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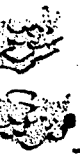
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# TECH NEWS

CITY COLLEGE OF NEW YORK

VOL. XVIII — No. 3

WEDNESDAY, APRIL 24, 1963

BY STUDENT FEES

## College To Purchase \$.8 Million Computer

By MARTIN MILLER

Dean Vincent Deltoro, Engineering and Architecture, acknowledged the intended purchase of an \$800,000 computer complex for the college. He said, "City College is in the process of negotiating the purchase of a large scale scientific digital computer called the I.B.M. 7040."

List price for the central processing unit plus twelve auxiliary units is \$759,550. But a 60% educational discount by the International Business Machines Corporation will make it possible to purchase the unit for \$303,820. At the present time only the approval of the Board of Estimate stands between the actual purchase of the system, and its installation.

A formal resolution for the purchase of the IBM 7040 was made to the Board of Higher Education at the March 6 meeting of the City College Committee. The computer was found, by the Committee, to be most suitable for the intended purposes of undergraduate and graduate instruction and re-

search. Dean Deltoro described the computer system as one that combines the features of many computer systems now on the market. This fact and the large discount (discontinued on April 1) makes the purchase highly attractive.

The computer's use will not be limited only to the engineering school. Ass't Dean Hyman, speaking before the Engineering Alumni Dinner, said, "It will be a major contribution to all departments of the university." Plans call for the computer to be housed in the basement level of Steinman Hall — rooms T2, 3, 4, and 5.

Included in the purchase price of the system are the following: a central processing unit, extended performance floating point arithmetic, a card and tape adapter, an input-output synchronizer for card and tape, a storage synchronizer, a card-read punch, and a printer. Provision has also been made to rent five magnetic tape drums

(Continued on Page 7)

## Technology Council On A Busy, Varied Program

Although not very publicized, Technology Council has been very much active in the affairs of north campus. Such activities include the enlarging of the north campus lounge facilities, the spearheading of the dedication ceremonies of Steinman Hall and the "Theathon" project, the possible alleviation of the annoyance of finals directly after the last day of school and the SG endorsements.

President Gallagher is in the process of receiving plans for the renovation of the lounge facilities of north campus. These plans call for a new "face-lifting" of Knittle Lounge, designed for the purpose of making it roomier than it is now. The ROTC supply room will also be converted, the lower level serving as a snack bar and the upper level as a lounge.

A problem many students will encounter at the termination of this term is the problem of final examinations the day after the last day of classes. Mr. Gerard Terstiege (ASCE) has been in contact with Prof. Bischoff of the Student Faculty Committee of the School of Engineering and Architecture concerning this problem. The TC resolution calling for at least a two day lapse between the last day of school and the first day of finals is under discussion.

On Saturday, May 11, there will be a combination alumni reunion and dedication ceremony of Steinman Hall. One thousand City College alumni

and their families will be welcomed back and tours will be given of the new building. Various member organizations of TC will supply the guides and anyone else wishing to serve as a guide is welcome to contact Robert Sheklin (Pres.) in room 207 Finley. On the agenda besides the tours will be the dedication to Steinman in the Grand Ballroom and the presentation of the mural, located on the wall of the lobby, by the Alumni Association to the college. There will be a reception on the Steinman Terrace at three o'clock followed by a continuation of the tours. During the tours there will be films for the children of the alumni in the Steinman lecture hall.

Project "Theathon" has recently been endorsed by Tech Council. What this project entails is the construction of a new building to combine the theater-arts and speech departments of the School. The proposed building will house several auditoriums. The various organizations of TC agree that it is something which a school of this size must have and have offered any assistance that might be needed in the field of Engineering and Architecture.

Next Thursday's TC meeting will be designed primarily for the purpose of endorsing SG candidates. Those candidates seeking the TC endorsement are invited to attend this meeting. The meeting will be held next Thursday at 5:30 in Room 121 Finley.

—Cohen

## Engineers To Start PhD Program In Fall

By WALLACE GOTTLIEB

The College's doctoral program in engineering has been given the green light by the Administrative Council of the City University. The Council, made up of the heads of the city and community colleges, has recommended to the College and to the Board of Higher Education that the program be launched in September. The BHE must eventually give its final acceptance, but, in approving the doctoral curriculum, the Council urged that it do so. The BHE's approval of the program is quite certain. According to Assistant Dean Seymour C. Hyman (Engineering and Architecture): "We expect that the approval will be forthcoming."

## Bloom Lone Presidency Candidate

Only one candidate is running for the Presidency of Student Government.

With nominations closed as of 3 P.M. Monday, only Ira Bloom had filed a petition to legally nominate himself as a candidate for the S. G. office.

It had been reliably predicted that Bob Atkins would run against Bloom but Atkins did not file a petition. This means that the students will be asked on the ballot to vote either yes or no as to whether they want Bloom as next term's S.G. president. To win, Bloom must not only get a majority of yes votes, but at least 800 students must vote yes.

TECH NEWS will publish a special ELECTION EXTRA next week with comprehensive coverage of the election and with the TECH NEWS endorsements for major S.G. offices.

—Sandler

## Student Day Scheduled For E.E.'s

The Metropolitan Student Council of the Institute of Electrical and Electronics Engineers announces the Ninth Annual Student Activities Day at Farleigh Dickinson University in Teaneck, New Jersey on May 4, 1963.

The day will be highlighted by the reading and judging of the student prize papers. In addition, the meeting will be addressed by the well known author and lecturer, Professor Jacob Millman of Columbia University.

The price of tickets, which includes the dinner where Professor Millman will speak is \$2.00. Tickets will be available at the IEEE meeting this Thursday. Farleigh Dickinson University is easy to reach by car (15 minutes from the George Washington bridge via route 4) or by numerous buses leaving from the George Washington bus terminal.



Dean Hyman

## Committee Will Study Steinman Room Use

Dean William Allan recently announced the formation of a "House Committee" for the School of Engineering and Architecture. In a letter to Ass't Dean V. Deltoro, new chairman of the committee, Dean Allan stated, "The Committee should be concerned with the use and care of various rooms and other facilities and features of our premises, especially Steinman Hall."

At its first meeting, called for Tuesday, April 23, the committee will consider the formulation of a new official policy towards the use of the Faculty Library in Steinman and student conduct. Dean Deltoro emphasized that the latter are only topics on an agenda with no action having as yet been taken.

The new Faculty Library-Lounge is located on the mezzanine of Steinman Hall. It's fur-

presently provide for PhD study in Chemistry, Economics, English, and Psychology. Next term, with the increased city aid, these funds will also provide for study in each of the four engineering fields: Chemical, Civil, Electrical, and Mechanical. A doctoral program in Biology will also be started in September.

The engineering faculty is ready for the graduate studies. In fact, they have been ready for quite some time, having passed plans calling for the formation of a doctorate program almost two years ago. More than half of the College's technology faculty have sufficient qualifications to teach graduate work on the Ph.D. level. Many of the instructors are now in the College's graduate program leading to a Master's degree. The program will be started with ten research assistants. These men are presently studying in the College's master's program.

The School of Engineering and Architecture has ample space for the program. Steinman Hall has a large amount of laboratory space that might be used; there is enough room to permit research equipment to be erected without interfering

(Continued on Page 7)

nished with sofas and tables and equipped for the service of food. Dean Deltoro said, "We will consider allowing student organizations to use the Faculty Lounge. There is no official policy on the latter at the present." He did note that several groups had already used the room.

Second on the agenda is the behavior and conduct of students in the lobby of Steinman Hall; notably on the benches. It waws also concerned with bicycles in the lobby.

Prompted by the new Faculty-Library-Lounge the Engineering Association of the College donated one hundred dollars towards the purchase of a gift for the new Steinman Hall. The House Committee, in turn, asked the Engineering Wives Club to select an appropriate gift. A set of glassware for the faculty lounge was selected and approved by the Committee.

## Tech Alumni Dinner Centers on Steinman

It was a time for pats on the back, much reminiscing, some cajoling, and a look towards the future. The occasion was the forty-fourth Annual Meeting and Dinner of the City College Engineering Alumni on Friday, April 19. Speakers at the dinner included Dean William Allan, Dean Seymour Hyman, and Pres. Buell Gallagher. Presentation of the Charles A. Marlies Award was also made to Melvyn B. Pell '63, its recipient.

Professor E. Brenner, President of the CCNY Eng. Alumni, set the tone of the night's festivities by saying that, "May 11 will be the most important homecoming for engineering alumni of all preceeding homecomings." Steinman Hall will be dedicated on that day. The new engineering building and the progress made by the school were the central themes of speeches given that evening. Mr. Saul Lance, Pres. of the Alumni Assoc., when called to the rostrum, cited the engineering alumni as the most active alumni group in the association.

Dean Allan began the round of speech making with the presentation of the Charles A. Marlies Award to Mel Pell. The award of a Certificate and fifty



Award Winner

dollars was established by friends of Charles Marlies, to be given to an outstanding engineering senior. Mr. Marlies was a professor in the Chemical and Chem. Eng. Departments who passed away in 1949. Mel Pell was Student Government Treasurer and is currently Tech News Editor. Special significance was made of this year's award because it is the first to be made in the name of the School of Engineering and Architecture.

## City Students Win Top Prizes in Contest

By VITO LAMANNA

Mr. Eugene Graff and Mr. Robert Killen, both of City College, won first and second prizes respectively, and Mr. Vincent Esposito of Polytechnic Institute of Brooklyn won the third prize at the Undergraduate Student Paper Contest of AICHE Metropolitan Conference held here on Saturday, March 30.

The judges were Dr. Gino Giusti of Texas Gulf Sulfur Co., Mr. Joseph Jewett, Jr. of Scientific Design Co., and Dr. Walter Schnyder of Hoffman La Roche Co.

The first and second awards included a certificate, a cash prize, and a subscription to either Chemical Engineering Progress, or AICHE Journal, both published by AICHE. The third award consisted of a certificate and a subscription to either of the above mentioned magazines. These prizes were donated by the New York section of AICHE.

The three papers were "Heat and Mass Transfer in Freeze Drying" by Mr. Graff, "Hydrazine and Its Derivatives As Pro-

pellants" by Mr. Killen, and "The Neutrino" by Mr. Esposito.

Dr. Walter Schnyder presented the prizes to the winners at the awards luncheon. Dr. H. L. Malakoff, vice president and general manager of Cities Research and Development Co., was the speaker.

According to Mr. Harvey Golubock, general chairman of the conference, the event was a big success. Approximately one hundred and fifty people attended the morning session, and one hundred and forty remained for the entire program. They were mostly students. All were very impressed with the laboratory facilities in Steinman Hall.

The conference was subsidized by the New York section of AICHE, the City College chapter of AICHE, and by student fees.

Professor Patell, faculty advisor of AICHE, directed the organization of the conference. Mr. Daniel Kollin, chairman of the Social Affairs Committee, and Mr. Barry Miller, president of AICHE, and other students contributed to the success of the conference.



Left to right: Robert Killen, second prize winner; Professor A. X. Schmidt, Chairman of Chem. E. Dept. C.C.N.Y.; Eugene Graff, first prize winner; Dr. Walter Schnyder; Vincent Esposito, third prize winner.

Prof. Hyman, Ass't Dean of Engineering Graduate Studies, stressed the new role of the research and graduate programs. He said, "The faculty has produced a Ph.D. program that has been approved by the Board of Education." This is further complimented by the City College Research Foundation, recently formed, and he went on to announce, "We will have sixteen members of the faculty released from substantial duty to do research work."

President Gallagher did not limit his remarks to a description of the College's expansion—South Campus, Cohen Library, Steinman Hall, Administration Building, and the new Science Building to be built on Jasper Oval. He commented also on the Charter Day Commemoration. Dr. Gallagher views President Benitez's actions in 1948, vis a vis Student Government, as purely political. Therefore, he noted, "For eleven years it's been my conviction that everybody with any political conviction can speak." President Benitez is an eminent scholar and President of the University of Puerto Rico.

—M. Miller

## Plastics Are Replacing Metal For Many Uses

By TED SEMEGHAN

A pre-holiday session of the A.I.Ch.E. featured the latest advances in polymer and plastics. Equipped with replicas of the new applications of polymers, the guest speaker, Dr. Keuffer, of DuPont Plastics, presented plastic dashboards, carburetors, and gears which are now replacing their metal counterparts.

Dr. Keuffer emphasized the unlimited uses of polymers and showed conclusive proof of the large volume sold in the United States being considerably larger than the volume of metals—in fact, more than four times the sales volume of metals. He said that plastic sales have increased continually at the rate of 10% per year.

Dr. Keuffer, who works in the Empire State Building, said that acetal resins are replacing metals in dashboards due to their lower cost and comparable strength. Acetal plastics also re-

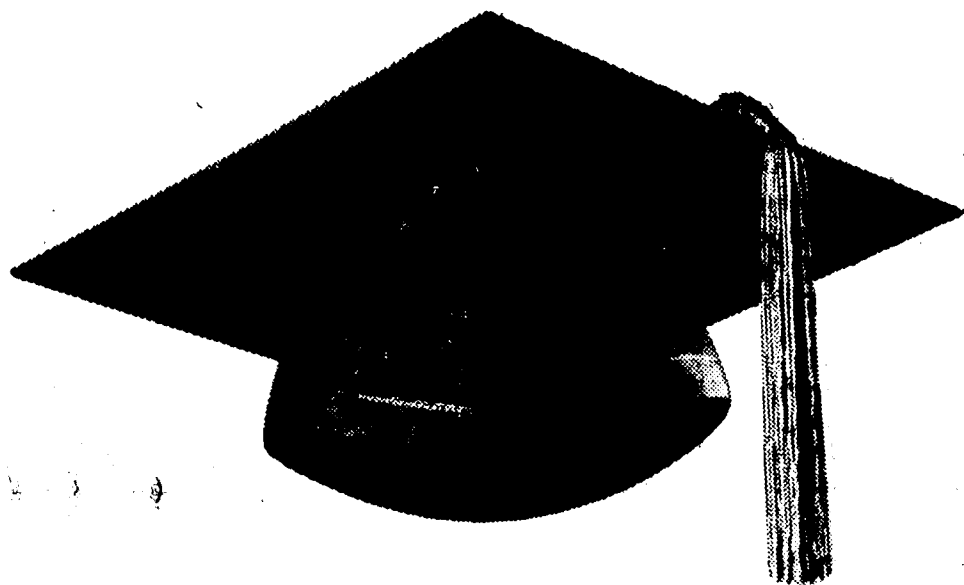
quire little or no finishing. Even milk containers are now coated with a plastic—polyethylene—which has its own heat seal properties. Another use for polyethylene is in the manufacture of squeeze bottles which are produced by blow molding technique.

### Nylon Carburetors

Nylon, primarily known as a shear leg-wear material, is now being used in applications such as experimental carburetors, automotive roof lenses, shower heads (replacing brass), cables, gears and even door lock mechanisms.

Polymers, Dr. Keuffer exclaimed, can even pipe light. This phenomenon is accomplished with acrylic resins.

Another recent innovation is the ability to coat wire with plastics at rapid speeds. A coating machine now developed can coat wire at the incredible speed of 4000 ft/min or almost 70 miles per hour!



Guess who offered me an executive position with a leading organization, where I'll get good pay, further my education, and enjoy world travel?



My uncle.

In this case, nepotism's a pretty good idea. But of course you've got to measure up to get it. To be admitted to Air Force Officer Training School, you've got to be a good student with skills or aptitudes we can use.

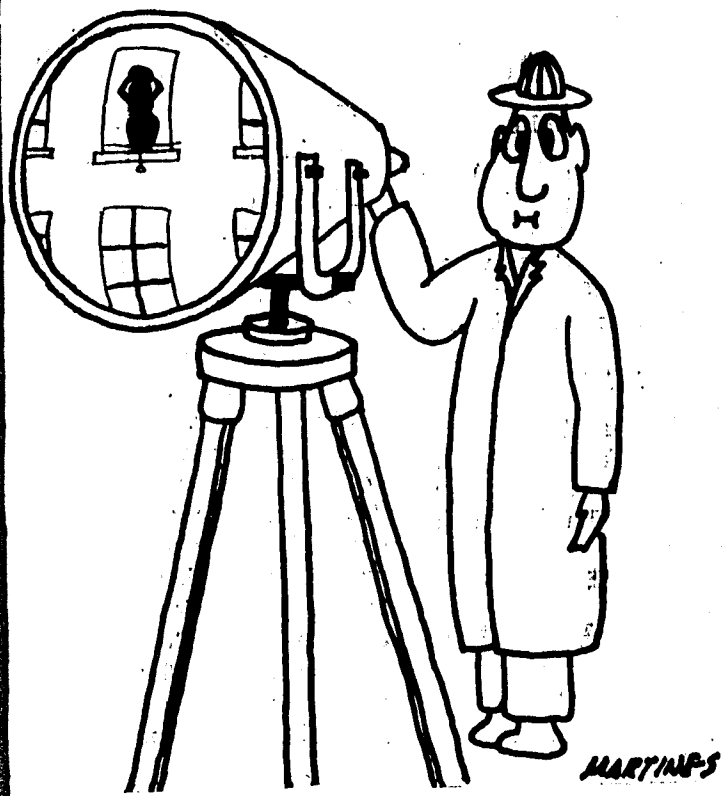
Air Force OTS is an intensive three-month course leading to a commission as a second lieutenant. As an Air Force officer, you'll be a leader on the Aerospace Team—and be a part of a vital aspect of our defense effort.

Here's a chance for ambitious college men and women to assume great responsibility. It's a fine opportunity to serve your country, while you get a flying head start on the technology of the future.

We welcome your application for OTS now—but this program may not be open to you in a year or so. If you're within 210 days of graduation, get full information about Air Force OTS from your local Air Force recruiter.

**U. S. Air Force**





SONOFAGUN!

## Aerospace Group Visits Thiokol

The field trip of the American Institute of Aeronautics and Astronautics on April 10 featured a tour through the area's largest rocket engine plant and test site: Reaction Motors Division (RMD) of the Thiokol Chemical Corporation at Denville, New Jersey. Various steps in the fabrication, assembly and testing of engine components were demonstrated, culminating in three static firings of complete engines.

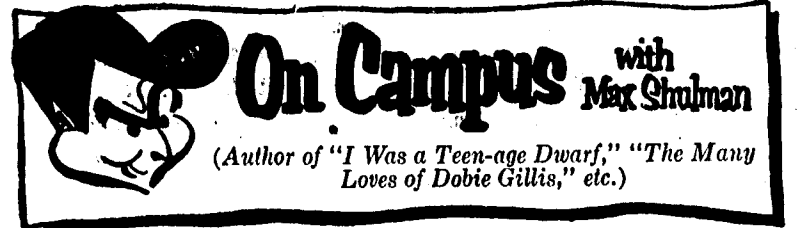
The first area visited was the component test laboratory, containing such equipment as high- or low-temperature chambers, a high-pressure gas cell, a water-flow facility, and vibration test equipment. Among the parts under test were propellant valves for the Titan ICBM and components of the Surveyor lunar-landing probe. The laboratory uses large quantities of liquid and gaseous nitrogen drawn

from large tanks nearby.

The materials laboratory, next to be toured, contains extensive testing equipment used to investigate not only the physical and chemical properties of materials used in rocket construction, but also their compatibility with the highly reactive, often cryogenic propellants used. An-

other section studies techniques for the application of a protective coating of refractory Rokide-Z (zirconia) to rocket chamber walls. The method now used by RMD is to melt a Rokide rod in a high-temperature flame, then blow the droplets onto the surface being

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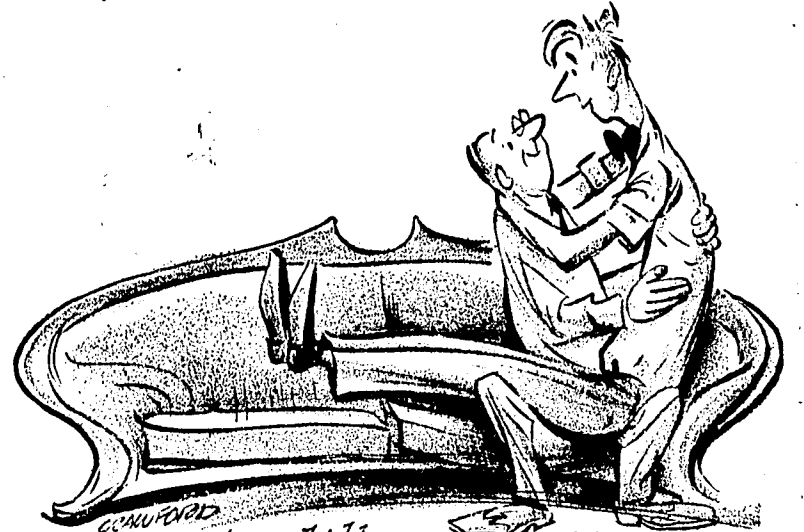
### FILLING A WELL-NEEDED GAP

Although my son is a college freshman, I am glad to say that he is still not too old to climb up on my lap and have a heart-to-heart talk when things are troubling him. My boy is enrolled at Harvard where he is studying to be a fireman. From the time he was a little tiny baby he always said he wanted to be a fireman. Of course, my wife and I believed that he would eventually grow out of it, but no sir, the little chap never wavered in his ambition for one minute!

So here he is at Harvard today taking courses in net holding, mouth-to-mouth breathing, carbon tetrachloride, and Dalmatian dogs. It is a full schedule for the young man, and that, in fact, is exactly what we talked about when last he climbed upon my lap.

He complained that every bit of his time is taken up with his major requirements. He doesn't have so much as one hour a week to sample any of the fascinating courses outside his major—history, literature, language, science, or any of the thousand and one things that appeal to his keen young mind.

I am sure that many of you find yourselves in the same scholastic bind; you are taking so many requirements that you can't find time for some appealing electives. Therefore, in today's column I will forego levity and give you a brief survey in a subject that is probably not included in your curriculum.



I have asked the makers of Marlboro Cigarettes whether I might employ this column—normally a vehicle for innocent merriment—to pursue this serious end. "Of course you may, crazy kid," they replied kindly, their grey eyes crinkling at the corners, their manly mouths twisted in funny little grins. If you are a Marlboro smoker—and what intelligent human person is not?—you would expect the makers of Marlboro to be fine men. And so they are—wonderful guys, every man-jack of them—good, generous, understanding, wise. They are each tipped with a pure white filter and come in soft pack or Flip-Top box.

But I digress. We were going to take up a topic you are probably unable to cover in your busy academic life. Let us start with the most basic topic of all—anthropology, the study of man himself.

Man is usually defined as a tool-making animal, but I personally do not find this definition entirely satisfactory. Man is not the only species which makes tools. The simians, for example, make monkey wrenches.

Still, when you come to a really complicated tool—like a linotype, for instance—you can be fairly sure it was made by *Homo sapiens*—or else a very intelligent tiger. The question one should ask, therefore, is not *who* made the tool, but *what* did he do with it.

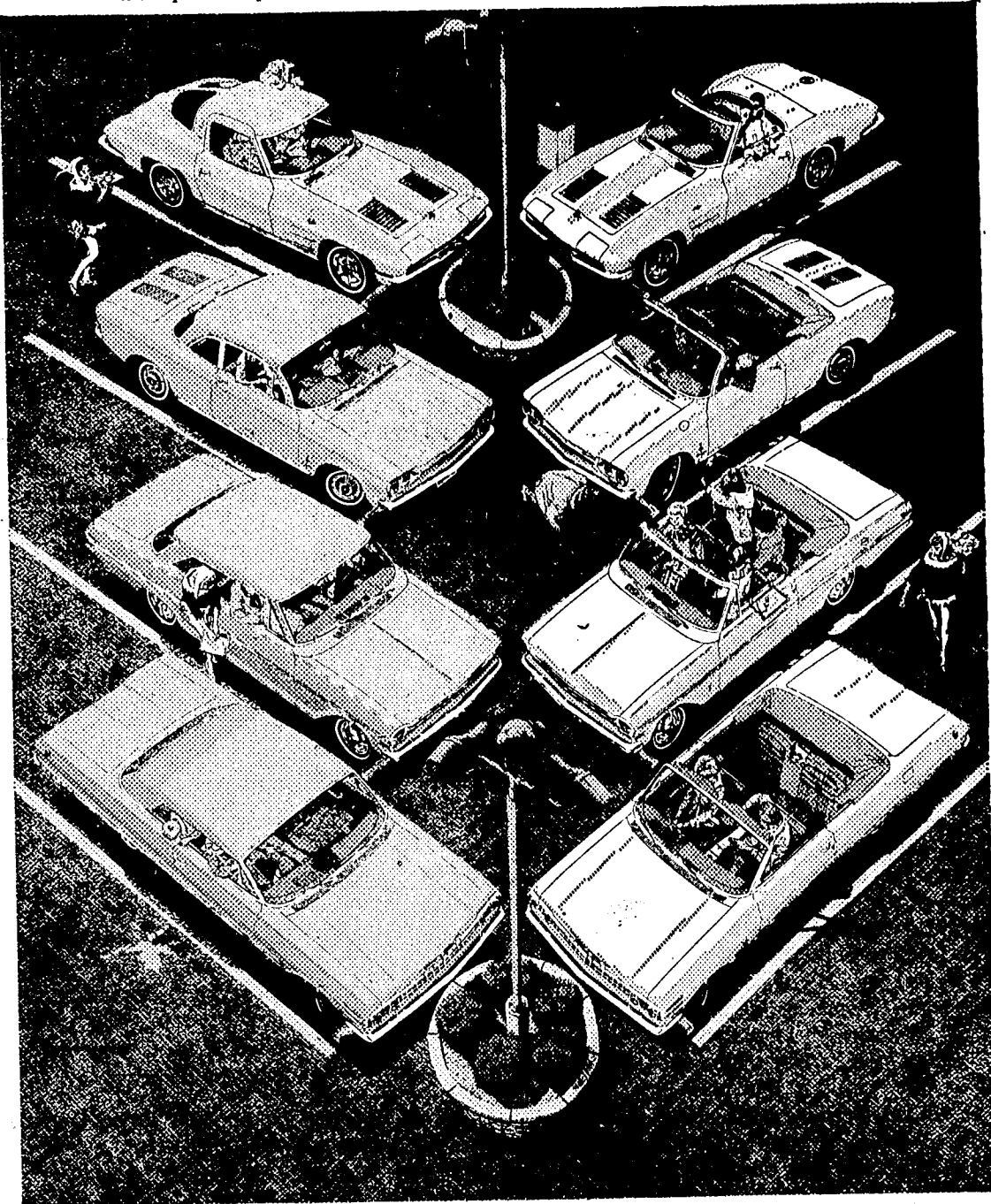
For example, in a recent excavation in the Olduvai Gorge a large assortment of hominoid fossils was found, all dating back to the Middle Pleistocene Age. Buried with the fossils was a number of their artifacts, the most interesting being a black metal box which emitted a steady beeping sound. Now, of course, zoologists will tell you that tree frogs make such boxes which they employ in their mating activities (I can't go into detail about it in this family newspaper) but the eminent anthropological team, Mr. and Mrs. Walther Sigafos (both he and she are named Walther) were convinced that this particular box was made not by tree frogs but by Neanderthal men. To prove their point, they switched on the box and out came television, which, as everyone knows, was the forerunner of fire.

If there is anything more you need to know about anthropology, just climb up on my lap as soon as my son leaves.

© 1963 Max Shulman

The makers of Marlboro Cigarettes who sponsor this column, often with trepidation, are not anthropologists. They are tobaccoists—good ones, I think—and I think you'll think so too when you sample their wares—available wherever cigarettes are sold in all fifty states.

From the top—Corvette Sting Ray Sport Coupe and Convertible, Corvair Monza Spyder Club Coupe and Convertible, Chevy II Nova 400 SS Sport Coupe and Convertible, Chevrolet Impala SS Sport Coupe and Convertible, Super Sport and Spyder equipment optional at extra cost.



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ALL TO GO!

Chevy's got four entirely different kinds of bucket-seat coupes and convertibles to get your spring on the road right now—the Super Sports! With a choice of extra-cost options like electric tachometers, 4-speed shifts and high-performance engines, they're as all out for sport as you want to go!

First, the Jet-smooth Impala Super Sport with your choice of 7 different engines that range up to 425 hp and include the popular Turbo-Fire 409\* with 340 hp for smooth, responsive driving in city traffic.

Then there's the Chevy II Nova 400 Super



Sport. Special instrument cluster, front bucket seats, full wheel discs, three-speed shift or floor-mounted Powerglide automatic\* and other sporty features.

Two more cures for spring fever—the Corvair Monza Spyder with full instrumentation and a turbo-supercharged six air-cooled rear engine. And if you want to pull out the stops, the Corvette Sting Ray,

winner of the "Car Life" 1963 Award for Engineering Excellence.

If the promise of spring has been getting to you, we can practically guarantee one of these will, too!

\*Optional at extra cost.

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## Infant SAB

The Student Activities Board hasn't completed a full year of operation, and it is being bombarded with petitions calling for its dissolution. The fault rests mainly with the members of the SAB rather than with structure of the group. They have spent too many hours during meetings dealing with trivia that should have been decided in minutes. Specifically, the long drawn out debates over proper punishment for publicity violators and the fight over the use of room 121 Finley lost the respect, if there was ever any, of students for the body.

The harsh punishments given for various infractions also indicates an infantile vindictive attitude rather than a mature understanding one. The general reputation the SAB now enjoys is one of a bunch of kids in a clique playing with power.

The SAB is empowered to be a very powerful beneficial guiding force in extracurricular life. It can only fulfill this aim if its members behave with maturity and understanding. The problem posed by the SAB lies in the membership rather than the structure of the Student Activities Board itself.

## Planning and Design

There is an area of Student-Faculty cooperation at the City College which can be very fruitful but is still untapped. We suggest that a student be given a voice on the Planning and Design unit of the Building Committee.

Here is an area ideally suited for student-faculty joint effort. Any new facilities at the school will be used by both students and faculty. At present, the ideas for designs are in no way discussed with students even though students are the majority users of nearly every building on campus. Why shouldn't a student be given the opportunity to give the student view on building designs? Students are certainly the most qualified to voice those student needs and desires which ought to be taken into account in considering the design for a new or additional school facility.

There are students in school now who have already been trained for such a job. An architectural student could competently participate in proceedings even to the extent of drawing plans when necessary.

Student participation in this area is already taking place. An architecture student on Tech Council has been working in consultation with the chairman of the Planning and Design Committee on plans for the renovation of Knittle Lounge and the conversion of the ROTC supply room to a lounge. The friendly atmosphere in which this planning has been done so far indicates that a permanent student-administration link in this area is feasible. The logical groups to investigate the matter further are Student Council or Tech Council. There is a lot of good to be gained from the proposed plan.

## Inquiring Techographer

**QUESTION:** Do you think the peace corps is a good place for an engineer to gain practical experience?

Elliot Dubin lives in Brooklyn and is a sophomore in chemical engineering. "Yes! Trying to develop the natural resources of a backward country is a good way for an engineer to work with other engineers in various aspects of his field. A Chem. E. can work in the development of oil refineries, in food production and medicine."



Elliot Dubin



Sheldon Zaklow

Sheldon Zaklow, a junior in Mechanical Engineering, lives in Brooklyn. "No! Because he would not get to work with modern equipment. This is the impression I have of peace corps, although it would be a good chance to work with people."

Joseph Bergeon is a civil engineering senior and resides in Forest Hills. "Yes! As a C.E. I feel the work in underdeveloped area would be more difficult than in relatively developed areas as are found in the U.S. By more difficult I mean that the application of engineering skills requires greater creativity and a greater use of the fundamental principles. In this aspect there is a greater challenge for the engineer as an individual and from this point of view I feel that the peace corps is beneficial for one's future career."



John Zupicich



Joseph Bergeon

John Zupicich lives in the Bronx and is a sophomore in mechanical engineering. "Yes! In the peace corps the engineer can gain experience in a wide variety of problems related to his profession. He would meet problems in public relations, supply, etc., which would teach him to be a complete engineer. He would then be able to return to modern industry with a more complete knowledge of his capabilities and an understanding of his job."

Thomas Ingaglio is an electrical engineering senior and lives in Brooklyn. "Yes! The monetary rewards are not great but you are getting a chance to deal with people and their welfare. You are helping and doing things for people and developing a sense of accomplishment and achievement. This is the duty of an engineer. It is a fulfillment of the ethics of the engineer. If I had the opportunity to work on something beneficial to all mankind and the peace corps was one of these ways, I would join. I plan to serve my country first as an officer in the United States Army."



## Club Notes

### PI TAU SIGMA

The honorary mechanical engineering fraternity will present Dean Hyman speaking on "Opportunities in Graduate School," at 12:30 Thursday, April 25, in room 123 Steinman.

### AIAA

Will present two films on solid propellant rockets and the Saturn booster in room 303 Cohen library. All are welcome.

### IEEE

Will present a lecture on memory devices and echo in Shepard 306 at 12:15.

### MATH SOCIETY

Present Professor H. J. Cohen speaking on "Niven's Proof of the Irrationality of Pi" in room 12 Shepard. All welcome.

## Bronx Community

### Holds Tech

### Open House

By ELLIOT WAGNER

On Friday evening, April 5, Bronx Community College held an open house for high school students and their parents. The purpose of the program was to stimulate interest, on the part of the public, in the college, its facilities, its programs and as a recruitment program for people who would best benefit from the school.

The evening began with a brief talk on "The Engineer and the Engineering Technician" and then included a tour of the laboratories. There was an opportunity for the visitors to talk with the faculty members.

Bronx Community College is a two year college with programs which prepare the student for transfer to a four year college or which train him to be a qualified technician in the electrical or mechanical industry. The laboratories at the school are very modern and well equipped. It was said that, compared to the drafting machines at the school, the use of a tee-square and triangle is primitive. It cost two to three million dollars to equip and remodel the building.

To the question of whether a visiting program of this nature would be of benefit to the city college, one woman replied "Absolutely! It is always a good policy for a college to permit the public to see what is going on in the college. It gives the high school students and their parents an idea of what is being taught in the school and it may influence them in the decision to study technology." One BCC official, Prof. Tyson, remarked that high school advisors should visit the colleges; to be aware of what the schools have to offer, from first hand experience. When asked why City College did not have such a program, Bob Sheklin, president of Tech Council, said that City College had an E-Day up to three years ago, but it was suspended until the transfer of materials and the equipment to the new tech building was completed. There will be, however, a dedication ceremony of the new tech building, Saturday, May 11, to which the alumni of the College will be invited. Tech Council expects to have an E-Day either next fall or next spring.

## Letter To The Editor

Much has been said about the engineering student's failure to participate in extra-curricular activities at the college. His indifference has been blamed, in part, on the centralization of extra-curricular facilities on South Campus. In your editorial of March 27, you suggested that a combination student center and speech and drama building on North Campus would provide needed room for Tech activities, and encourage the North Campus student to enjoy the benefits of a college experience which extends beyond the classroom.

I would be the last one to say that the Tech students are getting a fair deal. I realize that is something of a hardship to walk to South Campus for non credit activities. However, I get the feeling that the barrier between the Tech student and South Campus is not so much the physical one of distance as the mental one. This mental barrier is based on the conception many Tech students have of their education. They seem to feel that they are serving some sort of apprenticeship, similar to the formerly required of candle makers and silver smiths, instead of learning how to solve the technological problems of human beings. They don't seem to realize that math and physics are not enough. They don't realize the importance of the liberal arts, those learned both in and out of class.

On the other hand, the South Campus student often shows a total lack of interest in, and appreciation for, anything technological. This, in a technological civilization such as ours, is stupidity.

Widening the split between the Tech student and the rest of the college by setting up a Tech oriented student center (and Tech oriented it would be, despite the speech department and the auditoriums) would do nothing to change these attitudes.

North and South Campus students should have a lot in common. Whether it is Finley Center or some other building, there must be only one student center, both for the unity of the college, and for its students' better education.

Rebel Owen B.A. '68

## ME Award

Pi Tau Sigma is sponsoring the annual Manuel Latné Award, open to Mechanical Engineering students who are in the top half of the class and have completed 111 credits. The winner will receive a Mark Handbook, and his name will be inscribed on a plaque in the M.E. department office.

Judgment will be made by the Mechanical Engineering department on the basis of leadership and service to the College.

Application forms are available on the Pi Tau Sigma Bulletin Board and on the M.E. Bulletin Board, and must be returned to the department secretary or to Professor Baldo by Friday, April 26.



er To  
Editor

# TECH LIFE

By JOSEPH NADAN

The purpose of the Tech Life column as I understand it is to inform Engineering and Architecture Students of social and professional events that should be of interest to them, (and I use the phrase "should be" quite liberally). In pursuit of this goal I mention the following functions:

## SENIOR PROM

The Senior Prom is the culmination of an enjoyable college career. At present, however, the total registration for the Senior Prom is a mere 25 couples. (Engineering Graduating Class is in excess of 400.) This is a lousy response in itself; but considering the program offered (yacht, nightclub, etc.) this turnout is a miserable disgrace.

If lack of female accompaniment or funds is a problem when you are indeed unfortunate. But, if these necessities are at hand, then what reason could you possibly have for not attending?

The reason, fellow tech student, is a justifiable feeling on your part that you would not know many others in attendance. Many life-long friends may not be there; however, your fellow students will be present. Ken Schlesinger, President of the Class of 1963, informed me that tables will be available for 3, 4, 5 — 10 couples, and that seating can be specified with your deposit.

Since there is no E-day this year let's turn this affair into an Engineering Senior Prom.

## THEATHON

Theathon needs your support. They need your support in obtaining a theater on the CCNY campus. A theater (auditorium) to seat at least 1200 people. A theater to give practical experience to CCNY students.

In addition there are other crying needs. A need for lounges. A need for a decent cafeteria. A need for a snack bar. A need for Tech Organization office space. The "City" is spending large sums of money for the construction of new buildings (Technology, Administration, & Science) but when will they become aware that to complete this campus and to alleviate the above mentioned crying needs what is really needed is a North Campus Student Union: Location — Opposite Shepard Hall; to occupy what has been loosely termed a park, (for mountain goats). While the terrain would provide a challenge to designers, this challenge could be met.

Give Theathon your support. Outside F 152 — 9 a.m. — 10 p.m., Wednesday and Thursday.

## ATTENTION LOWERCLASSMEN

If one of your primary motives for attending college is vocational training then take heed:

When you start working you will do so with people. People like to work with other people. Your subject matter adequately prepares you for your technical endeavors but not to be "a people."

Do not fret, for there are many organizations that are "people builders." Companies expect that you have a thorough knowledge of your field but they also insist on your having taken a people builder course. (You can substitute out of this course by sufficient effort on your part to acquire interests in other areas in addition to technology.) One method interviewers use to test the totality of your development is to question your extra-curricula activities.

If you are one of the unfortunate upperclassmen you start to whistle the third stanza of the "Star Spangled Banner" and begin your eloquent, "Why I Chose Not to Go Into Extra Curricula Activities Because My Primary Purpose in Going To School Was To Gain Knowledge and Since My Courses Were Sooo Rough I Decided to Devote Alllll My Time To My Studies" speech. The interviewer nods politely in agreement and two days later your merry mailman brings your rejection. (Exception: Top 10% of class.)

The time to make a move is now. An organization (Engineering Firms, etc.) looks for active participation in at least one group. Many school groups would welcome you with open arms. Just to name a few: TECH NEWS, Vector, IEEE, AIChE, AICE, etc. In addition, active participation in one group is far more beneficial and enjoyable to you. To those of you with a sense of humor I recommend Student Government Activity.

In summary, what I am saying is activity, activity to diversify your interests, to increase your worth to industry, to increase the enjoyment of your studies, to more fully develop your personality is directly convertible into money. Once you are active in these organizations your reasons for maintaining an interest will change and then, and only then, will you be one of "the people."

## CE's Visit '64 Fair Site

For twenty-five students at the college it seems as though Robert Moses is in the process of performing two miracles. The first getting exhibitors for the 1964 World's Fair is quite evident to most people. The second miracle was made quite apparent to the college's chapter of the American Society of Civil Engineers. Moses must get the 1964 World's Fair finished by 1964.

On April 9, during the spring recess, twenty-five members of the A.S.C.E. visited the site of the 1964 World's Fair. The trip to Flushing Meadows was made by chartered bus.

On arrival at the fair grounds the group was greeted by Mr. George C. Lapins, the Ass't. Engineer for the World's Fair Corporation. Mr. Lapins then proceeded to give a lecture on the complexities of World's Fair construction. By using a scale model of the completed fair he was able to point out the intricacies involved in planning and layout. The model, more than anything else gave the group a composite picture of what the completed fair is to look like. L. Levy, one of the visiting students, said, "The model and all those lights were very impressive. I only hope it turns out the way its planned."

After the lecture the group was given a guided tour of the grounds. It was during the tour that a first hand knowledge of actual construction procedure was observed; more pile driving than one would think possible was going on. It was during the lecture that Mr. Lapins noted, that if necessary, the construction crews would work twenty-four hours a day to complete their work. Renato Larese, an A.S.C.E. member said, "Twenty-four hours may not be enough."

But there was still a potpourri of building construction to be observed. At the site of the Kodak Exhibition Hall, a free roof, it was pointed out, required the use of polarized light for analysis of the stresses. Only this sophisticated method would give a solution to the problem.

General consensus seemed to favor the General Motors Building as the most impressive.

## AIChE Smoker

A.I.Ch.E. will hold its biannual smoker on Friday evening, April 26. After speaking with some of the producers of the script material and even the refreshment committee, a note of elfish optimism is present as though some rough comedy is brewing. A.I.Ch.E. extends a cordial invitation to all Chemical Engineers and other interested parties. Daniel Kollin and/or Harvey Shapiro should be contacted for further information.

## The Faculty View

Mr. Deans holds a B. Arch. from Pratt and an M. S. Arch. from Columbia. He has been teaching at City College since September.

By J. J. DEANS

It has been stated, that since the turn of the century there has been more technological development, than in all previous recorded history. The results of this phenomenon on man's day to day activity have been too many and varied to elaborate upon here. However, not the least of these, and one which weighs heavily upon our topic has been the progressive fragmentation of the trades and professions of man. For instance, very few neighborhood shoemakers today can actually make a pair of shoes from beginning to end. The days of the carriage maker as the sole executor of his product are certainly over and I would hesitate to venture a guess as to how many people involved in the production of one Detroit "carriage" today, are so qualified. This fragmentation is equally evident in the professions and justifiably so in terms of many of the tasks involved. I am sure a man can spend a lifetime developing a rocket fuel or finding a cure for cancer, or for yawning or whatever.

The unfortunate part of all this is that society in general has come to expect everyone to specialize in something or other. It does not seem to have occurred yet to most, that someone still has to put all the parts together into the whole. I heard recently of a nationally renowned architect being approached by a lay group with intentions of commissioning him to design a country club for them, and typically one of their first queries was whether or not he had previously done this specific building type. The answer being in the negative, the group decided to find another architect who had done country clubs.

Architecture is an art in which the practitioner must be deeply concerned with all the facets of his profession. It does not in essence lend itself to specialization. The architect must be concerned with aesthetic quality, spiritual expression, structural soundness, convenience of function, economy, and he must be concerned with them simultaneously. Admittedly, among these elements of consideration, there exists specialized fields. The Civil Engineer must be more versed in the analysis and definitive technical designs of structures than the architect. The degree of the architect's comprehension of structural principles is what determines how well he can use the services of the engineer. It is the architect's function to create the conceptual design based on his comprehension of structural principles. His knowledge of engineering, need not be as analytical as that of the engineer, and consequently his training in structure should follow a somewhat different pattern; a pattern that is more involved with the application of principles, than with the derivation of theories.

Along with this role of generalist, as opposed to specialist, go certain responsibilities — responsibilities to become and remain conversant with the more specialized aspects of building. How often do we hear architects complain that the mechanical equipment is dictating the design of the building in today's technology. It is only doing so because we have refused to face the fact of its physical reality, and often approach a design under the delusion that it can all be concealed in a 2 by 4 pipe chase, only to be rudely awakened when the mechanical drawings arrive.

In spite of the pressures on the architect by industry, by his fellow professionals, indeed by society in general, to join the ranks, to submit to "design by committee," and "stop all this talk about aesthetics," the architect, if he is to fill his only true role, must still lead the band. The test has become more difficult because of the increased virtuosity of the musicians. Truth still exists in the fact that one man can lead the band better than two or three.

## Your Empty Packs Worth Money

KENT  
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See Bookstore for Details — Offer Expires May 31, 1963

**Musical Comedy Society Show + Dancing**  
**To Live Band + Booths, Games and**  
**Prizes — FUN AT CARNIVAL — Sat. Eve.**  
**May 11 — Tickets Now on Sale**

# FALCON IS "NEW KING OF THE MOUNTAINS" \* IN TOUGHEST 2,500-MILE MONTE CARLO RALLYE

**Special edition Falcon V-8 "Sprint" defeats the world's best in final 490-mile test section on icy Alpine cliff roads... then outperforms every sedan on famous Monaco circuit!**

Falcon picked the world's roughest winter ordeal to reveal an astonishing new brand of total performance. Four days and three nights through an inferno of ice, snow, freezing fog, endless curves—2,500 miles against an implacable time schedule, designed to try a car's reliability, road-holding and performance to the ultimate. Experts said a first-time car couldn't hope to finish—and two thirds of the 296 competitors did drop out. But Falcon not only placed first and second in its class, it defeated every car, regardless of class, on the brutal Chambery-Monte Carlo final leg, set best time among all finishers in all of the six special test sections—and showed its heels to every sedan in the dramatic three-lap elimination on Monaco's famous round-the-houses course. You couldn't get better proof of total performance anywhere!

\*You can read the dramatic report of the world's most rugged winter Rallye in Sports Illustrated's February 4 issue. And you can get the full story of this and Ford's other total performance accomplishments from your Ford Dealer.



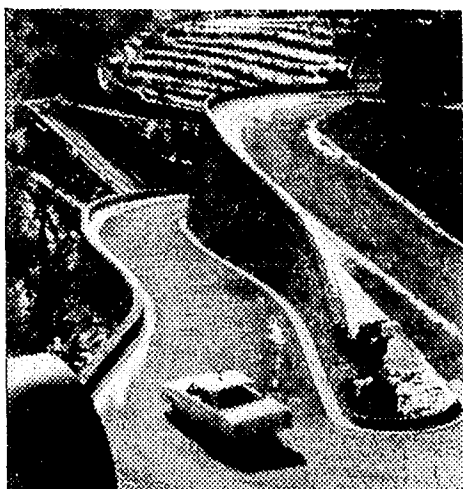
DEEP SNOW on the Col de Turini special section didn't even slow the "Sprint." And sure-footed Falcon also amazed the Rallye experts by its traction on glare ice.



STORMING ALONG IN THE FRENCH DUSK, a Falcon plunges into the third night behind the special lights that let a Rallye driver see around curves, spot patches of ice, penetrate fog.



FALCONS TOOK CURVES LIKE THESE—hundreds upon hundreds of them—and proved that road-holding is not a European monopoly. In fact, Sports Illustrated magazine called them "the new kings of the mountains" and quoted a London newspaper as declaring, "The Falcons are part of a power and performance plan that will shake up motoring in every country of the world."



"LACETS" is French for zigzags like these. It means "bootlaces", but to Rallye drivers it means an ultimate test of steering, stability, brakes and, above all, durability.



BEST OF ALL "TOURING" CATEGORY CARS in the three-lap Monaco circuit was the Falcon piloted by Swedish ice expert Bo Ljungfeldt. It was surpassed by only three cars, all of them two-seater sports cars in the Grand Touring category.

America's liveliest,  
most care-free cars!

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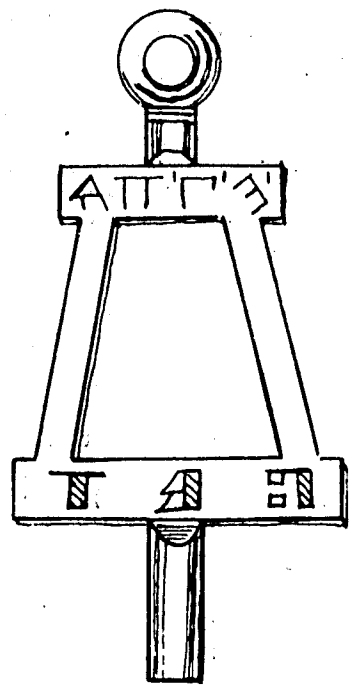
MOTOR COMPANY

IF IT'S FORD-BUILT, IT'S BUILT FOR PERFORMANCE... TOTAL PERFORMANCE!



# Spring Tech Honor Society Pledging

*"Dignity Lies In Deserving Honors, Not In Possessing Them."*



## Tau Beta Pi

Tau Beta Pi is the national engineering honor society. It is recognized as the leading engineering honor society in the U.S. Seniors and upper juniors in the top fifth and top eighth of their respective classes in the School of Engineering and Architecture are eligible for election under rigid standards of scholarship, character, leadership, and service to the School.

The following students have been elected to pledge Tau Beta Pi for the spring term, 1963:

Elliott P. Friend  
Jay D. Popper  
Allen Kaufman  
Ronald Yager  
Anthony Valenti  
Andrew Adams  
Mark Ballan  
Harvey Cautin  
Richard Stiengart  
Stanley Levine  
John Evangelista  
Ami Kestenbaum  
Stanley Kropewnicki  
Richard Melito  
Laszlo Bakonyvari  
Martin J. Shapiro  
Hayward Wu Young  
John Sisko  
Harvey Leong  
Joseph Marrone  
Theodore Berg

## Computer...

(Continued from Page 1)

to extend the memory capacity of the computer.

A separate personnel budget has been drawn up for the system. It will include a full time research assistant of the highest level, an assistant, on a part time basis, and a Fellow who will be selected on a yearly basis. Approval for the latter rests within the Mayor's Executive Budget.

in one or more foreign languages as the department may require.

6. The candidate shall pass an examination prior to receiving departmental approval of a research topic.

7. The candidate shall conduct research on the approved topic and submit a written dissertation.

8. The candidate shall pass a final examination which will include oral defense of the dissertation.



## Alpha Chi Epsilon

Alpha Chi Epsilon is an honor Chemical Engineering Fraternity. To be accepted, a student must be in the top quarter of his class in the School of Engineering and Architecture. He must also be in the top fifth of his class in Chemical Engineering grades. Approximately twenty percent of his chemical engineering courses must be completed.

Pledges are required to put in fourteen hours of service to the Department of chemical engineering and to the faculty. Both Pledges and members tutor chemistry and cooperate with other honor fraternities.

Pledges for this term are: Alan Buchner, Gilbert Jackson, Philip Klepak, Stanley Levine, Edward Lisi, Melvyn Pell, and Leon J. Schwartz.

—Schuchman

## Tech. Salary Shows Rise

A report just released by the Engineering Manpower Commission shows an 8% increase in the overall median salary of engineers during the last two years.

The overall median salary as of mid-1962 was \$10,375 compared with \$9,600 for the survey conducted two years earlier.

Information on 213,000 engineers was obtained from 573 companies, 152 government agencies, and 6,897 individual engineering teachers.

### Increase Decreases

The average yearly increase of the median during the last two years (1960-62) was 4%. Between previous surveys, however, the increase was somewhat sharper — 5% yearly between 1958 and 1960, and 6.5% yearly between 1953 and 1958. Since the survey series began in 1953, the median engineering salary rose 60% compared with a 13% increase in the consumer price index and a 37% increase in the average weekly earnings of production workers in manufacturing industries.

The survey analysis makes possible a rough comparison between the broad fields of industry, education and government. After ten years, for example, an engineer in industry earned about \$10,625. With the same length of experience, a government-employed engineer received \$9,375 and an engineering teacher's basic teaching salary was \$8,000.

—from Engineer

tation center of the test facility.

A nearby building houses a series of boys in which fueling and final assembly of Bullpup engines takes place. Other areas visited at the test site were a high-volume water-flow facility and an environmental test chamber presently being used, to test the Surveyor's vernier engines under vacuum and other conditions similar to those it will encounter in operation.

## Eta Kappa Nu

Excellence in their field is the goal of every Electrical Engineering student. Among the qualifications which must be met for this achievement to be realized are willingness and ability to do demanding work, and the strength of character necessary to achieve this end.

In the hope that it will act as a stimulus toward these ends, Eta Kappa Nu, the National Electrical Engineering Honor Society, elects each semester outstanding men from the classes of the last two years of the baccalaureate course in Electrical Engineering.

Eligibility for election is based on marked achievement, impeccable character, and undoubted ability, as evidenced by scholarship.

In keeping with the standards outlined above, the Beta Pi chapter of Eta Kappa Nu has elected for membership the following students:

Leonard Accardi, Martin Agalick, Guido Brossoni, James

## Pi Tau Sigma

Pi Tau Sigma is the national mechanical engineering honor society. Election is limited to the top fifth of the junior class and top quarter of the senior class, and is based on standards of character, service to the school, and promise of future success in the field of mechanical engineering.

The following students have been elected to pledge Pi Tau Sigma for the spring term, 1963:

Thomas Bermell  
Sanford Krant  
Bruce Hyman  
Leonard Olshan  
Donald Rogers  
Martin Schulman  
Lawrence Weissman

Camponozzi, Harvey Cautin, Mark Cooper, Walter Feldman, Barry Freedman, Herbert Freese, Michael Gruber, Martin Keller, Alen Lefkan, Frank Mastromonico, Jay Popper, David Prerau, Michael Ricken, and Marshall Wattneck.

## Ph. D. Program...

(Continued from Page 1)

with normal classes. Dean Hyman anticipates the success of the program. He said that the faculty "Looks forward to serving the community as a research organization and as a source of doctoral engineers."

The School of Engineering and Architecture Bulletin now lists several hundred credits of graduate courses. Many of these are other graduate courses as prerequisite and consequently on a level high enough for Ph.D. work. The major curriculum changes are the addition of courses that require greater creativity and work of an individual nature. Seminars will be along with research courses. Besides courses given by each of the separate engineering departments, there will be courses under the simple designation "Engineering." These courses are expected to be of interest to more than one of the conventional branches of engineering. The instructor may be drawn from among any of the several departments and the students will comprise a group associated with several departments. Typical titles of this type of course are, "Magnetohydrodynamics," "Digital Computation,"

and "Continuum Mechanics."

The doctorate will be awarded in recognition of a high level of achievement in scholarship and demonstrated accomplishment in original and creative research.

1. The applicant for doctoral candidacy shall have an approved Bachelor's or Master's degree in a branch of engineering or in a closely related area.

2. To become a candidate, the applicant shall pass such qualifying examinations as may be set by the department of his major concentration.

3. The candidate shall complete at least sixty semester credits beyond the Bachelor's Degree. A portion of these may be allowed for research. The selection of courses for these credits must have approval of the department and the Dean. The candidate will be expected to spend a suitable period in residence. Interdisciplinary studies will be encouraged.

4. The candidate shall attend seminars prescribed by his department.

5. The candidate shall demonstrate proficiency in reading the technical literature of his field

## SAME Visits Research Center

By ELLIOT WAGNER

A trip, during the spring vacation, to the United States Army Quartermaster Research and Engineering Center, at Natick, Massachusetts, was sponsored by the Society of American Military Engineers.

The sixteen students left the college on Thursday, April 11 and returned Saturday, April 13. As guests of the U.S. Army the group stayed at the Statler Hilton Hotel in Boston.

The schedule, on Friday, for the tour of the center began in the morning with a welcoming by Lt. Col. Miller, an ROTC graduate. He discussed the greater executive responsibilities of an officer in the army as compared with those in the civilian world. Lt. Col. Miller's responsibilities places him in charge of fifty million dollars of equipment. Following a film describing the activities of the center and a display and a discussion of footwear for the combat soldier the group went to the radiation laboratories. There they saw the research in food preservation using ionizing radiation which destroys bacteria and enzymes. The advantages of irradiated food is it does not need to be reconstituted and can be kept at room temperature. As a result of the work done here bacon has been preserved by ionization for commercial use.

The Quartermaster Research and Engineering Center's work includes improved air delivery equipment (parachutes, vehicles for clearing drop zones, etc.) and experiments on humans and clothing in the arctic and the tropic climatic chambers. It has been doing pioneering research in bionics in which they have been doing experiments on cockroaches to determine methods, other than pesticides, to eliminate these pests. The center conducts studies in thermal radiation. For this purpose they use a solar furnace which concentrates the energy of the sun into an image about four inches in diameter. The furnace can produce a temperature of 5000 degrees F. It was said that this furnace is the largest in the world.

One of the recent developments at the center is air supported shelters. These shelters will be of inestimable value as emergency field hospitals and in places where space and shelter is needed in a short period of time. A shelter as big as an airplane hanger can be put up in one hour by four men.

The mission of the Quartermaster Research and Engineering Command is to plan, program and execute research and development and standardization programs which will enable the Quartermaster Corps to supply and support the soldier at maximum battlefield capacity. The Quartermaster Corps is responsible for the purchase of food and clothing for a half a million men and women each year.

The Society of American Military Engineers is the only engineering organization on campus affiliated with the Reserve Officers' Training Corps. The S. A. M. E. will sponsor its third trip this June to Wallops Island, Virginia, a missile launching site. In addition the S. A. M. E. offers a series of lectures and films every Wednesday at 5 p.m. in Harris 003.

## Guest Tech Life

By FRANK MARTINES

Of increasing evidence over the last decade is the fact that unprecedented demands are being made on the engineering students in this country. We the engineering students, have, in brief, become the target of constant appraisals and criticisms from numerous sources both on and off campus.

While it is understandable that a group occupying a position of such extreme importance in our society should come under constant scrutiny, its effect is often disconcerting to engineering students. More often than not, criticisms are conflicting and appraisals erroneously founded, and here-in lies the problem; here-in lies a true injustice to the engineering student.

On the one hand we're expected to broaden our engineering background by studying new sophisticated topics previously reserved for graduate school and on the other hand we're studying too much engineering and ought to absorb more of the liberal arts; on the one hand we're forced into a politically motivated technical field not of our doing, and on the other hand we're to remain indifferent and doctrinally pure; on the one hand we should spend our spare time learning more about the engineering field of our choice and on the other hand we should be devoting our spare time to extra-curricular activities.

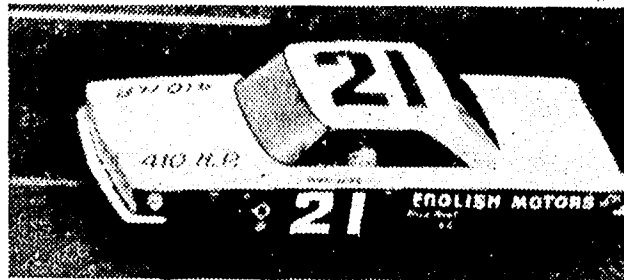
In my frame of reference, these demands recently brought to bear on the engineering student are, broadly speaking, two-fold in nature. There are those made by a rapidly changing industry and

those made by non-technical sources on our own campus.

Although one can conceivably tolerate spiraling academic standards, shocking academic fatalities, and ever changing curricula provoked by industry, it is quite difficult to remain complacent in light of unqualified analysis from these non-tech sources. It seems everybody and his uncle has an opinion as to what makes Johnny tick and they're quick to voice it when a problem becomes apparent. They're quick to point to the entire engineering community and brand the shortcomings of individuals as a trend of the engineering school. We have been given a group identity; erroneous identity of being a group of look-alikes, do-alikes, a think-alikes; of being homogeneous and selfless; set aside and labeled as it were. And to make this point of view more convincing it's continually argued that THE TECH STUDENT "seldom wanders below 137th St.;" that "the natural habitat" of THE TECH STUDENT is some dingy laboratory in an obscure and forgotten cranny; that THE TECH STUDENT does not participate in student affairs.

As early science learned that the earth is not the center of the universe, so should certain people learn that Finley Center is not the center of City College. They should learn that there are numerous activities not housed in the Center that many engineering students do participate in. They should learn that while many of the engineering student's activities are located on North Campus he is as much a part of our integrated community as any. They should learn that as a part of our community he has probably done more to enhance its reputation than any. And finally, they should learn that student affairs are where you find them and that participating in them, regardless of what facet of our diverse makeup they deal with, is all one need do to be "on-the-in."

## How Ford economy won for Tiny Lund at Daytona



The Daytona 500 is one of America's toughest stock car events. It measures the toughness, stability, over-all performance and economy characteristics of the cars that take up its challenge—in a way that compresses years of driving punishment into 500 blazing miles. This year mechanical failures claimed over 50 per cent of the cars that entered. That's why Tiny Lund's victory in a Ford (with four other Fords right behind him) is a remarkable testimony to sheer engineering excellence.

Lund attributed his victory in part to the "missing pit stop." He made one less pit stop for fuel than his competition—proving that Ford economy can pay off in some fairly unlikely situations!

Economy and the winner of the Daytona 500 might sound like odd bedfellows at first. Yet economy is basic in every car we make . . . yes, even the Thunderbird is an economy car in its own way. Here's what we mean . . .

Economy is the measure of service and satisfaction the customer receives in relation to the price he pays for it. It does not mean, however, austerity . . . you have taught us this. Americans want—and we try hard to give them—cars that are comfortable to ride in, fun to drive, and powerful enough to get out of their own way. Not many Americans want to settle for basic transportation. You see this in our sales figures—more than half of our 1963 sales are coming from the top of each model line. We're selling convertibles, hardtops, the jazzy cars . . . the bucket-seat, high-performance, luxury editions are going like hot cakes.

Yet for all the fun that people are demanding in their cars, they still are

very conscious of the element of thrift—of avoiding unnecessary expense. This is the kind of economy we build into every car from the compact Falcon to the luxurious Thunderbird.

There's a special economy, for instance, in Ford's freedom from service. Every car and virtually every wagon can travel 36,000 miles before it needs a major chassis lubrication. Other routine service has been reduced, too—because these Fords are simply built better—and of better materials—than ever before.

In its own elegant way, even the Thunderbird gives you economy. It will travel 100,000 miles or 3 years before you have to lubricate the chassis. Thunderbirds have a way of becoming classics—as a look at their remarkably high resale value will quickly tell you. This, too, is economy.

Once, long ago—before the arrival of the Income Tax—a wealthy lady was asked to comment on the solid gold plumbing of her latest villa at Newport. "So thrifty, my dear," said the dowager . . . "it will never, ever rust."

Economy then, is many things to many people. Whatever economy means to you, you're pretty sure to find it in a Ford.

**America's liveliest,  
most care-free cars!**

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OF DEPENDABLE PRODUCTS



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