#### 16th Annual ME72 Engineering Design Contest

Thursday, November 30th 2pm Beckman Auditorium free admission



Ladies and Gents... announcing the

#### Annual Dabney Drag Show

beginning this evening at 8pm in the Dabney courtyard

# The California Tech

Volume CII, Number 9

PASADENA, CALIFORNIA

NOVEMBER 17, 2000

# CHEMIST RECEIVES 2000 NATIONAL

MEDAL OF SCIENCE

BY TECH STAFF

On November 13, John Baldeschwieler, J. Stanley Johnson Professor and professor of chemistry, emeritus, was named one of this year's twelve recipients of the National Medal of Science. A member of the Caltech faculty since 1973, Baldeschwieler was cited for his work on molecular assemblies used for the delivery of pharmaceuticals, for his work on scientific instrumentation, and particularly for his development of ion cyclotron resonance spectroscopy.

"I am delighted with the recognition that the award brings to our work at Caltech, and to the extraordinarily talented group of students that I've had the privilege to work with over the past four decades," Baldeschwieler said after receiving notification of the award.

President Baltimore, a 1999 recipient of the National Medal of Science, said the award is a fitting tribute to Baldeschwieler's pioneering work in a wide range of fields. "The National Medal of Science is America's most prestigious science honor, and I think it's appropriate that the award goes to John for his many contributions to basic science, as well as for his public service."

A native of New Jersey, he earned his doctorate at Berkeley in 1959. Baldeschwieler joined the Caltech faculty after several vears at Harvard and Stanford universities. He was also a member of the President's Science Advisory Committee from 1969 to 1972, serving as vice chairman from 1970 to 1972. He served as deputy director of the Office of Science and Technology from 1971 to 1973. Baldeschwieler pioneered the use of nuclear magnetic resonance and double resonance spectroscopy, nuclear Overhauser effects, and perturbed angular correlation spectroscopy in chemical systems. His recent work concentrates on the use of phospholipid vesicles in cancer diagnosis and therapy, the development of scanning tunneling and atomic force mi-

PLEASE SEE MEDAL ON PAGE 4

# You flick, you flame, UASH

BY WILLIAM FONG

When we return from our winter break (which is only three weeks away), we can look forward to beginning yet another term at Caltech that will inaugurate a set of UASH changes. The Undergraduate Academic Standards and Honors Committee, UASH for short, has made changes in its procedures for dealing with petitions for late adds and drops, underloads, additional term requests, and reinstatement.

UASH is a committee on campus composed of students and faculty that deals with academic honors and academic matters that involve undergraduates. The changes that will be effective January 1, 2001 will only affect

UASH's procedures concerning academic matters. The new year will usher in a set of new petitions that are more specific than the present form. Instead of just one form that encompasses all miscellaneous matters, there will be a separate petition for each of the following: late adds and drops, grade changes, further work, and underloads. These forms are obtainable from the Registrar's and Dean's Offices as well as from the web at http://www.registrar.caltech.edu/ uash/. There are detailed instructions on how to complete these new forms in the UASH handbook, also available from the Registrar's and Dean's Offices and on the web at http:// www.registrar.caltech.edu/uash/ handbook.htm. Currently, both

the old form as well as these new petition forms will be accepted; only the new petition forms will be accepted after January 1 of next year.

Perhaps the most important change in UASH procedure concerns the process of reinstatement. Reinstatement is a student's request to continue at Caltech after becoming academically ineligible. Ineligibility for undergraduates can arise for a number of reasons, including: a GPA of less than 1.4 in the previous term, a GPA of less than 1.9 for the previous year, more than 27 units of E and F in the previous term, more than 45 units of E and F in the past academic year, the completion of less than 36 units or a GPA of less than 1.9 in the term following a reinstatement, or the completion of less than 99 units in the previous three terms. Once a student becomes ineligible, the student cannot register for classes in the subsequent term until he or she has been reinstated into Caltech by UASH.

In the past, the procedure followed by UASH when dealing with reinstatement petitions began with the student filing a brief petition, a short statement, and his or her transcript. This is followed by the presentation of the student's case to the committee whose members then discuss the petition. Afterwards, the student is called in for an interview where the student is questioned by the committee with regards to the student's case. Then, be-

PLEASE SEE UASH ON PAGE 2

# L. Sprague deCamp, Sci-Fi author and alum, dies

BY ROBERT LI

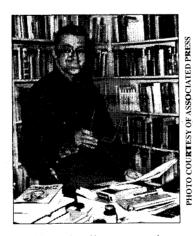
Lyon Sprague de Camp, famed science-fiction writer and graduate of Caltech, passed away on November 6. He follows his wife of 60 years, Catherine, who left this world on April 9. L. Sprague de Camp is survived by his two sons, Lyman and Gerard.

In 1930, after spending his childhood in New York City, L. Sprague de Camp graduated from Caltech with a BS in Aeronautical Engineering. Three years later he received a MS in Engineering from the Stevens Institute of Technology and during the Depression, wrote science fiction stories for Astounding magazine. He served his country during World War II as Lt. Commander in the US Naval Reserve. After the war, L. Sprague de Camp became a full time writer.

The prolific career of L. Sprague de Camp includes over 120 science fiction and fantasy novels, hundreds of short stories, and well-known non-fiction works in history, science, and biography. Some of his works of fiction include: the Thinking Bear series of science fiction short stories; short stories featuring Conan the Barbarian, a character first created by the late Robert E. Howard; "Rivers of

Time"; and perhaps the most well-received of his works, "Lest Darkness Fall". L. Sprague de Camp's works of non-fiction include recognized pieces such as "The Ancient Engineers" and "The Great Monkey Trial".

Besides writing, L. Sprague de Camp has worked as an educator, lecturer, engineer, patent expert, and publicity writer. He has also traveled the world with



his wife and colleagues to do research for his books.

Among the many accolades that L. Sprague de Camp received in his half-century of writing are such honors as the Nebula Award in 1978, the Grand Master Award for Lifetime Achievement in Fantasy, and the Hugo Award in 1997.

As a veteran, L. Sprague de Camp and his wife will be laid to rest in Arlington Cemetery.

#### Science Fiction Film as History

BY TECH STAFF

"The Science Fiction Film as History," a course Professor Robert Rosenstone offers every other year, will this winter term become part of a Pasadena celebration entitled "The Universe."

This spring festival will include exhibitions and other events at the Norton Simon Museum, the Art Center College of Design, the Huntington Library, the Armory Art Center, and One Colorado, and will feature concerts by the Southwest Chamber Orchestra.

Four of the nine films for Rosenstone's course will be open to the campus community and the general public. Each will be followed by a panel discussion that will include well-known scientists, humanists, and possibly filmmakers.

The four films will be "Contact" (Jan. 14), "Things to Come" (Jan. 30), "The Day the Earth Stood Still" (Feb. 13), and

"Blade Runner" (Feb. 27). "Contact" will be screened at 2 p.m. in Beckman Auditorium, and the rest of the films at 7:30 in Baxter Lecture Hall.

Students in the course will attend video screenings during the other Tuesday nights of the winter quarter, and will meet with the professor for lectures and discussion on Thursdays (the time will be determined at an organizational meeting on the first Tuesday of the term.)

The general aim of the course is to introduce students to classic science fiction films from the earliest days of cinema through the present.

Students will analyze such works as aesthetic, historical, and social documents, and to examine how such films, while describing alternative, hypothetical, and futuristic worlds, also serve as a commentary upon and/or a critique of contemporary (to the film) historical, social, political, and ideological systems and attitudes.

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## **ME 72**

#### Annual engineering design Contest: Teamwork Introduced

(beginning in 1987), the

BY HOMER

The 16th annual Caltech Engineering Design Contest will be held on Thursday November 30, 2000 starting at 2:00 pm in Beckman Auditorium. Spectators are welcome. Admission is free.

Engineering is primarily the process of creating new things to solve problems. This

course, and contest, is one attempt to provide students with a real-world opportunity to learn about the design of new things, and the solution of open-ended, ill-defined problems.

At the beginning of the term the students are given a design task, a "bag of junk", and 10 weeks to design and fabricate a device. The task is a competitive one, and is different each year. Each participant (working as part of a team of two) must design, prototype, fabricate, assemble, test, debug, and tune a device to compete against pairs of classmates' devices. Only the materials provided in the "bag of junk" are permitted. A typical year's "junk" includes: plexiglass, aluminum, a few ball bearings, shafting, brass tubing, a few pulleys and rollers, and other miscellaneous surplus "junk" that can be found in sufficient quantity. Before annual Schlumberger contribution power source supplied to the students was rubber bands. Since that time we have been able to provide two (or more) electric motors each. Donations from our industrial sponsors have enabled us to provide each student with high quality "junk". The display case in the middle of the first floor of the Thomas building includes several of the students' devices from the previous contest, the trophy, and a display of the contents of the "bag of junk". Six years ago the students designed and built devices that collected golf-balls from a trough. Five years ago the devices delivered a pre- loaded collection of ping-pong balls to a drain. Four years ago the devices had to gather and sink golf balls into a central drain. Three years ago the devices moved hockey-pucks, golfballs, and hose-washers out of their side of

the table, across an 8-inch high ridge. Two years ago the devices, in teams of two, gathered ping-pong balls from a central bar and

moved them in a soccer-like game into goals at each end of the table. Last year the devices, in teams of two, attempted to attach plastic shapes to a vertical Velcrocovered wall. This year's contest is entirely different, and requires students, again working in teams of two, to design and build individual devices that compete together.

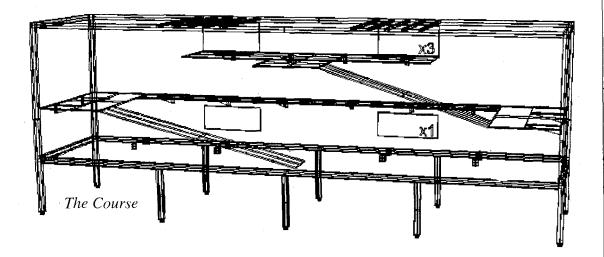
There is an attempt each year to provide a real-world engineering atmosphere. There is a limited amount of time. The hardware resources are limited. Team members must negotiate over size, weight, and task constraints. There are many competing requirements, and overall strategy is a crucial initial decision. Every effort is made to make the contest scrupulously fair; all students have exactly the same raw materials and time, and access to tools and machine tools. The only variability is the student's learning, talent and expertise. Many lessons come out of the class, including: working in design teams; management and planning of time in the design cycle; decision-making in an uncertain environment; the benefits of prototyping and testing; the benefits of modular easy-torepair designs; the interaction between design and manufacture; and an experience with open-ended problem solving.

The tournament begins at 2:00 pm and lasts about an hour and a half. Additional information on the course and contest is available at: http:// www.design.caltech.edu/ Courses/ME72/

### ME72 Engineering Design Contest Rules in Brief:

At the start, each team's devices (together a maximum of 20 x 20 x 40 cm in size (about 8 x 8 x 16 inches) and 4.5 kg in mass (about 9.9 pounds)) are positioned within their 20 x 40

faces) are positioned on the table top. During the 60 seconds of electrical power (2 channels controlled by a joystick, plus 2 switch-controlled channels, provided by batteries and a radioare worth 2 points. The wall is divided into scoring zones with values of 1 (below the middle shelf) to 3 (above the top shelf). Each SI's value is determined by multiplying its point value



cm start zone on opposite sides of a shelf suspended 0.91 m (3 feet) above a 1.22 x 4.88 m (4 x 16 foot) table. A ramp leads around the inside of the perimeter of the table from the shelf down to the padded table top. At the start, 8 scorable items (SI's) (4 cubes and 4 cylinders, each containing magnets on some

control pack carried on each device) each team attempts to magnetically attach SI's in scoring zones on one side of a vertical steel-backed chalk-board wall. Each team's score at the end of each contest is based on the number and location of the SI's on its side of the wall. Cubes are each worth 1 point and cylinders

by the value of the zone in which it is attached. The team with the most number of points at the end of 65 seconds wins. An overall winner will be determined in a modified roundrobin tournament, followed by a single-elimination playoff tournament among the top 4 teams.

Faculty, Students, Sponsors, and Friends: Please join us for:

#### The 16<sup>th</sup> Annual Caltech **ME72 Engineering Design** CONTEST

to be held: Thursday November  $30^{th}$ , 2000 starting at 2:00 pm

in Beckman Auditorium on the Caltech Campus

Spectators are Welcome

Admission is Free

Professor Erik Antonsson Presiding

Additional Information is available at:

http://www.design.caltech.edu/Courses/ME72/

#### **UASH:**

#### CONTINUED FROM PAGE 1

hind closed doors, a decision about reinstatement is reached by the committee. After an analysis of this procedure, the interview component of the reinstatement process was deemed bad because it was not only time-consuming, but it was also unpleasant for students.

As a result, the interview component has been phased out by UASH in favor of a procedure that is solely based on a written petition. The petition is longer than the present form but is aimed towards being more informative and specific in order for the student to completely present his or her case. The new procedure involves the student submitting the petition to UASH with supporting documentation. The committee members then read and review the petition which is followed by a member presenting the case to the entire committee. In the past, it was unclear what UASH based its decisions about reinstatement on, but the UASH handbook now makes it clear that the central question which the UASH committee addresses is: "Is this student more likely than not to succeed in his or her academic work in the coming term?"

Professor Fiona Cowie, in her seventh year as a member of the UASH committee and first year as chair of the committee, says that "by making the questions that UASH asks explicit, the students will know exactly what kind of information we're looking for." This user-friendly petition will debut next year with hopes of improving the reinstatement process.

#### THE CALIFORNIA

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## Letters, Lectures, and Culture

# WHAT'S WITH ALL THIS WATSON LECTURE STUFF ANYWAY?

BY JONATHAN FOSTER

Dr. Judith Goodstein, author of several books about Caltech and the institute's first archivist but better known to the undergraduate community as the Registrar, presented the latest in the Earnest C. Watson lecture series on November 17th in auditorium. Beckman "Memories of Caltech Past", combined a slide presentation and talk with a short video highlighting memorable moments from Caltech's past.

These memorable moments focused primarily on famous past personalities at Caltech and what Dr. Goodstien referred to as "Caltech Culture". The culture slides primarily focused on Caltech traditions and pranks: the Halloween pumpkin drop, Ditch Day, Commencement (which is always held outside), the many prankings on the Rose Bowl and certain notable decorations of Millikan Library. These sorts of things are fairly familiar to Caltech students. However, Dr. Goodstein had some less well-known anecdotes also.

Millikan, who esentially established Caltech as we know it today, was a brilliant scientist (Caltech's first Noble Prize Winner) but a difficult administrator. Apparently, being a professor in Millikan's time was almost as difficult as being a student today. Millikan was famously against vacations, and whenever a professor asked for time off he is reputed to have replied, "Why do you want a vacation, don't you like your work?"

Another interesting story Dr. Goodstein told was the tale of Caltech's seal. Millikan commissioned a seal in the early 1920's which depicted two figures in the clouds, the elder one passing a torch to the younger. However, this seal was never officially approved by the Board of Trustees. In 1969 a new seal appeared on the information

# Toghurt

BY CALLAS AND ONASSS

This week we bring you an event above and beyond our usual level of culture, and highly amusing. (Skip to the last paragraph if this is above you.) Long before many of you were born, there was darkness throughout the world, mainly at night.

People everywhere were in despair as you were not around, and some in more despair after you were. Yet, in 1978 (gasp! the antiquity!), a group of very strange individuals came up with an idea for a high class cultural art form. When that didn't work out they invented... The Doo Dah Parade.

The Doo Dah Parade is a satire of that other annual Pasadena parade, I think it's on the 23rd of February. The Doo Dah Parade has no rules, no judges, no prizes, and no motorized vehicles. However, they do have the Synchronized Precision Briefcase Marching Drill Team, this year's Grand Marshalls. There is no real format and no one really seems sure who will be there. It is always quite hysterical and more than worth the nothing you pay to see

The parade is followed by a pub-crawl through Old Pas featuring many local bands including our favorite, Snotty Scotty and the Hankies. Considering the typical (short) length of the parade and the 11:30 kick-off, the sun should be over the yardarm just in time for the crawl.

There is even a Doo Dah Queen, or at least there was one in 1997. That year the Queen was Mrs. Lily Hodge. Mrs. Hodge was brought to the tryouts by her husband because she could not leave her urn. She had actually been deceased for a number of years.

Kickoff time is 11:30 am on Sunday (the 19th). The parade starts at the corner of Raymond and Holly, heads south on Raymond to Colorado, and west on Colorado to Pasadena Ave. Go early and take a chair. Plus you can stop by the Gem and Mineral Show after the parade. For only \$3, you can enter the Pasadena Civic Convention Center

(300 E. Green).

Those of you with more class should clear your calendars tonight and Sunday. Tonight at 8 pm, the Caltech-Oxy Orchestra will hold their free end-of-theterm concert in Ramo Auditorium.

Support musical Techers (what a concept) and enjoy the wine and cheese offered at the reception following the concert. Sunday in Beckman Auditorium at 3:30, there will be a Coleman Chamber Concert.

The Coleman Concerts are always excellent and this week it is the Brazilian Guitar Quartet. The Groups that appear in the Coleman Concerts are always world-class performers and well worth seeing. Tickets for Techers are only \$5.

#### LETTERS TO THE EDITOR

Dear anonymous,

It is customary and proper for critics to present their ideas openly. You know, all that stuff about being able to confront your accuser. Anonymous, it seems to me that you have let anger take hold of you and lead you on. My editorial was a comment on US News & World Report's evaluation of Caltech. We are obviously not the school for everyone. When there is a mismatch we help students find more satisfactory ways to get the kind of education they want.

This being said, you seem particularly upset about opportunities to meet Profs and do research. There are 63 students having declared a major in biology, the division I know best. Of these, 20 signed up for a research course (Bi 22), this term. On drop day, sixteen were left. Eight students are enrolled in Bi 90, (Thesis Research). In addition there will be some students working for pay, but I do not know how many. So discounting these, 20 students working out of 63, means nearly 30% have found labs in which to work.

Jean-Paul Revel

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PLEASE SEE WATSON ON PAGE 4

## The world

#### WATSON:

CONTINUED FROM PAGE 3

for the inaugural address of Harold Brown (Caltech's 2nd president). This seal was nearly identical to the current one, and the Board of Trustees officially adopted it as Caltech's seal. The students took exception to this, and the old seal was left on the diplomas, which is why Caltech's diplomas have two different seals on them.

Finally, Dr. Goodstein told the story of Earnest C. Watson, a brilliant scientist and lecturer who introduced the tradition of evening lectures at Caltech by presenting lectures in 201 E. Bridge. The Watson Lecture series was renamed in his honor in 1972. This series continues next year on January 17, when Dr. Ken Libbrecht will be presenting "The Physics of Snow Crystals."

CONTINUED FROM PAGE 1

croscopy for the study of molecules on surfaces, and on novel techniques for producing combinatorial arrays of oligonucleotides.

Baldeschwieler was a founder of Vestar Inc., and served as chairman of the company's board of directors until it merged with NeXagen Inc. Baldeschwieler was also a founder and director of Combion, Inc. He currently

serves as a managing member of the Athenaeum Fund and is a director of Drug Royalty Corporation Inc., the Huntington Medical Research Institutes, Pasadena Entretec, and several privately held companies.

One of twelve recipients this vear, Baldeschwieler will receive his award at the White House on December 1. There is no grant associated with the medal. There have been 386 recipients since the medal was established in 1959 to honor scientists who have had an important impact on human knowledge in a variety of scientific and engineering fields.

Baldeschwieler is the 46th person affiliated with Caltech to receive the National Medal of Science. The first year the medal was offered, the only recipient was also a Caltech professor, Theodore Von Karmen. Other Caltech winners in the past include Linus Pauling, Richard Feynman, and Arnold Beckman. (A full list can be found online at: http:// broccoli.caltech.edu/~development/ news\_room/NatMedSci-frame.html)



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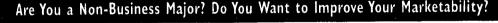
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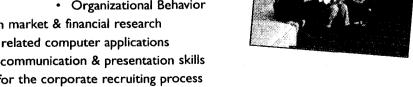
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### The Outside World

by Erik Dill

Sarasota, Florida—A U.S. Air Force F-16 collided in mid air with aprivate Cessna. The Cessna pilot was killed, but the military pilot ejected safely.

Moscow, Russia—President Vladimir Putin's cabinet authorized abandoning the Mir space station. Currently, the Russians plan to crash Mir into the central Pacific in February.

Vargas, Venezuela—A state of emergency has been declared and thousands are homeless due to severe flood-

**Congo, Africa** —1.6 million people have fled their homes due to an increase in rebel fighting in the north and east.

Los Angeles—3 of 4 defendants in the first Rampart police corruption case were convicted of conspiracy to obstruct justice and filing false police reports.

Phoenix, Arizona—State Representative Steve May was honorably discharged from the Army reseves for being gay. In upholding the discharge Mai. General John L. Scott said that May violated the Army's "don't ask, don't tell" policy when he acknowledge his homosexuality in a legislative debate, even though it was in no way connected with his duties as a reservist.

Beijing, China—A gathering of poets sponsored by the Communist Youth League was cancled after officials learned that dissident writers were invited. Two poets were subsequently arrested and are being held in jail for organizing the "illegal gathering".

Ann Arbor, Michigan—A University of Michigan student died of alcohol poisoning after trying to celebrate his 21st birthday by drinking one shot for every year of his life. He downed 20 shots of scotch in an estimated 10 minutes and had a post-mortem blood alcohol content of .39.

Nairobi, Kenya—68 people died and 245 were hospitalized after drinking moonshine which had been diluted with methanol. Home brewed alcohol is often cut with high-octane fuel or methylated spirits to give it a kick.

Shimonoseki, Japan—A fleet of five Japanese whaling ships left port for the Antarctic to hunt minke, Bryde's and sperm whales. President Clinton criticized the action, though Japan defends its whaling as necessary for scientific research.

#### Hair on lake

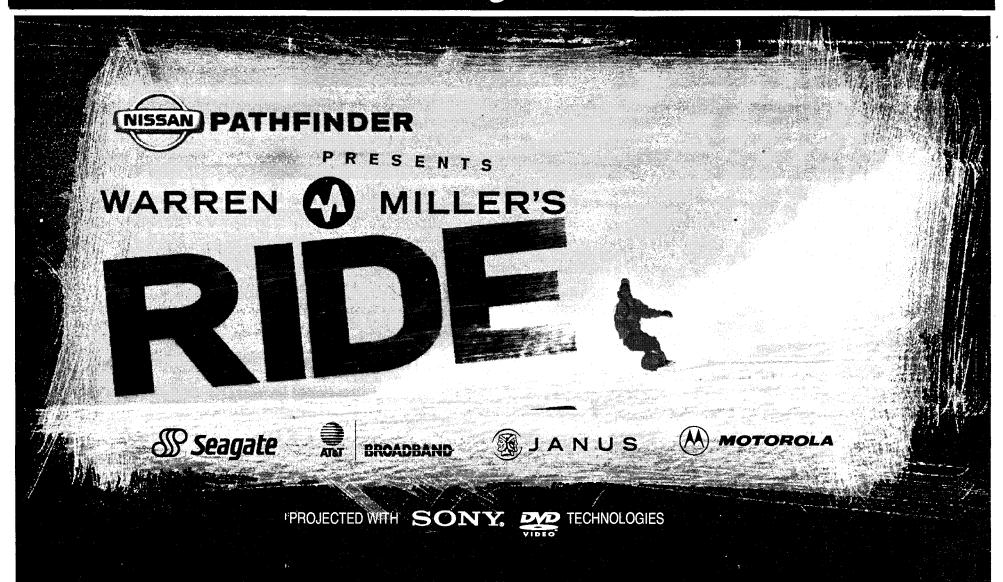






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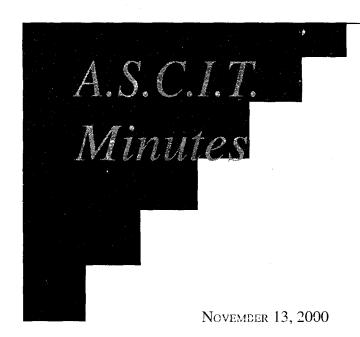
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## **ASCIT** minutes



Minutes of the ASCIT BoD Meeting November 13, 2000

Present: BoD - Meghan; Guests: Scott Van Essen, Janet Zhou, Garrett Heffner Meeting called to order at 10:41 pm.

receiving the Marshall Scholarship. He will be studying in England for two years.

Guests Scott Van Essen, a member of the Ecphonema singing group, requests his club's funding for the term sotto voce.

Fleming frosh Janet asks for Fleming's multihouse allocation for first term to cover costs for the frosh party they had last weekend. We say sorry, but already gave Fleming funding this term

for their laser tag event with Lloyd a few weeks ago. Martha-Helene sympathizes with Janet, since she was in charge of getting frosh party funding as a Fleming frosh last year. She advises her to keep We congratulate Eric for bugging the Fleming excomm.

> General Meeting 10:49 pm - Minor disturbance in hallway involving Darbs, CO2 cartridges, and lots of

> Jason reports that the locks for the Playstation 2 in the Coffeehouse are on order through Tony Valdespino in Housing.

> In the meantime, the PSX2 will be protected by an impervious and indestructible invisible force field known as the Honor Code.

> > Bangkok Moscow Lisbon Madrid Barcelona Tel Aviv Johannesburg Delhi Hong Kong

Chris exchanged the broken SNES for a good one. Laura asks who would want to play the SNES when the PSX2 is around. Lots of people, since the SNES is "old school" and therefore "radical," "tight," and "all that and a bag of Fritos." We still need to get some games. Classics like Super Mario Cart will never die.

Martha-Helene says that the ASCIT copier is not working. Chris will email the right people to get that fixed.

Eric, Laura, Chris, and Sean met with Andre last Friday to discuss the Coffeehouse. The new managers, Melissa Soriano and Dominika Rytwinska, and

Attention clubs! The contents of SAC 35 need to be moved out now to make space for the Screening Room

the new employees will receive training on how to use the equipment.

There was some concern about the Coffeehouse opening three weeks late, which meant lost revenue. There are also some old problems, but we are confident that the new managers will solve them.

A meeting is being set up by Miriam Feldblum, the President's liaison, to discuss renovation of all seven student houses.

The houses are not up to code (for example, wheelchair access is nonexistent). This will be a long-term project and no student here now will be affected. A onetablished to come up with a proposal, comprised of faculty, staff, and four student representatives (1 appointed by ASCIT, 1 by the IHC, 1 from off-campus, and 1 from Avery). A major

renovation will require temporary housing for students, and questions like how that will affect the current house system need to be addressed.

Sean wonders out loud if it is cost-effective for us to have a full-time accountant.

Eric says that the CLUE data they received from the registrar is screwed up, which is what is causing the delay.

He also reports that the Caltech lawyer said the Best Book Buys site is okay to link to from the ASCIT Bookmart page, but not okay to collect money from. The site offers 15 cents per click-thru by each person referred.

The ASCIT lights purchased by Dan Liebling and Ted Jou looked awesome at the parties last weekend.

Attention clubs! The contents of SAC 35 need to be moved out now to make space for the Screening Room, which should be ready by second term. There are a lot of books in there, CCF ones and some written in Chinese (so we have no idea which club they belong to).

All the components of the DVD library are done; they just need to be put together. Chris will talk to the donut people about setting up a computer checkout system with a barcode reader.

In the meantime, the checkouts will be done by hand. Eric assures us that Wes will do all the manual labor.

11:30 pm - Chris remembers that Nate Austin was supposed to come to tonight's meeting. He goes looking for him.

11:31 pm - A knock at the door. It opens and Gurt, the Social Director from the year committee will be es- previous BoD, enters. He chats with us a little and it's with that. like old times again. We give him a hard time for sending Janet to request Fleming's already received funding. He denies all knowledge. The true pur-

pose of his visit, however is to bring some bad news He just talked to Sean's mother who called to inform him that Sean's favor ite goldfish, Flipper, has just passed away. (A moment of silence.) She would like to know if Sean has any last words to say before they flush. Could Sean be excused from the rest of the meeting to address this sad sad tragedy?

Sean's red face illuminates the entire room. The BoD assures Sean that we feel his pain and he leave in tears with Gurt.

Melinda says that Occidental really wants to have a big construction party with us this term. The want us to build on their campus something reminis cent of the movie "Real Ge nius." Eric asks if we reall want to be "nerds for hire," since we'll probably do most of the work, then stand around at the party feeling socially awkward, even once in a while bragging to the nearest passerby abou how well we installed the laser lighting system.

Melinda says that Harve Mudd wants to do a "coo prank" with us sometime it 2001. What's a cool prank! Laura suggests infiltrating the Rose Bowl parade with a "float" made from fou Daihatsus and a whole lot o soda cans. Wait a secondif I write this in the minutes it won't be a secret anymore so it won't get done. Oh no

Melinda has asked Ted Joi to take over as Social Direct tor after she leaves for En gland next term.

The Music Departmen would like some extra space, so they ask if the could have Club Room B Eric will put up a sheet or that room's door, asking it any student has a problem

Meeting adjourns at 12:00

Respectfully submitted,

# Jason C. Cardema

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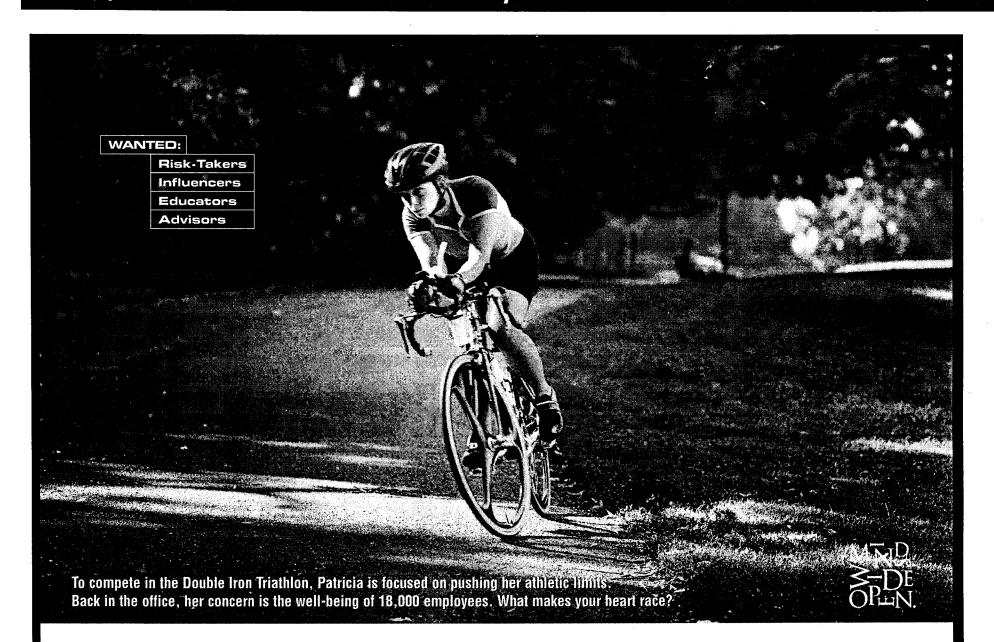
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#### WANTED

Primetime network show is seeking CalTech students who are interested in accepting a challenge from MIT to set a world record in the following categories:

—Furthest Distance Refrigerator Thrown by a Catapult (No current record) .—Most Stone Skips (Current record is 38)

Also, other ideas for world records will be gladly accepted. If you are interested in being on the show, please contact us via e-mail (dballard@lmnotv.com) or telephone (818/382-4360), and we will provide you with a Fed Ex # you can use to forward a videotape of yourself in action and any background information related to the your record-setting attempt.



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Monday, November 13th, 2000
Investment Management Division
Quantitative Resources Group
Presentation on Portfolio Risk Monitoring
Center for Student Services-Dining Room 5
4:00 pm - 6:00 pm

#### **Resume Drop**

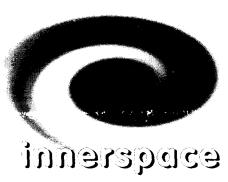
November 14th through November 28th Please contact your Career Services Center



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# Innerspace



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By Jason Metlzer

#### How Happy Are You?

The title of this week's Innerspace is a question: How happy are you? I want to know. To determine this, I have devised a survey whose purpose is to gather information about various facets of student life at Caltech. I'm curious to know how happy students (grads and undergrads) here think they are, and what factors influence that determination. Assuming I can get enough replies, it'll make for an interesting little project. I will, of course, publish all results here in Innerspace and on the web.

The survey is presented below, as well as on the web. I encourage all of you to fill out the web version as it will be more convenient to assemble the data in that form. However, if you wish, you can return this paper version to the "Surveys" box outside the Tech office, SAC 40. The WWW version is located at:

http://www.its.caltech.edu/~jasonm1/survey.html

#### Innerspace Happiness Survey -

Please answer all questions as best as possible. The survey is completely anonymous. Return completed surveys to the "Surveys" box outside the Tech Office in SAC 40

Return completed surv	eys to the "Surveys" box outside the Tech Office in ŞAC 40
General Info: All About You	ACADEMICS: WORK, WORK, WORK
ANTI AT LO	On average, about how many hours per day do you spend on academic-related work?
What is your gender? Female Male	1 or less 2-4 5-7 8-10 More than 10 Every waking moment
Are you a  Freshman G1 (first year grad student)  Sophmore G2  Junior G3  Senior G4+  Super Senior	From what you can tell, do you:  Do more work than your friends?  Do about the same amount of work as your friends?  Do less work than your friends?  Have no friends?
What is your GPA?  A+ B C+ C+	Overall, how much do you enjoy the work you do?  Very Much Somewhat  Very Little Not at all
A C C B+ _ C- or less N/A	On a scale of 1 to 10, how happy are you with academics at Caltech overall?  (1 = despairing, 10 = estatic)
Where do you live?	Social Life: The Fun Stuff!
Blacker ' Off-Campus Alley Dabney Avery	In general, are you satisfied with your social life? Yes No
Fleming Marks Lloyd 1170 Del Mar Page 150 S. Chester Ricketts Catalinas Ruddock Other Caltech Owned Number Caltech Owned Number Caltech Owned Number Caltern Owned	Where do you spend most of your time?  Room/apartment In Class UGHouse Elsewhere on Campus Dorm/Complex Off Campus In Lab/Job In a drunken stupor
Non-Caltech Owned What is your Major/Field?	Of those you know at Caltech, would you say you have  Lots of good friends?
ACM _ E&AS (ME, AE, CE, CS, CDS, etc.) _ Geology/Planetary Science _ Mathematics	On average, how many hours per night do you sleep?         2 or less
Biology _ Physics _ Chemical Engineering _ HSS _ Chemistry _ Other	Do you generally enjoy parties? Yes No Don't know
ECE or EE Worms: Armageddon	Do you generally enjoy Caltech parties? Yes No Don't know
Editor's Note:  Democrats from Florida should check with their local representatives and legal staff before attempting to fill	How often do you drink alcohol?  Never Less than once a week A few times a week At least once a day I'm drunk now
out this form as some of the spacing may be confusing.	How often have you used/do you use illicit drugs?  Never A few times Many times, but not anymore A few times a month Very often
Theater Arts at the California Institute of Technology presents HEDDA GABLER	Have you ever been on a date while at Caltech? Yes, some Yes, many No
by Henrik Ibsen Translated by Eva Le Gallienne	Do you have a significant other? Yes No
By arrangement with International Greative Management, Inc.  Directed by Shirley Marneus	Do you share a room? Yes No
Fri., Nov. 3, 10, 17 at 8 p.m. Sat., Nov. 1, 11, 18 at 8 p.m. Sun., Nov. 5, 12, 19 at 2 p.m.	On a scale of 1 to 10, how happy are you with the social life at Caltech overall? (1 = despairing, 10 = ecstatic)
Dabney Lounge on the Caltech campus  Handicapped parking available \$15 General admission Persons with disabilities: \$10 Students with current ID (626) 395-4688 (voice) (626) 395-3700 (TDD) GROUP DISCOUNTS AVAILABLE	If you had to choose one, which of the following is the worst thing about the social life at Caltech?

events@caltech.edu

www.events.caltech.edu

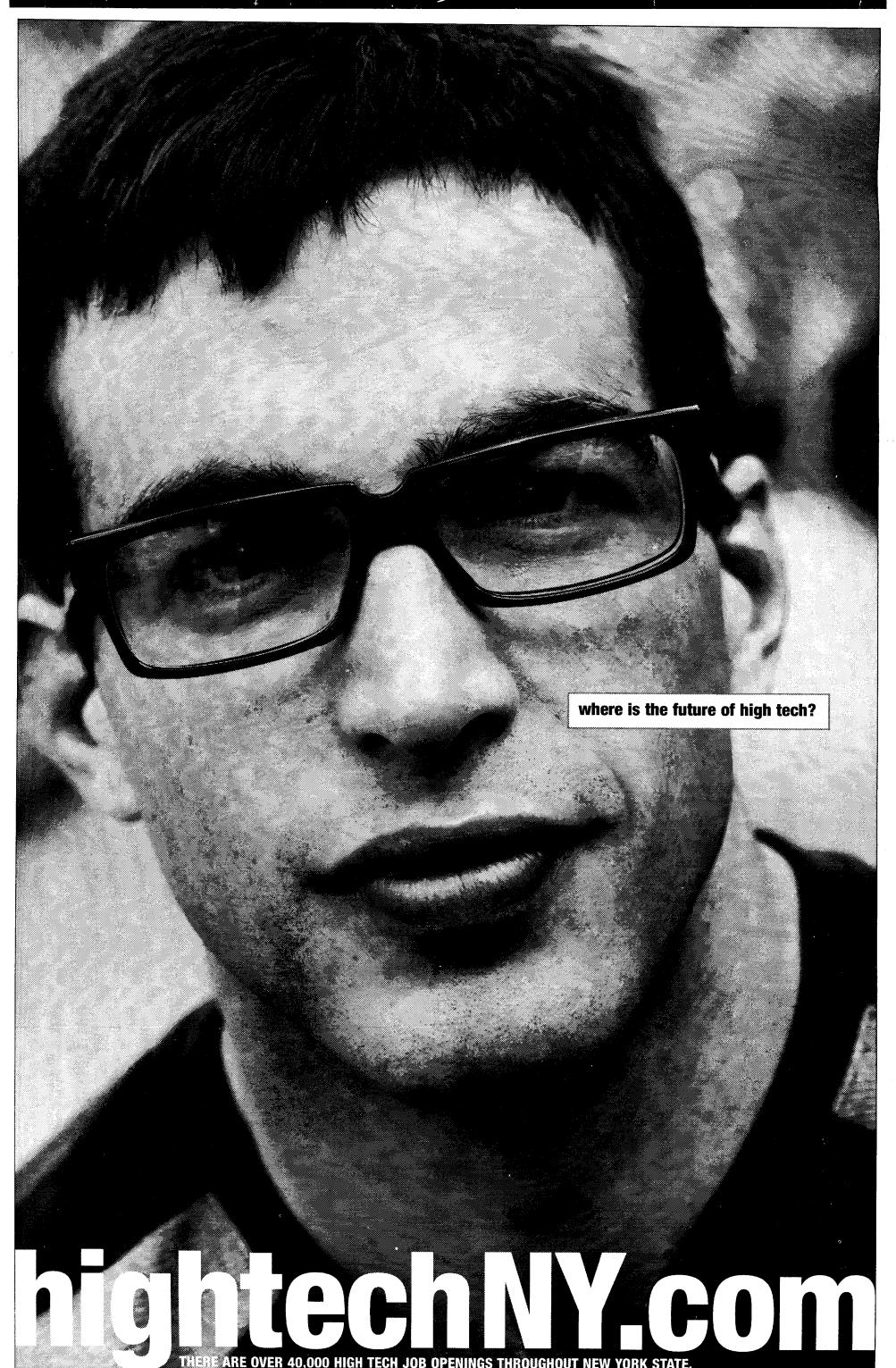
M/F ratio

Too few people

The Honor System

Too many nerds

The UG House System \_\_\_



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## Comics

#### **DILBERT®** by Scott Adams

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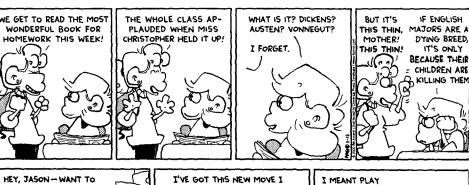
EXCELLENT. WE CAN USE NON-LINEAR MATH AND DATA MINING TECHNOLOGY TO OPTIMIZE OUR RETAIL CHANNELS!











FoxTrot by Bill Amend

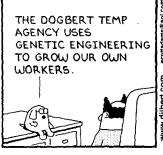




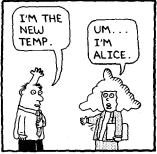


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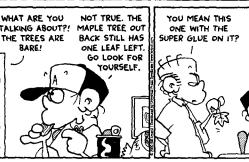
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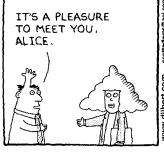


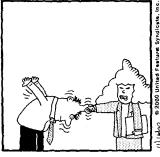




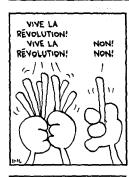






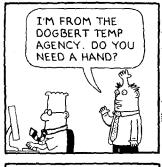












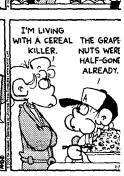


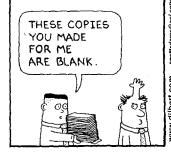




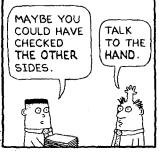






















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## Dean

How



Good morning to all! This is Dan

Rathernot, reporting from

Halahasisi, BLA. In the warm and

steamy countryside surrounding

this capital, among the swaying

palm trees, darkly outlined against

a blue sky loaded with threaten-

ing thunderheads, in this swampy

backwater, with its fields of sugar

canes, alligator-filled swamps, and

fancy hotels for the rich or cold

Northerners, there have recently

been some strange goings on. So

went the dream I had last night,

strange is the word. Perhaps this

is not surprising, readers; you

might recall that only a few years

ago there was a whole series of at-

tacks on unsuspecting tourists (for-

eigners to boot) in parts of the state

of BLA. The locals apparently

were unable to police themselves.

At the time it seemed that the (Fed-

eral) State Department might just

have to restrict travel to this un-

ruly area. By now the residents

have overcome this threat to a

# Dean's Corner

major

#### Banana Republic

by Jean-Paul Revel

source of income. Can you imagine what would have happened to the local economy if the scores of students who descend on the countryside each spring had been kept away by local brutalities? Well, although things have been quiet on the tourist front, other problems have now reared their heads. In fact the random shootings and roughing up of visitors seem to be simple problems compared to the mess that has developed in the last few days. The two major candidates for running the country (Gov. Gush and VP Bore) now seem to be essentially in a tie after a closely contested race. While trying to find out who really won, there has been a close examination of the voting results, and many irregularities have been revealed, which one would not expect in what is considered a free, democratic election. Apparently in a less hotly contested election no one would have noticed a few thousand citizens who were not given the

chance to express their desires.

can it be that in this "democratic" environment, thousands, many thousands of citizens seem to be disenfranchised? I heard there were people who were refused new blank ballots, having made mistakes in filling previous ones. There were people who apparently were turned away standing in line at the polls at closing time. Others, who thought they had registered through the DMV, apparently never got on the voters rolls. There were 19000 people who were sent absentee ballots, and will presumably return them by the deadline. Fine and good, but the deadline is today, Friday, several days after the results of the voting were to be "certified" by state officials. As a result it would seem that, for these absentees, it is as if they had not voted. Who knows, perhaps they are being counted after all, and the tally eventually added to previously "final" counts (potentially changing the results once more?). The confusion is far from reassuring, I must say. Assuming an overwhelming majority, in this case any majority, greater than 19000 would have made these votes "redundant." But that's no

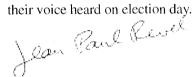
reason for not counting them. And who knows whether all the candidates and all the issues would have passed with the same margin? Those votes might have been crucial to the outcomes of other issues addressed by the ballots. All right then, things went wrong in BLA. If that were the end of it, it would be bad enough. But it turns out that there were voting irregularities in other states as well. Five hundred votes dropped from here and who knows what there. Would we not raise hue and cry should such shenanigans be discovered somewhere beyond our borders?

Considering this situation, could one blame countries that have been the butt of our criticisms, or even countries who have had to watch our swaggering assertions about democracy, could one blame them if they were to pay us in kind, expressing doubts about our ability to have free and impartial elections? May be other nations should send observers to look over the shoulders of untrustworthy locals. The Peruvisians could send Fujimori, the Haititians Papa Doc Duvalier, wherever he is now, to oversee our elections?

Are we the democracy that we claim to be? Peoples around the world will surely shake their heads and waggle their fingers. Who could believe we are a leader in this modern age with such a backward way of doing things? We who pretend to tell others how free

elections are to be carried out. "Can you imagine mes amis (I can hear the conversation in the cafe), they had to rely on counting by hand, imagine that! And that in spite of complex algorithms, rapid communications, exit polls, clouds of reporters, delays, recounts, and legal opinions. Can you imagine!"

I have heard it said that of course this is democracy, see, at least there have not yet been fist fights, only verbal jousts. True there has only been some screaming, placard waving, and emotional speech making, no bloodletting. But that sure is not anything to brag about. There is all hope that the situation will be resolved today, if it has not been already, but then maybe there will be other delays. But even as we discover who our next president is, we cannot be complacent about all the mistakes that have been made. It is deeply disturbing that so many of us, unbeknown to most, may have their wishes disregarded at the polls, or their intentions misrepresented. Surely there must be better ways to ensure a faithful recording of the will of the people. Whether one has a vote or not should not depend on trying to decide whether or not a chad is still hanging on or was just indented, or whatever. Let's make sure that next time all of us have their voice heard on election day.





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ITU Ventures seeks motivated, experienced individuals to source and negotiate attractive investment opportunities during the school year at Caltech.

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## Mints

#### **ANNOUNCEMENTS**

H&SS Division offers the following Selected Topic Courses for winter term 2000: Ec 101 On Economic RationalityEc 101 Topics in Corporate Finance; H/Hum 131 The Science Fiction Film--as Histor H 161 The World of Charlemagne: H 161 History, Religion, and Culture in the Borderlands; H 161 Japan and the US: The Cultural EncounteH 161 Intellectual Property and Piracy from Gutenberg to Gates;H 161 Environmental History of North America: L 101 Elementary Chinese ILit 180 Poetry In English: 1950-2000; Psy 101 Introduction to Evolutionary Psychology; SES/ Pl 169 The Ethics of Risk ManagementSES/P1 169 ParadoxesSES/P1 169 Intelligence; SS 200 The Evolution of Conventions and Preferenc. Complete course descriptions are posted in Baxter as well as the Registrars office. Copies of HSS course schedules are available in 228 Baxter.

The Caltech Ballroom Dance Club [CBDC] continues its offerings of dance classes and parties with the next set of lessons starting the first week in Nov, as shown below. Please run the class announcement for the duration of the class.

Beginning Lindy Hop - taught by a professional dance instructor, a four week series on Mon 6, 13, 20, and 27 Nov'00: \$16/series for undergraduates, \$24/series for others. The lessons will be held from 7:30 to 9:00 pm on Mon in the Winnett Lounge with a 1/2 hr. practice period after each lesson.

Refreshments will be provided, and no partner is required. For last minute changes see www.its.caltech.edu/~ballroom, or call Don at 626-791-3103.

Beginning Rhumba - "Amateur"-taught, four week series on Wed 1, 6. 15, and 29 Nov'00 [note: no class on the Wed, 22 Nov, prior to Thanksgiving Day], free for undergraduates, \$1.00/lesson for others. The lessons will be held from 7:30 to 9:00 pm on Wed in the Winnett Loungea 1/2 hr. practice period after each lesson. Refreshments will be provided, and no partner is required. For last minute changes see www.its.caltech.edu/ ~ballroom, or call Don at 626-791-3103

The Caltech Ballroom Dance Club hosts a series of weekly "mini-parties", i.e., no lesson/demonstration or theme as done for the "regular" parties. The parties are free and take place in Winnett Lounge after each protaught class [the Lindy Hop for the second half of the Fall term] on Mon from 9:00-11:00pm. Refreshments are provided and no

partner is required. From 9:00 to 9:30pm music pertaining to the previous class will be played, but after 9:30pm feel free to make requests &/or bring your own music.

Gay/Lesbian/Bisexual Discussion Group: Looking for a safe and supportive place to discuss issue such as comingout, being out, dealing with family, coping with a homophobic culture, and being GLB at Caltech? Want somewhere just to make new friends? We invite you to the Gay/Lesbian/Bisexual Discussion Group, which meets on the first and third Tuesdays of each month from 8:15 until 10:15pm in the Health Center Lounge. This is a confidential meeting and does not imply anything about a person's sexual orientation - only that s/he is willing to be supportive in this setting. The group usually discusses a particular relevant topic and then moves on to the general discussion. Refreshments are served. If you would like more information, please call ext. 8331

**Community Service Oppor**tunities Abound! The Caltech Y offers students and staff a variety of ways to participate in community service. Opportunities include working with Habitat for Humanity, Union Station Homeless Shelter, math tutoring (on or off campus), reading tutoring, and working at local hospitals. One-time community service events are planned each term and opportunities for service on a regular basis exist. Undergraduates with federal work-study can receive \$15/hr for their community service work. To be added to the community service interest email list, or for more information about the Community Service Program, please contact Kristin Abbott at kabbott@caltech.edu or call 626/395-3180. Or, stop by the Caltech Y in the Center for Student Services (formerly Keck House) for a complete listing of opportunities.

#### **EVENTS**

James Michelin Seminar Series, Cassandra Einstein Painter/Filmmaker: "Can Gravity be Held Responsible for People Falling in Love?" A presentation of art, film, and science. Beckman Institute Auditorium, Monday, November 27, 2000, 8:00 p.m. This seminar, is an on-going series, which augments the James Michelin Distinguished Visitor Lecture series. Both are designed to foster a creative interaction between the arts and sciences.

All members of the Caltech Community are invited to audition for the TACIT production of Shakespeare's Othello in Ramo Auditorium at the following times: Sat., Nov. 11, 2-5 pm; Sun., Nov. 12, 7:30-10:30 pm; Wed., Nov. 15, 7:30-10:30 pm; Sat., Nov. 18, 2-5 pm. See

www.its.caltech.edu/~tacit for related information as it becomes available. Othello will be performed during winter term on three consecutive weekends beginning Feb. 16, 2001.

The Caltech Edition of AIRTALK: "THE GREAT BLUNDERS OF SCIENCE with NATHAN LEWIS, Professor of Chemistry, Caltech & MICHAEL SHERMER, Author, Publisher & Director, of the Skeptics Society. KPCC - 89.3 FM 9:00 - 10:00 A.M., Monday, November 20, 2000.

Science, Ethics, and Public Policy Lecture Series for Fall Ouarter 2000:

The William and Myrtle Harris Distinguished Lectureship in Science and Civilization presents Dr. Peter Galison, Professor of the History of Science and of Physicsm, Harvard University, Poincare's Maps and Einstein's Clocks, Friday, December 1, 2000 4:00 p.m. Beckman Institute Auditorium

Seminars are on the Caltech campus and are open to the community at no charge. For information, contact Michelle Reinschmidt at (626) 395-4087 or

michelle@hss.caltech.edu.
For a complete list of SEPP
Seminars and Harris Lectures
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#### SCHOLARSHIP

The Financial Aid Office has applications and/or information on the following as well as additional undergraduate scholarships. All qualified students are encouraged to apply. Our office is located at 355 S. Holliston, second floor

\* The American Electroplaters and Surface Finishers Society (AESF) is offering scholarships to upper class undergraduate and graduate students who are interested in careers in the surface finishing field. Applicants must be full-time and majoring in chemistry, chemical engineering, environmental engineering, materials engineering, materials science, metallurgy, or metallurgical engineering. To apply, ap-

plicants must submit an application form, statement describing career objectives, list of educational achievements, official transcripts, and three letters of recommendation from teachers, employers, or professors. Applications are available in the Financial Aid Office. Please send completed application materials to: AESF Scholarship American Committee, Electroplaters and Surface Finishers Society, Central Florida Research Park, 12644 Research Parkway, Orlando FL 32826-3298. Entries must be submitted to the AESF Scholarship Committee by April 15, 2001.

\* The Swedish Club of Los Angeles, Inc. plans to award two \$2,000 scholarships: one in International Relations and/or Diplomacy and one in Mathematics and/or the Physical Sciences. Applicants must be upper 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 professors, and an essay describing their academic goals. Please send application materials to: Peter Franta, Swedish Club of Los Angeles, Inc., Scholarship Chair, 19122 Lindsay Lane, Huntington Beach, CA 92646-2226. Entries must be submitted to the Swedish Club of Los Angeles Inc. by December 1, 2000.

\* The National Academy for Nuclear Training is offering \$2,500 scholarships to eligible students majoring in nuclear engineering, power generation health physics, electrical or mechanical engineering, or chemical engineering with nuclear or power option. 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. Additionally, scholarships will be renewed for current Academy scholars who maintain their eligibility. For further information on the National Academy Educational Assistance programs, please www.nei.org. Applications are available in the Financial Aid Office. Please send completed application materials to: Na-

tional Academy for Nucle Training, Scholarship Revic Committee, P.O. Box 630 Princeton, NJ 08541-630 Entries must be submitted the National Academy for Nucle Training by February 1, 2001.

\*The Measurement Scient Conference (MSC) has estab lished scholarships to students an Engineering or Science Quality Assurance degree pr gram. The scholarship progra places emphasis on papers projects that discuss the a vancement of measurement sc ence tecnology. Applicants mu be U.S. citizens, have a overa grade point average of 3.2 ( higher, completed at 24 units upper division courses in Eng neering or Science degree or fit courses in a Masters Degree Pr gram in Quality Assurance. Cu rent members of the Measur ment Science Conference Con mittee are ineligible for th scholarship award. Also, app cants must be able to attend # Measurement Science Confe ence luncheon held on Janua 18, 2001, at the Disneyland Co vention Center in Anaheir California. Applications a available in the Financial A Office. For further information regarding MSC Scholarship you may contact: Ric Careyette, MSC Scholarshi Chairperson, Teledyne Electro ics Technologies, Marina d Rey Facility, 12964 Panan Street, Los Angeles, CA 9006 6534. Entries must be submitt to Teledyne Electronics Tec nologies by December 1, 200

\*THE GLAMOUMAGAZINE'S 2000 TO TEN COLLEGE WOME COMPETITION has begut The competition is open to full-time juniors regardless major or GPA. All entries mages be postmarked by January 2001. Contact the Dean of State of the applications.

To submit an event for the Mints, containints@ugcs.caltech.edu or mayour announcement to Calte 40-58 Attn: Mints. Submissionshould be brief and concist Email is preferred. The editoreserve the right to editoreserve the right t

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