ME 72 contest trounces Techers

Technical problems and a challenging course result in shutouts dominating the competition

BY JOHN O'TOOLE

The 16th Annual Caltech ME 72 Engineering Design Contest, better known simply as the ME 72 Contest, proceeded Thursday, November 30 with bumps and stalls, as the contestants were held at the complete mercy of a brutal course. The winners were Jason Wong and Alec Muller, with Steve Schell and Jason Turner coming in second, followed by Dave Gagne and Howen Mak in third. Held at Caltech's Beckman Auditorium, the ME 72 Contest was the final culmination of a terms work for eighteen Caltech undergrads enrolled in the course of the same name. Lead by Professor Antonsen and assisted by many others, the students, in teams of two, were given a goal, a bag of "junk"—various bits and pieces of materials, machine parts, and motors—and left to their wits for ten weeks to produce a machine to compete against their fellow classmates in Thursday's contest.

A few rules were changed in this year's contest, with each team given a full minute to finish their task, rather than the thirty seconds given previous years. Also, rather than using wiring to supply power and control, a wireless system was used, with battery packs providing power and a radio control module receiving control input. This module proved to be problematic, setting off motors before the competition started and making control difficult for the contestants. Instead of the double or single elimination procedures used in previous years, the 2000 ME 72 Contestants faced each other in round robin style. At the end, the four highest ranked teams would square off to determine the winner. The entire afternoon was dominated by double losses, where neither team managed to score any points. Only four matches in the round robin rounds resulted in any points. Steve Schell's unique jumping crane design was one of the few crowd pleasers, as was Jason Wong's compact runabout that was the only consistent scorer of the afternoon.

Going into the semifinal rounds, the fourth place spot was taken by six teams who had failed to score at all. The situation was resolved by a election amongst the twelve students, with the team of Paul Novak and Michael DeSalvo taking the spot. Paul and Michael were defeated by first ranked Jason Wong and Alec Muller, who lead after the round robin stage with two wins. Steve Schell and Jason Turner moved on to the final round where, after two pointless bouts, their opponents Howen Mak and Dave Gagne conceded. The final round was the closest and most exciting of the entire contest, with Jason and Alec managing to score while preventing Steve and Jason from doing so.

336 hours a week at Tech

BY NIGEL AFSARIAN

As of Jan. 1, 2001 a new bi-weekly newspaper, "Caltech 336," will replace the recent monthly "On Campus" newspaper. The newspaper will be working out of the Public Relations Office, with Daryn Kobata as editor and Javier Marquez as assistant editor. The paper will serve all of the Caltech community with hopes of opening a communication channel between the staff, faculty, and students. [The paper was initiated at the behest of Dr. Baltimore and the MAC, who want to keep the community informed of the latest research and campus and personnel news in a more timely manner], said Kobata. Amongst some new additions, some old aspects of the "On Campus" will be kept; one of which is a calendar of academic lectures and campus events.

Steve Schell and Jason Turner work frantically to set up their machine in a contest plagued by a difficult course and technical problems with the new radio control system.

Dr. Ahmed Zewail, Caltech's most recent Nobel Laureate, recently became the second Caltech scientist in the Pontifical Academy following a ceremony at St. Peter's Basilica in the Vatican.

The Pope appoints the 80 academicians (originally 70) who belong to the group, which was established in 1847. Its charter defines its purpose as "The aim of the Pontifical Academy of Sciences is to promote the progress of the mathematical, physical and natural sciences and the study of epistemological problems related thereto." In addition to their role as promoters, the scientists also advise the Pope on scientific developments. Candidates are selected "by the Academy's 70 members or their eminent original scientific studies and of their acknowledged moral personality, without any ethical or religious discrimination."

The notion of a wide variety of viewpoints is central to the Academy. Pope Pius XII expressed this wish for freedom and variety in his 1940 address to the academy when he said: "To you noble champions of human arts and disciplines the Church acknowledges complete freedom in method and research."

At the ceremony, Zewail was presented with the insignia of the Pontifical Academy, and spoke with the Pope personally following the Pope's formal address.

Caltech Security Alert

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The area north of campus has seen an increase in crime recently, as several students have been attacked within the last 10 days. The maps show the approximate locations of the incidents, as reported in the security bulletins e-mailed to students and staff.
Letters to the Editor

Dear Editors:

It is wonderful that Caltech and our insurance program are concerned about the flu, and are providing free vaccinations. However, with a nation-wide shortage of vaccine, perhaps it would be prudent to rethink the campus immunization program. On average, 110,000 people are hospitalized and 20,000 die due to influenza. Most deaths occur in high-risk individuals: people over 65 and those with chronic health or immune-deficiency disorders.

Members of the Caltech population do not generally fall into either of these groups. Yes, most of us are overworked and under-rested. We live and work in close quarters with each other — a perfect stew for disease infection and transmission. Yet historically, Caltech students and staff do not drop dead from the flu. We should delay our vaccination program until doctors and hospitals who serve persons truly in need are served. It is unconscionable to do otherwise — to trade a few days of personal discomfort for an easily preventable death.

— Erik Dill

A.S.C.I.T. Minutes

This week: follow the bouncing ASCIT Minutes

November 20, 2000

Minutes of the ASCIT BoD Meeting November 20, 2000

Present: BoD - Enum: Guests: Nate Austin, Christoph Baranec, Jonathan Dana, Dan Liebling Meeting called to order at 10:12 pm.

Guests: Little t business manager Nate Austin says he already mailed copies of the little t to advertisers. He is still waiting for money to come in from some ads and is worried that the publisher may still charge tax, depending on whether or not ASCIT, as a non-profit organization, is exempt. Otherwise, Nate says, they are fairly close to budget. The money so far has come out of his and Dave Giskin's pocket, but they are not in a hurry to be reimbursed. He will contact Eric when the figures are in, by the second week of next term.

Christoph, Co-Social Veep of Ricketts, requests $200 multimedia funding for the Audiofest concert earlier this term. No interhouse funding yet, but says he will gladly donate the 20-cent bolts he also purchased to attach the lights to the t. Should there be a check-out system on donut for the ASCIT lights? No, we should just have the social director be in charge of them.

Martha-Helen asks us to write that the Women's Glee Club will be having a concert next weekend. I think she also said something about coming in drag.

General Meeting: Eric informs us of the Junior class BBQ that was held last weekend to discuss commencement speakers. The cost to ASCIT is about $200-$300.

Melinda says that the Ritz-Carlton Huntington has just charged us $750 for parking for the formal from last year. It's so late that we were wondering if they forgot.

The BoD will have dinner with Tom Mammion on Sunday, December 3 if it's available. Our backup dates are December 5 - 7.

Chris contacted Tom Mammion about having the In 'N' Out truck come on campus as an incentive for students to fill out the transportation survey. But Tom wants to do survey incentives the old-fashioned way, with houses that get 75% participation to receive a dinner or something like that.

Miriam Feldblum is looking for recommendations for students to be on the Renovation Committee, which will meet over a year to discuss changes to the student houses. There will be four student representatives on each from ASCIT, IHC Avery, and Off-Campus. We'll pick our student representatives at the next meeting.

Martha-Helen will come up with a list of people (2 each) for the Student Health, PE, and Li brary Commissions, and we will vote at the next meeting.

The Student Health Committee will discuss the student insurance program, so we would prefer to hear back from him.

Chris says the SNEs is ready for installation, though we haven't bought any games yet.

The lock system for the t will be installed this week.

Meghan says that the copie works and that she will talk with the people in charge of giving us a copy of the SNEs.

Meagan is concerned about the flu, and are providing free vaccinations. How­ ever, over 65 and those with chronic health or immuno-deficiency disorders. It is wonderful that Caltech and our insurance program are concerned about the flu, and are providing free vaccinations. However, with a nation-wide shortage of vaccine, perhaps it would be prudent to rethink the campus immunization program. On average, 110,000 people are hospitalized and 20,000 die due to influenza. Most deaths occur in high-risk individuals: people over 65 and those with chronic health or immune-deficiency disorders.

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Seagate welcomes Warren Miller to California Institute of Tech Pasadena Civic Center Friday, December 1st, 8:00 PM

Special Screening of the All-New Warren Miller Film

Get tickets in advance at Cal Tech "Y" Center for Student Services or outside theater on day of show. 200 free tickets available. Get your FREE ticket now!* Brought to you by Sony DVD and Cal Tech YMCA

warrenmiller.com

*Must have ticket plus current, valid student ID on the night of the show. 1st come, 1st seated; ticket does not guarantee admission; come early!
The past few issues of the Tech have contained a number of upset letters from the undergraduate population. I have published some pretty critical (some might say harsh) articles before regarding student life at Caltech, but I must take issue with the comments I have read.

Many Innerspace columns have dealt with the misperception of Caltech by prospective students (during Prefrosh Weekend) and Freshmen (during Rotation). I certainly hold fast to ideas I previously presented: that Prefrosh Weekend does indeed mislead some students, and that Rotation misleads many. These issues typically dealt with the social life. I have rarely criticized the Institute when it comes to academics, which the latter by Anonymous and Dean Revel primarily dealt with. Now I will defend this aspect of Caltech life, because it's really Caltech's only redeeming quality for an undergraduate.

Let me first say, if you are a freshman, get some sleep! You're on pass/fail for a reason! You need to stock up now so you can go without for the next 3 years. If you're really overworked, participate in some extracurricular activities. Don't join clubs or sports if it's killing you. And if you're social life is really so great that it's eating up that much time, then I'm jealous; you deserve no sleep.

Be more efficient. Don't be in groups. I know it's hard, but I've often found that, at least for me, the more people around, the slower homework is finished.

If you're already taking suggestions from others, consider changing your college plans. Even schools like Harvard and Caltech do not have the great M:F ratio that we do, but you'll get used to it.

With that said, I will move on to more specific points. Let's begin with classes. Everyone should know how hard it is not to hard to graduate, but some students are academics here difficult. Students take many classes, none of which are easy. This information is available in the Course Catalog, in material Caltech sends to prospective students, in reviews by outside sources, and (if you're lucky) during Prefrosh Weekend. This is the Marine's of academics. You may be somewhat surprised at the difficulty level, but you shouldn't be that surprised.

While we take many classes, we learn many things. I truly believe that Caltech undergraduates learn far more than students at other universities (I have to believe this to keep my own sanity). We may not get exposed to every single detail of a discipline; rather, our classes teach us the important, fundamental concepts. We don't sweat the small stuff — you can learn that later in graduate school or in industry. And it is true that you will not learn every concept in one or two classes. You take some. Things you will forget (like all of Bi 1), but you will learn something, and it will be important. I must also add that it's only during Freshman and Sophomore years that your schedule will look the same, and you'll be surrounded by your classmates. By the time you are a Junior or Senior, you will probably have figured out what you want to major in, and your classes will be more focused on that area. When that happens, classes fit together somewhat better, and the freshmen is less broad, if not less powerful.

How about the Student/Faculty ratio? Yes, it's 3:1, and no, you won't notice the benefit of that... if you're lucky enough to be in the right class. But there are many opportunities for research at Caltech, many more than at any other university. Because we have more students available in the undergraduate, most faculty are happy to take on an undergraduate (or many, in some cases) to be a research assistant. I started working with (in Astronomy, which isn't even my department) during my Freshman year, and I have continued since. I am, in fact, writing this column from a computer at the 60-inch telescope on Palomar Mountain, a top-notch observatory. In my time at Caltech, I have observed on Palomar on many occasions (usually twice per term). This is not an opportunity typically available to most undergraduates at other schools, especially those who are not astronomy majors. At Caltech, I had to do was talk to a professor.

I have worked on a number of significant research projects here, and I am happy with all of those experiences. In every case, it was not difficult to get involved. All I had to do was talk to my professor, and he/she would go so far as to say that most faculty at Caltech would like more undergraduates to be involved in research and would welcome students that do that, but it is the students who are the limiting factor. These opportunities (usually...you have to put in some effort to seek them out. But once you do, it's not hard to find faculty to work with you. The argument that students don't have time to do research during the year is because of classes is clearly ridiculous. In just about every major there is a "Research in..." class, which will give you some number of units in the form of grading for doing research during the year. If you don't want units, you can usually get paid for it. Sounds like a good deal, but I'm not going to try to discourage students from attending any more than it really is. I mean, really, it's not that tough. Most people think they can't cut it and in fairness, students that will be expecting they will is effective.

An everything "hunky-dory" of Caltech for undergraduates? I say it depends on who you are, of course. Overall, students here tend to be very busy. They may not have much time to visit friends, and they may not know that, and I think they play a pretty good game. Even if you think they're a threat, you should look for a way to use the system for student to work with you. As mentioned above, you've found someone, you've got a student for that project. Basically, the point is: go to talk to professors! They don't like it.

As far as classes go, it's true that many faculty here are really good teachers, and some are not, but I think overall they are pretty good. Even if you think they're terrible, I'm sure that there's a reason we have books and problem sets and tests and friends! Lecturer is not the place you should be learning all the material, it's a nice addition to a book, but you really can learn a lot just by reading the texts and doing your own homework. You will also have a lot from fellow students. On top of that, if you want to talk with a professor about concepts from class, they are usually available to you so don't be afraid. To even part Caltech professors to those a university and say that the administrative staff is good. Sure, they might not present the material in the best, but they really understand it better than the students! Who would you rather learn from a trained lecturer or the world's ex pert on a particular field?

Find out what is being done in plug fo Innerspace. If you came to Prefrosh Weekend in either of the past two years, you were into a critical review of undergrads at Caltech. Did you feel like you'd do more work than you think that you probably would have: girlfriend, that you wouldn't go much, and that the social life sucked. Yes, all of this information was available in the student news for the past 2 years. Caltech was not. Caltech, and it gave a pretty hard time. If you didn't see it or chose it ignore, then you are missing out. Sounds like it's a lot like MIT's UROP program to me, except that there's no central organizer. You have to dig it out and try to find the student to work with. And, as mentioned above, you've found someone, you've got a good student for that project. Basically, the point is: go to talk to professors! They don't like it.

I don't think that's the best idea. Caltech, here, we're all in it to get together, and that shows through in all aspects of student life.
where is the future of high tech?
The commercial celebration of Christmas starts earlier and earlier. Not that this is a novel insight/complaint, but this year it was brought home more forcefully because I watched more television over the Thanksgiving break than I usually do. I twisted my ankle a while back and took along, hoping it would mend it—maybe the Titanic PlayStation. There were also the great movie, but what impressed me were the toys offered for kids of all ages. There were the fulsome pronouncements suggesting that life’s problems can be solved by purchasing fancy toys, but have they really been turned virtual pages I came to see how much work their students were expected to do. As I was turning virtual pages I came across a section which discussed how final examinations were to be handled. Quite a difference from Caltech. It brought to mind turning examinations when I was a first-year student at the university in my home town. We sat in a huge lecture hall with a single seat left empty between each two students. The time for examinations was synchronized for all courses, and the students were seated in the room so that it was very unlikely you would be anywhere near a classmate. Proctors walked up and down the aisles, ready to pounce should they see anything they thought suspicious.

But back to Harvard: their final examinations are given in the classroom, at a time determined by the Registrar’s Office (I think), for example, from 9 a.m. (shudders) to noon. Appropriate behavior is described in the Faculty of Arts and Sciences Handbook as follows, hmmm... “Examination Rules: In order to avoid any possible suggestion of improper behavior during an examination undergraduates should refrain from communication with other students while an exam is in progress. They should also not retain or refer to any books or papers during an examination except with the express permission of the instructor or proctor. Eating and drinking are not permitted in any examination room. For violation of the examination rules or dishonesty in an examination a student may be required to withdraw from the College. Students who fail to obey the instructions of an examination proctor are liable to disciplinary action.”

At MIT exams are also taken in a strictly supervised environment. Their catalog says “Take home final examinations are not permitted for any undergraduate subject.” It all sounded pretty forbidding, and I’m glad our honor code allows us a rather more relaxed atmosphere. Of course an exam is an exam and taking it in the comfort of one’s room or in a library carrel, with munchies at your elbow, still requires that it be taken in a manner above all reproach. The work has to be your own, and has to be done in the allotted time. All of that is specified in our Honor Code. Good luck on your finals!

While I am on the topic of the honor code I need to broach a topic that concerns me. And that is the increasing number of instances in which students, having witnessed a particular event, refuse to name who was involved. It is quite admirable not to rat on one’s friends. It is good that students take good care of each other. But one needs to balance this expression of friendship with the good of everyone else. It is important to recognize that the freedoms derived from living under the honor code are derived from an explicit understanding that everyone will be held in a manner that is above reproach. The confidence expressed in you by allowing you great freedom assumes that everyone is willing to be responsible for their actions. Anyone carrying out a prank must leave his or her identity. All too often pranksters hide behind anonymity. All too often they are helped to do so by their “friends” and the opportunity to do things in a manner above reproach. They say to the rest of us, “I can act as I wish without paying attention to you.” That is not in the spirit of Caltech, that is taking advantage of others in the community. And these are the people whom their “friends” want to protect? Shielding each other from responsibility is an ultimately self-defeating behavior. We can enjoy the liberty and the convenience which are the result of living under the honor code only if we’re all willing to take the consequences of our actions.

So good luck on the finals, see you all in the New Year, rededicated to support the Caltech way of doing things. Maybe everyone should read the Honor System Handbook over the break! And include “acting responsibly” as one of your important New Year’s resolutions. Till next year, A bientôt!

Jean-Paul Revel
that they design themselves, along the lines of Mr. Rhoads’ interests and skills. Interested students should apply to the In- stitute Committee on Art by way of

obligatory. The Caltech Administrative Committee on Art has arranged for an appointment of a world-famous sculptor, George

Tennant, as an artist-in-residence starting January 2 for a six week period. Ten Caltech undergrads and grads will be selected to make metal or wood sculptures

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Mints

Science, Ethics, and Public Policy Lecture Series for Fall Quarter 2000:
The William and Myrtle H. Har- ris Distinguished Lecture in Science Ethics and Public Policy this year presents Dr. Peter Galison, Professor of the History of Science and of Physics, Harvard University. Pre-registration for lecturer’s Maps of Science and Einstein’s Clocks, Friday, De- cember 1, 2000 4:00 p.m.

* The Swedish Club of Los Angeles, Inc., plans to award two $2,000 scholarships each quarter in recognition of students who pro- duce and present an outstanding Diploma and one in Math- ematics and/or the Physical Sciences. Candidates must be up- per class or graduate students in an accredited college or university in Southern California with strong academic qualifications. To apply, applicants must submit official transcripts, letters of recommendation from two pro- fessors, and an essay describing their academic goals. Please send application materials to: Peter Franta, Swedish Club of Los Angeles, Inc., 1212 Research Parkway, Orlando, FL 32826-3298. Entries must be submitted to the Swedish Club of Los Angeles Inc. by December 1, 2000.

* The National Academy for Nuclear Training is offering two $2,500 scholarships to eligi- ble students majoring in nuclear engineering, power generation health physics, electrical or mechanical engineer- ing, or chemical engineering, with nuclear or power op- tion. Applicants must be U.S. Citizens, enrolled full-time in a four-year accredited institution, minimum GPA of 3.0 or higher, and interested in nuclear power careers. Addition- ally, scholarships will be renewed for current Academy scholars who maintain their eligibility. For further information on the National Academy Educational Assistance programs, please visit www.nei.org. Applications are available in the Financial Aid Office. Please complete application materials to: Na-