus was being shown. Advance publicity given the event by the Socialist Party and other groups resulted in a turnout variously estimated as high as two thousand, which apparently intimidated the prospective picketers, for only Rockwell and two “storm troopers” appeared. The efficient Boston Police intercepted a group of others and ushered them out of the state.

Individuals and groups, notably one from East Campus, joined in the picketing, which was generally orderly until Rockwell appeared.

 Bronx Police

A group of others, including one from East Campus, joined in the picketing, which was generally orderly until Rockwell appeared.

Three room apartment, Harvard Square, to sublease from March 1 or mid-February until September 1, Release optional. 2 Gravenhouse Ave. Call UN 8-6749.

Very unusual

ONE OF MANY unusual projects at the Lawrence Radiation Laboratory—the only national laboratory active in virtually all phases of the atomic energy program.

ON FEBRUARY 16 AND 17

Lawrence Radiation Laboratory staff members will be on campus to answer your questions about a career in nuclear research.

They will interview outstanding:

- electronic engineers
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- mechanical engineers (MS, Ph.D)

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UNPOPULAR POLITICS

In a letter appearing below, an MIT student expresses his distress that the Fair Play for Cuba organization was given permission by the Activities Council to make use of the MIT bulletin boards. The writer goes on to criticize The Tech for not voting against such permission. He makes it very clear that because the majority of the MIT student body does not "agree" with this organization, it would have no reason for existing. Its ideas are unpopular; The Tech assuredly does not like Dr. Castro and does not "agree" with him. But there is here no reason to suppose that the writer is trying to get a hearing for Castro's side of the question. Or is the writer concerned that the position of the United States with respect to Cuba is so weak that decent must be stifled?

We do not think this to be a problem. The abstention of The Tech on this issue was a reflection of its disapproval of Dr. Castro, and of its doubts as to whether the group would actually exist more than a few months. Whether there should be a class of activity permitted to use the bulletin boards but not the MIT name is a question that must be settled soon. We are likely to see more ad hoc political groups in the future, and a policy toward them should be set.

If this is not done, every group will become a political football for Activities Council. The test for approval of a group should not be the popularity of its ideas, but only that it be made up of MIT students with a responsible aim. Otherwise all religious groups, all political groups and all publications that represent minority opinion would lose the right to use the MIT name, since in a sense, the bulk of the student body does not "agree" with them.

LETTERS

To The Editor:
The granting of Provisional Class B status to the Fair Play for Cuba organization shocked me as much as I believe it shocked the entire MIT Community. What I think was more to learn was that The Tech, instead of voting against the group, voted to table the motion. Surely, the members of Activities Council must be aware of the fact that relations between this country and Cuba are extremely tense. The principles upon which EPIC was founded. However, in any poll or survey you take today, you will find that the people state this sound ridiculous. Any group worthy of being recognized, is worthy, according to my definition, of the right to fix "MIT." The fact is that some of these ad hoc political groups are treated without consideration while others are not. Activities Council should make it a policy to permit a group a right of review on a group of opinion before taking action. I would go one step further, by declaring the Tech the initial and back a referendum of the Student Body to reverse this latest decision of Activities Council.

Melvin Potash, Jr., '64

VOLUME LXXXI BORN

This issue of The Tech marks the start of the eighty-first volume and year of publication, under a new editorial board. As MIT enters its second century, and The Tech its ninth decade, it is fitting that this publication should broaden its horizons much as MIT is broadening its approaches to the modern world.

With this in mind, this newspaper approaches the coming year with a responsibility to serve the entire student body as the sole news outlet on campus, to provide a broadened coverage of campus events, and of events off campus that bear upon the MIT community. The board of this newspaper feels furthermore, that the expression of opinion upon important issues is as important an aspect of student life as any other. The absence over the years from the newsprint here are of great importance. There is a major lack of communication here at MIT; outside of the classroom there is very little exchange of ideas, of intellectual innovation. According to the Russian report, the MIT student body is highly conservative, probably more conservative than their parents. MIT tries to be an institution of the future; it should be a source of ideas, not a sink, where the old and tired is clung to, merely because it is familiar.

Many of you will have answered the call of the new administration in Washington to help bring about the "New Frontier". Regardless of one's politics, and regardless of one's feelings about Mr. Kennedy's approach to the problems of the world, it is an exciting new world, that the world is undergoing extreme and far-reaching changes. Students here could each student be assured of the personalized attention, the camaraderie, the feeling of belonging, that is all too often lacking in higher education.

Welcome aboard! You will also find twenty cigarettes-twenty incomparable unfiltered king-size cigarettes-in each pack of Marlboro's new partner in pleasure-the Philip Morris Commander. Welcome aboard!
Looking Around

A young conductor—James Dixon—will lead the Conservatory Symphony Orchestra at Jordan Hall this Wednesday at 8:30. The superb "Eroica" by Beethoven and Mousorgsky-Ravel's Pictures at an Exhibition are on the slate and should provide a very worthwhile evening's enjoyment.

Or, if your tastes run along another line, Carmen McRae may interest you at Storyville in the Bradford Hotel.

Nearer at home, the Hayden Gallery here at the institute will have major paintings from the Whitney Museum on display until February 28. These paintings—30 oils and 7 watercolors—are an expression of the progress of American art. I have seen them and found them most intriguing. Definitely worth taking out an hour or so to see.

If your looking for folklore concerts Jordan Hall might be worth looking into Saturday at 8:30. William Clauson and his guitar promises to be a sensation in the field with his tenor voice. If he can please the New York Times he must be something out of the ordinary.

Going abroad? Well, even if you only wish you were, the lectures are every Tuesday night at 7 and include such topics as the "Monuments of Rome," "Gardens of Paris," and "Small Towns of Spain." Art and architecture will be emphasized, but an attempt is made to keep the scope quite broad. A marvelous soprano will sing in the MIT Chapel to the accompaniment of the organist, Thomas Curtis. The soprano, Louise Curtis, received her musical training in Boston and New York. There will be ten selections. It will be held February 12 at 4 p.m. This concert is the first Sunday afternoon organ concert in the MIT Chapel since the Christmas season and is open to the public free of charge.

For those interested in opera, Boston University is holding its audition sessions through February 15. They are being held at the School of Fine and Applied Arts Auditorium. It is under the leadership of Prof. Ludwig Bergmann and N.Y.C. soprano Adelaide Bishop. Although a non-credit course, there is no finer opportunity in Boston for those interested.

Although relatively quiet, Boston still contains ample opportunity for first class entertainment this week. Don't miss the spectaculars of Tremont Street.

Review of Erich Leinsdorf will be found on page 2.

Josh White To Perform At MIT

The second concert of the MIT Choral Society's Guest Artist Series will present Josh White on Friday evening, at 8:30 p.m., in Kresge Auditorium, with seats by reservation only.

Josh is ranked with the greatest of the folk singers of our time. The key to his tremendously successful career throughout the thirties, forties and fifties undoubtedly stems from the imagination and deep emotional feeling which he injects into each song that he sings, and he is still referred to as the 'Daddy' of the folk singers.

Josh White, who will be at MIT on Friday, February 17 at 8:30.

The Tech needs YOU

The Tech is now planning a larger paper with increased coverage, but additional staff members, particularly make-up men and newswriters, are needed. Experience preferred but not necessary. Call Tom Brydges, Managing Editor, Wal. 412 or The Tech, ext. 2731 or come to The Tech at MIT, 50-211 (Walker Memorial) any Wednesday night (7-11 p.m.).

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CAMPUS INTERVIEWS
Wednesday, February 15
SEE YOUR PLACEMENT DIRECTOR TODAY to arrange a convenient interview

P.SYCHOLOGY and PHYSIOLOGY TESTS
The Psychology Laboratories of the Massachusetts General Hospital are looking for male volunteers to act as subjects in psychological and physiological experiments. Testing sessions of 3 to 4 hours are on a fixed afternoon of the week for each subject. Each subject should be free to return 4 to 8 times at two week intervals. $1.50 per hour.

Call LA 3-8200 Extension 2533

Hockey Team Rolls Over Four More Opponents

Coach Ben Martin's varsity hockey team won its sixth straight game Wednesday, downing Wesleyan, 6-3, in a contest marred by a third period free-for-all. The victory followed two mid-term conquests over Holy Cross, 10-1, and Salem State Teachers College, 11-3. Before the vacation the Techmen dropped the University of Pennsylvania, 8-2.

The punches were traded late in the third period. Steve Levy '62 and Wesleyan's Dave Eklund came together near the Wesleyan blue line. In the melee several sticks were raised before the officials broke up the fray, with Levy and Eklund drawing roughing penalties.

Weikel Faces Scorers
Tony Weikel '63 led the Tech scoring, caging two goals, one in the first and one in the second period. Levy opened the scoring at 0:46 of the first stanza, and Weikel counted at 6:53. Mike Denny '63 found the range at 18:58. Wesleyan scored twice in the first period.

MIT missed several fine opportunities in the second period when they were one and sometimes two men up on the visitors. The lone home score came from Weikel at 12:25, and Wesleyan counted at 17:46.

Levy's Trick
Levy gained a hat trick in the Penn game, catching the cage once in each period. Weikel hit twice in the third period, and Captain Erik Salbu '61, John Rupert '62 and Denny each scored once.

Tech dominated the play in both the Wesleyan and Penn games, but were aiming at well-guarded cage. In both contests the losing goalie recorded over forty saves.

U Mass Here Tonight
Tonight's contest against UMass, on Briggs ice at 7 p.m., promises some excitement. Tech bowed to UMass earlier in the season, 4-2, in a well-played game. A recent schedule addition will bring Ft. Devens to the home rink Monday night, 7 p.m.

U Of Mass Here Tonight

Hank Schlienz '61 fires a pass as a University of Pennsylvania skater tries in vain to break up the play. Captain Erik Salbu '61 looks on. Tech went on to win easily, 8-2.

Trackmen Ninth In AAU Indoor Track; Lukis Cops Medal

The MIT track team continued one of its busiest seasons Wednesday night by placing ninth in the New England AAU Indoor Track Championships held at Rockwell Cage. Sixteen Colleges, twenty schools, and ten athletic clubs were represented.

Fresh Gary Lukis tied for second in the pole vault at 11'6" but was awarded a third place medal on the basis of the number of missed tries. Joe Davis '61 added a fourth in the high hurdles for a total of three points for Tech. The meet was the seventh of a twelve-meet season for the cindermen.

In action before vacation, the varsity was downed by Bowdoin 66-47, while the yearlings were victorious 65-51. Joe Davis was high scorer for the varsity with 10 points, while Jim Flink paced the freshmen with 16.

In the BAA meet at Boston Garden on January 28, co-captain George Withrow '61 placed fourth in the Ryder 440. Jim Flink '64 was fifth in the finals of the 60-yard dash. In addition both varsity and freshman relay teams competed in the BAA meet and in the Knights of Columbus meet on January 14.

On Deck

Today, February 10
Hockey with U Mass 7 p.m.
Rifle at BC, Wentworth

Tomorrow, February 11
Basketball with Case 8:15 p.m.
Fencing with 1 Conn 2 p.m.
Rifle with Dartmouth 10 a.m.
Skiing at Lyndonville, Vt.
Squash at Trinity
Swimming at Trinity
Track — Greater Boston Invitational at Northeastern

Sunday, February 12
Skiing at Lyndonville, Vt.
Monday, February 13
Hockey with Ft. Devens 7 p.m.

Wednesday, February 15
Basketball at Bowdoin (V & F)
Fencing at Harvard
Hockey at MIT
Hockey (F) with Lawrence
Squash (F) with Middlesex

Thursday, February 16
Hockey (F) at Middlesex

Six Straight Wins

Hockey Team Rolls Over Four More Opponents

At General Foods, one of the world's largest growth companies in the most basic of all industries--food--opportunities are open to professional people over a wide spectrum of technical and non-technical areas...in 23 divisions located throughout the United States.
Basketball Team Cops Two

On Midterm Trip South

By Edward M. Schneider '62

The MIT varsity basketball team hosts Case tomorrow night in Rockwell Cage, hoping to continue the fine play that carried them to a successful 2-1 road trip between terms. During that trip, the Engineers routed Stevens Tech, 84-46, and Johns Hopkins, 77-59, after being nipped by Hartford, 70-68.

Although surging to a 12-2 lead in the opening minutes, Tech could not contain the sharp-shooting Hartford cagers. Hartford connected on 46% of its floor shots compared to MIT's 37%. The Engineers' often-erratic foul shooting dipped to a low 64%. Center Dave Koch '62 contributed 32 points to the Tech effort.

Tech Bounces Back

What a change against Stevens! It was MIT all the way. Never in danger, the Engineers scored on 56% of their floor shots. Leading the squad were Koch with 31 points (73% shooting average) and Tom Burns '62 with 18 (70%).

Hitting on five of his first six long jump shots, sophomore Jeff Paarz led MIT to its victory over Johns Hopkins. He ended up with 19 points, five fewer than high-scoring Dave Koch.

HOOP HAPPENINGS...

Dave Koch is now the leading scorer and rebounder in the Greater Boston Area. He is averaging 23.9 points per game. Although it doesn't show in the box score, Phil Robinson '62 has been doing great work on defense for Tech. With a 7-6 record, MIT is heading for its best season in quite a while. This Saturday's game will be carried by WTBS starting at 8:15.

Baseball Rally

The pre-season varsity baseball meeting will be held next Wednesday at 5 p.m. in the du Pont Athletic Center conference room.

Shooters Divide

Six Matches, And Set Team Record

The Rifle Team split even in six matches during midterm. The teams encountered were the strongest opposition in the eastern half of the country and three of them have suffered their first defeats of the season from the MIT squad.

The first match on Monday, January 30, resulted in a close victory over the Coast Guard Academy, 1423 to 1419. Tuesday the first loss of the trip occurred, 1421 to 1436, against St. John's University, dominant team in the New York City Metropolitan League.

The Tech team topped 1430 for the first time this season at Annapolis on Wednesday and the Midshipmen lost their first match 1434 to 1429. A loss to CCNY on Thursday, 1428 to 1426, was the only real disappointment of the trip. At Merchant Marine Academy the new team record was set. Bob Clark '63 and Richard Ludeman '63 had 290's, Bill Leffler '61 and Steve Smith '62 had 289's, and Ron Pellar '61 fired a 283 for a team score of 1441 to 1416.
Make sure you choose the beer that gives first beer pleasure every beer through. Always make it Schaefer all around.

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