How to Choose a Major & How to Get a Job

by Samson Timoner

Many freshmen ask, “How do I choose a major?” “How do I figure out what field of science I am interested in?” “How do I get a job doing research?” “Do I even want to do research?” “How do I know I want to be a scientist?” and “Do I want to get a job and make money or do I want to do research?” which inevitably leads to, “Why am I here?” or “What is the meaning of my life; what is my purpose?” While I cannot answer all of these questions, I can tell you that Caltech has the resources to let you answer them for yourself.

Let us start with the easiest questions: “How do I choose a major?” and “What field of science am I interested in?” The biggest problem that you, a freshman, face in choosing a field of interest is that the freshman introductory courses do not represent what is studied at the frontiers of science. That is, whether you hate or love Chem 1 does not mean you will hate or love being a chemist since Chem 1 barely addresses what chemists actually study; it only discusses techniques chemists use.

So how do you determine whether or not you like Chemistry? The answer lies in the Caltech Calendar. Every week, the Caltech Calendar announces what events will happen at Caltech. You want to know what chemists actually study? Go to a chemistry seminar. You think you might be interested in astronomy? Go to the weekly Wednesday astronomy colloquium. Physics has a weekly Thursday colloquium that is designed to be understood by the general scientific community. The way to determine if you are interested in a scientific field is to go to seminars and see if you are excited by what people in that field do. Go to 3 to 5 seminars a week. (You are a freshman; you have time!)

You probably will not understand most of what a speaker is saying, but you can still understand the basic ideas. After the talk, ask the lecturer questions. If you know nothing about what he was talking about, say so. You will be surprised. I found that most people will go out of their way to explain to you the basics of what they are doing. Also, while you are there, talk to graduate students. Find out what they do and if they like it. Do they think the field has any future? Is there any chance of getting a job in it or is the field saturated? If you are really nervous (and I was) you can ask graduate students to show you their labs. They will do it.

The downside of seminars is that they are designed for students who are already interested in Chemistry. If you are really nervous, you can ask graduate students to show you their labs. They will do it.

If you are really nervous, you can ask graduate students to show you their labs. They will do it.

Engineering Design Contest Returns to Caltech

by Homer

The 11th annual Caltech Engineering Design Contest will be held on Thursday November 30th, 1995 starting at 2:00 p.m. in Beckman Auditorium. Spectators are welcome.

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 must design, prototype, fabricate, assemble, test, debug, and tune a device to compete against his classmates’ devices. Only the materials provided in the “bag of junk” are permitted. A typical year’s “junk” includes: masonite, Plexiglas, aluminum, a few ball bearings, a length of shafting, some brass bearings, a few pulleys and rollers, and other miscellaneous surplus “junk” that can be found in sufficient quantity. Before the annual Schlumberger contribution (beginning in 1987), the power source supplied to the students was rubber bands. Since that time we have been able to provide two (or more) electrical motors each. Donations from our industrial sponsors (Schlumberger, Ford, HP,ITT, Alcoa, AeroEnvironment) 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”.

Four years ago, the students designed and built electromechanical Sumo wrestlers. Three years ago, the students designed and built devices to collect more small plastic pellets than their opponent’s device. Last year the students’ devices collected golf-balls from a trough. This year’s contest will be entirely different, and requires the devices to deliver a load of ping-pong balls to a drain. Several additional elements will require the students to plot a careful strategy to be successful.

Avery Committee Drafts Suggestions for New House

by David Wales

After our first open discussion, the Avery committee has given two recommendations to Gary Lorden and asked him to implement them for next year. The first recommendation is that the student house system be changed considerably to allow the students to be more self-sufficient. The second recommendation is that the house structure be changed so that the students have more say in their house. We feel this is needed in order to allow the students to be more self-sufficient. The first recommendation is that the student house system be changed considerably to allow the students to be more self-sufficient. The second recommendation is that the house structure be changed so that the students have more say in their house.

1. We recommend that freshmen not be allowed to enter Avery in September of next year.

2. We recommend that a lottery system be devised to choose the upperclass students to enter Avery in September. Exact details of the lottery should be worked out at a later time.
The 90’s SUCK!

Remember the law of the old west? If you didn’t like what someone said, you could corner them and have a fist fight or a shoot-out and everyone would think you were justified. If you thought that someone slandered your mother, or even your dog, you could take matters into your own hands. But this is the nineties: now you whipstitch the auto dial on your cell phone to get your lawyer to serve a summons to the offender. That is just one of the things wrong with today.

Everyday we see reports of another moron trying to make a fast buck on account of their own stupidity. For example, take that woman who spilled McDonalds coffee all over herself by pushing them over. Fee all over herself and won the case because stupid kids have the freedom to express ideas regardless of how it may affect our audience being slowly trampled on (including Ricketts Fireballs which were stripped away this year). (The NXA is my friend). You know, humans have existed with hot running water in houses for thousands of years. Fire is our friend. Yet, in these past years, we fear fire and is hence legislated to hell. Ricketts has managed to NOT burn itself down through 60 years of playing with fire, yet suddenly fire has become so much more dangerous. This is just another example of how stupid, shortsighted, and scared American citizens have become. Traditions that have been in Tech’s history are seldom seen anymore. There is just too much risk that someone may get hurt or offended. (The NXA is my friend). The grand days of pranking and causing mayhem are gone. In place, we have tighter control, more laws, and a climate that may well bring the end of Tech’s best tradition—the Honor System. After all, if we are too stupid to take responsibility for what we say and do, someone has to take care of it for us. (The NXA is my friend).

There is a simple reason for this: the quality of civilization in America is slowly decaying. This is just another popular entertainment on television of the past few years—those disgusting talk shows that glorify (and uninventive, amorphous crap.

Another observation about this forsaken decade is this constant hammering to make everything inoffensive. Frankly, it offends me to see everything homogenized and made suitable for the tender ears of every type of person in America. Why is this happening? Why is our freedom to express ideas regardless of how it may affect us being slowly stripped away? Examples of this frequently happen to the editorial staff of this newspaper. Material that is satirical and comical and designed to induce laughter are often met with derisive attacks. This has even caused editors to explicitly remove their names from certain sections for fear of libel. Who are these people, these wusses who want to make the world into an amorphous blob, devoid of anything colorful, interesting, and most likely, offensive.

Have you noticed the exponential growth of laws and government imposed control lately? (The NXA is my friend). In the past, it was common for Techers to prank the city of Pasadena, and even burn large bonfires on Colorado Blvd. Now, the long standing traditions of the Houses have been trampled on (including Ricketts Fireballs which were stripped away this year). (The NXA is my friend). You know, humans have existed with fire for thousands of years. Fire is our friend. Yet, in these past years, we fear fire and is hence legislated to hell. Ricketts has managed to NOT burn itself down through 60 years of playing with fire, yet suddenly fire has become so much more dangerous. This is just another example of how stupid, shortsighted, and scared American citizens have become. Traditions that have been in Tech’s history are seldom seen anymore. There is just too much risk that someone may get hurt or offended. (The NXA is my friend). The grand days of pranking and causing mayhem are gone. In place, we have tighter control, more laws, and a climate that may well bring the end of Tech’s best tradition—the Honor System. After all, if we are too stupid to take responsibility for what we say and do, someone has to take care of it for us. (The NXA is my friend).

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What about that electricity? There is a limited amount of energy, and constraints, 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: 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-to-repair designs the interaction between design and manufacture and an experience with open ended problem solving.

The double elimination tournament begins at 2:00 p.m. and lasts about an hour and a half.

ME72: Annual Design Contest to be Held Soon

CONTINUED FROM PAGE 1

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. There are competing requirements and constraints, 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: 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-to-repair designs the interaction between design and manufacture and an experience with open ended problem solving.

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General Relativity Theory in the LIGO Era and Beyond

by Jim Cheng

From black holes to gravity waves, Kip Thorne, Caltech’s Richard P. Feynman Professor of Theoretical Physics, brought general relativity theory and gravitational astronomy down to Earth in a dynamic theory seminar held on Friday, November 10, in Baxter Lecture Hall.

Beginning his lecture from the Galilean relativism of Newton’s paradigm to Einstein’s theory of general relativity to today’s current research into the realm of quantum gravity, Professor Thorne led his audience on a trip of astronomical proportions, of colliding black holes and ripples in spacetime flowing forth at the speed of light.

In his presentation, Professor Thorne illustrated the limits at which the current theory of relativity start to fail; namely, at the singularities that existed at the Big Bang and at the centers of black holes. Here, he showed the transition between the Newtonian model of gravitation in regions of relatively low gravity to Einstein’s general relativity in space significantly warped by the forces of gravity, and at singularities, where even Einstein’s theory breaks down, to a new theory, that of quantum gravity, which is still being formulated today.

Going from the theoretical background of gravity and relativity to experimental physics, Professor Thorne next began a discussion and presentation of the Laser Interferometry Gravitational-Wave Observatory (LIGO) project, one which he himself had originally persuaded Caltech to embark upon.

The LIGO project, as Dr. Thorne explained, would consist of two pairs of four-kilometer-long tunnels currently being built in Livingston, Louisiana and Hanford, Washington. With its laser interferometers, the LIGO observatories and their sister observatories being planned in Italy and Japan, hope to detect the launch of gravity waves emitted by distant black holes and neutron stars.

As the LIGO project comes online early in the next century, Professor Thorne foresees the confirmation of the existence of gravity waves, which are postulated by Einstein’s theory of general relativity. By detecting the passage of gravity waves, the LIGO observatories will also verify the existence of black holes and will elucidate the properties of the gravitation.

Scientists are also hopeful that the LIGO observatories will unveil an entirely new field in astronomy, that of gravity. The observation of gravity waves is believed to hold much promise for the detection of coalescing binary stars, the absorption of a star into a black hole, and extending our ability to observe events in the universe back to the Planck era, which has previously been impossible.

Professor Thorne concluded his lecture with a brief discussion of the LISA project, a space-based gravitational observatory that is being planned by the European Space Agency for launch in 2014. This new detector is expected to allow for observations of gravity waves that are far outside the spectrum visible to the LIGO observatories, and is hoped to bring further discoveries in the next century.
October 24-January 28 Huntington Library

This exhibit is a tribute to the history of the American women's suffrage movement. It focuses on the three-quarters of a century between women's earliest demands for political equality in 1848 and the ratification of the Nineteenth Amendment in 1920, with particular attention on California.

For further information call the Huntington Library at: (818) 405-2411.

AAUW Meeting: Report on NGO in Beijing
7:30 p.m. Monday, November 14
Hastings Ranch Library, 3325 E. Orange Grove Blvd
Pasadena

This is the monthly meeting of the AAUW. The program is open to the public. Presenters will be Carolyn and Bruce Harris. For more information call (818) 564-9640.

Huntington Library Women's Studies Program: What Difference Did Women's Suffrage Make, Anyway?
9:30 a.m. – noon

Saturday, November 18
Huntington Library

Professor of History Ellen DuBois (co-creator of the Votes for Women: A 75th Anniversary Celebration exhibit at the Huntington Library) will speak on the women suffrage movement. Following the seminar you will have an opportunity to view the exhibit "Votes for Women". The WISE organization at Caltech will be sponsoring a group visit to this program and the exhibit. Call 222/222 for more information. There is no charge for the seminar.

Paula R. Borsos: "Looking for Love in Cyberspace"
7 p.m. Monday, November 13
Beckman Institute Auditorium

Ms. Borsos, feminist author will discuss her writings entitled Virtual Romance. These short stories delineate how the new information technologies deform relationships and show the ways that the eternal grasping after intimacy is undergoing mutagenesis in the wired-up world. Dessert will be served. Reservations necessary. Please call 2222.

Growing Smart: What's Working for Girls in School
The newest publication from the AAUW Educational Foundation is a thematic review of the literature on factors that promote the achievement and healthy development of girls from kindergarten through grade 12. "Growing Smart" articulates five key themes to aing a national program for girls and boys. Sensitivity to all the following themes in a school classroom, program, or policy promises to create stronger, better schools for all. To help girls thrive, the people, places, programs, policies and priorities of schools must intentionally work to:

1. Celebrate girls' strong identities
2. Respect girls as central players
3. Connect girls to caring adults
4. Ensure girls' participation and success
5. Empower girls to realize their dreams

"Growing Smart" is available through the AAUW Sales Office at (800) 225-9990. The Executive Summary and Guide is $12.95 for members; the full-length report is $35.95 for non-members and $32.95 for members. (From PWO #21).

Women's HIV Prevention Agenda
In 1994, women represented 18% of all AIDS cases reported, nearly triple the 7% reported in 1985. The Center for Women Policy Studies, HNW6066@handsnet.org requests comments and 12/10 is Human Rights Day. Suggested actions include: community events, media outreach, and lobbying. Email Malika Dent or Linda Postbuszny at CWMPCAP@GMAIL.COM.

Shed Those Self-Imposed Shackles
Remember "It takes as much courage to have tried and failed as it does to have tried and succeeded."
—Anne Morrow Lindbergh.

Feeling a little low on the totem pole lately? Defeated and defeated? Well, who shackles your creativity? Who is the major stumbling block in everything you attempt?

Now don't shy away from the spotlight lately? Defeated and defeated? Well, who shackles your creativity? Who is the major stumbling block in everything you attempt?

Start at your goal and work backward to the beginning. If you are packing for a trip with intermediate stops, you start with what you're going to need as your final destination and place that on the bottom of the suitcase. Each succeeding layer works toward the top of the suitcase and backward toward the earlier days of your trip. Complicated problems can often be solved the same way. Try it.
Present: The ENITL BOD, Maria Satterwhite

- Meeting begins. Like I always need to tell you this. Lloyd asks for multihouse money to shoot paintballs at Rudds. The BOD gives them money. They go away. But BEFORE they leave, Greg plugs the new idea of telling the BOD about events you'll throw for the entire campus BEFORE the first of the semester. Greg will then put your event on his illustrious social calendar, and you'll get an extra $50 from ASCIT and a free security guard courtesy of Kim West.
- Gavin asks for approval of Tech Editors' and Business Managers' salaries for the first 5 issues. Tom asks to see a copy of the Tech budget, but Gavin says that the Tech doesn't draft formal budgets.

Gavin confirms, though, that the Tech has sufficient funds to cover the salaries for these issues. Tom asks if the student body still has to pay 10% of their dues to the Tech, and Gavin says that this amount could probably be cut in half. Gavin adds that about 1/3 to 1/2 of Tech funding comes from advertisements, and that the remainder is picked up by ASCIT, the GSC, and Caltech. The BOD approves Tech salaries for the first five issues 6-0-1. Gavin also asks whether we'll be able to run the Tech Eds '88Ms' and the Big T Editors' salaries in the same payroll. Kanna says that it depends on whether the Big T Business Manager signs the checks in time. Gavin gives Kanna a payroll form.
- Melissa sent out requests for the UROH. She'll get them back eventually.

Laura needs to call the cashier about setting up the copier account. Laura adds that the van has been used a lot recently, and it might need a tune up soon. Nothing's happened to the van in a while, and Laura feels something coming. Is it a sixth sense? Or is Laura just REALLY TIRED?
- Larry realized that his work on this planet was done, and left. Good luck, Larry.
- Greg wants an ASCIT Social Hour. Once per month. No clue where he got this idea. Really. The hour would cost about $120/month. Greg can't start the hour until he can think up a cool acronym for it and do some planning. Greg adds that the Leatherman is a really cool tool.
- Ken has the artwork and format for the plaques for the ASCIT Teaching Awards and will give them to the plaque-makers (the anti-dentists) Tuesday. Ken also wants to run the survey on the registrar's office second term. Jon believes that people will be registering for classes by computer by the year 2000.
- Tom mentions that hopefully the IHC will do something mean-
Professor Lewis Unveils Electronic Nose

by Stephen D. Van Hooser

The smells of chemistry, electrical engineering, and neuroscience were in the air of Beckman Auditorium on Wednesday night, as Professor of Chemistry Nate Lewis unveiled his lab's latest endeavor: The Caltech Electronic Nose Project.

The work addresses gaps in the history of sensory information processing tools available to engineers seeking to build smarter solutions; electrical engineers and computer scientists have been working with the senses of sight and hearing since the conception of their fields, but few, if any, had succeeded in cultivating general sniffing devices.

The principle ideas, first suggested to Lewis by former postdoc Mike Fuend, are remarkably simple.

There are an array of "sponges" which can conduct a certain amount of electricity. Each element in the array is "painted" with a different polymer. When an object enters the device, the resistances of the sponges change due to interaction between its polymer and the vapor's chemical compounds, causing each sponge to swell in a manner slightly different from its neighbors. These changes are monitored and the values are sent along to a computer.

Every vapor that Lewis' group tested had a unique pattern "signature"—that is, the list of values of the elements in the sponge array were unique. Wei Qin, an undergraduate working in Rod Goodman's group, designed a neural network to associate the various patterns to smells.

The applications of such a design are many. A nose with many array elements might be able to monitor lots of smells in a house (gas, air conditioning, etc.). A vendor might use one to set a price on wine. Or one could design a reduced nose to detect any change in odor; NASA might use one of these "electronic canaries" on its space stations.

Lewis related a humorous but practical application: Kraft employees used "cheese-sniffers" to determine the freshness of its cheese; unfortunately, workers can only work for two hours consecutively due to olfactory fatigue.

While this project has many interesting engineering applications at present, some interesting work is still on the way. Lewis' group is searching for an optimal group of polymers to use on the sponge array so they can form a better basis in "color-space."

Chemistry Professor Bob Grubbs has been chipping in with useful suggestions, and visiting faculty member Bob Santner has also been experimenting. Lab members have also been varying the conducting material; graduate student Brett Doleman and undergraduate Sara Beaver worked on a silver-based approach, while Mark Longergan and Erik Severin worked on using Carbon Black.

Also, scaling the array (Lewis used 17 elements initially) into the thousands or millions would require many polymers that behaved differently; the results would be very accurate, and hopefully a simple method for determining which polymers to use could be found.

Lewis also thinks it would be interesting to experiment with implementations of stereo smell—much like the human sense of hearing: This would allow a machine to infer the direction from which a smell was approaching.

At the advice of his former advisor, Harry Gray, Professor Nate Lewis "followed his nose" to an amazing discovery. Featured are sophomore Sara Beaver, graduate student Brett Doleman, visiting faculty member Bob Santner, Nate Lewis, postdoc Mark Longergan, and grad student Erik Severin of the Electronic Nose Project.

MOVIE ABOUT BOSNIA TO BE SHOWN

Friends of Bosnian Club at Caltech will show the movie "Bosna!" on Thursday, November 30th, at 7:30 p.m. in Beckman Institute Auditorium. "Bosna!" is a documentary on the war in Bosnia and Herzegovina from the beginning.

"...These images of war and violence... are very often the images the Bosnians shot. Would the West really look differently? What a mistake! Go to the end of these images. If the West sees them it will be as though they are opening the death pits with us—with it will be as though they are helping put a face back on the dead, giving them the identity they lost. Do not hide anything. You owe it to the dead. You owe it to the survivors."


Friend of Bosnia e-mail add: bosnia@co.caltech.edu

Homepage URL: http://www.co.caltech.edu/ -bosnja/bosnjan.html

Public Events Plans Busy Weekend for Techers

BASS-BARITONE DEAN ELZINGA TO GIVE FREE CONCERT AT CALTECH

Bass-baritone Dean Elzinga will give a free Paco A. Lagerstrom Center Music Concert on Sunday, November 19, at 3:30 p.m. in Caltech's Dabney Lounge.

Accompanied by William Vendice, Mr. Elzinga will perform songs by Schubert, Vaughan Williams, Brahms, and Ravel. The Los Angeles Times recently wrote of him, "With William Vendice, his ever-present accompanist, Elzinga attended closely to word and meaning, sang with sweetness, silkiness and evenness of tone."

Elzinga, with his professional operatic career as a Young American Artist at the Glimmerglass Opera in New York. Since then, he has sung roles with Opera Pacific, the Opera Company of El Paso, and the USC Opera. His Los Angeles Music Center Opera and Metropolitan Opera debuts take place this season. Elzinga holds degrees in mathematics from Caltech and UCLA.

TREASURES OF MEXICO

Dr. Dwayne L. Merry will narrate his Armchair Adventures travel film "Treasures of Mexico" on Friday, November 17, at 8 p.m. in Caltech's Beckman Auditorium.

Merry visits many ancient sites of Mexico, beginning with the mysterious stone figures of the Olmecson the Gulf coast, the giant statues of the Toltecs at Tula, and the Aztec remains in and around Mexico City. He also explores the Mayan ruins and shows the present-day inhabitants of the Yucatan peninsula, giving insight into the way of life of descendants of these ancient civilizations.

Tickets to this film are priced at $9.00 and $7.00. Tickets can be purchased at the Caltech Ticket Office, 332 S. Michigan Avenue, Pasadena, and are also available at all Ticketmaster Ticket Centers.

We want to thank everyone who came to Broomball for helping to make it a success, with no major injuries. The winner was 5-2-2-1-2. Congratulations! Other statistics are available at the Y.

Decompression is coming! For you fros that don’t know what Decompression is, it is free food and entertainment the weekend before finals week to help everyone relax. But we need help to make it happen. So sign up to volunteer for a couple of hours. You even get a free t-shirt for helping out! Sign-ups will go up in the student houses on Monday, so you can sign up there or at the Y.

On Thanksgiving weekend, the Y will be sponsoring a camping trip to Joshua Tree. The group will leave campus around 9 am on Friday and return by 6 pm on Sunday. If you are interested, sign up at the Y by 5 pm on Monday, November 20.

Today at noon the Israeli Folk Dancers will be demonstrating their art outside Winnmet Center. Bring your lunch out and watch!

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PUBLIC EVENTS PLANS BUSY WEEKEND FOR TECHERS

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JB: How to Find a Research Job on Campus

CONTINUED FROM PAGE 1

the people who are experts in the field. Luckily, there are lecture classes, such as Chem 10, Phys 10, and Aph 110, that circumvent this problem. In these classes, a different professor comes each week to present his or her research on a level Caltech freshmen can understand. You do not have to sign up for the course, just show up! Ask Professor Tombrello (Phys 10) or Nate Lewis (Chem 10) for a schedule and go to the talks that interest you. The point is not to get credit; the point is to learn which fields of science you like.

You have been going to seminars for a while and have found a couple things you are interested in. Now what? In my case, a few seminars had a big impact on me. I thought there was no doubt that I wanted to become a physicist until career day my senior year of high school; you need three recommendations and preferably at least one from an矿业 scientist. Keep in mind, though, that Caltech graduates have been successful in many other fields such as Frumkin Capper (movies) and Steve Ross (finance). There are other things you can do to choose a major. Try asking professors what they do. If you want to know what being a theoretical physicist is really like, make an appointment to see a theoretical physics professor and ask him. What does he like? What does he dislike? These last two questions are really great ones; professors will talk for hours about what they really like to do. It is as if the information was bottlenecked inside them waiting to burst out. At the same time, you learn what being a professor is really like. I was surprised.

You may not realize it yet, but Caltech is a research institution. I believe you will get far more out of Caltech if you do research while you are here. There are also other advantages: papers that come out of your research and recommendations from the professors you work with will be powerful tools for getting you into the graduate school of your choice. The end of first term is almost here. By this time, you may not have decided what field of science you really like, but it is time to get a job doing research! The best way, I believe, to get a job is through networking. Talk to the professors who give the Chem 10 and Phys 10 lectures. Talk to the professors you interview. Ask them if they know anyone who hires freshmen. Talk to your advisor. (This is what advisers are here for!) Each department has a booklet, usually given to graduate students, that describes what research each professor does. For example, to get the Electric

Remember:
1) Get the Caltech Calendar; available in most buildings, on the World Wide Web, by e-mail or mailbox delivery.
2) Go to seminars for the entirety of your freshman year and find out what you do and do not like.
3) Find a professor and start doing research now. If you do not like the field by the end of the year, at least you found out now rather than later as a graduate student.
4) Continue to do research until you graduate. Unless, of course, you hate it. In that case, at least you know, that Caltech graduates have been successful in many other fields such as Frumkin Capper (movies) and Steve Ross (finance).

The California Tech
November 17, 1995

DILBERT ® by Scott Adams

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Why We, As Students, Should Care About Minimum Wage

by Anne Marks

Most of us came to college with the expectation that the completion of a bachelor’s degree would, among other things, lead to some sort of career. Whatever importance the minimum wage would have for us in the future would come only from the standpoint of an employer. One of us might expect to someday run a business wherein an employee earns minimum wage, but none of us expects ourselves to work for minimum wage.

However, many students are working for minimum wage right now. About a third of those earning minimum wage are aged 16 to 19; another fifth are between 20 and 24 years old. Youths and young adults attending school make up a sizable portion of the minimum wage population.

It would seem, then, that students have a large immediate incentive to support an initiative to raise minimum wage. And yet, many of us do not involve ourselves in the issue. The first obvious reason for this is that some students are not old enough to vote. The more critical reason, however, is that young workers tend to view earning minimum wage as a temporary stage of their working life. It might be two years after the beginning of an initiative drive before an actual wage increase goes into effect. Few of us expect to work at the minimum that long, so we think we have no reason to work now for a higher minimum wage later. This is easily what the powerful anti-minimum-wage, anti-working-class establishment wants us to think.

A modest increase in the minimum wage affects millions of people. It immediately raises the earnings of everyone who was working at the old minimum, and also the earnings of all those who were working for below the new minimum. There is a ripple effect as well: raising the minimum wage increases employers’ productivity and increases government income from workers’ pay. In other words, we should not assume that a rise in the minimum wage will not directly affect our own earnings.

But even if we do not feel the effect of the minimum wage on our own pocketbook, there are compelling reasons to support an initiative to raise it. The income gap in the United States between the top and the bottom quartiles is among the largest in the industrialized world, and it continues to grow. Raising the minimum wage is a powerful redistributive tool to help curb this alarming trend.

Contrary to the propaganda, many families depend upon the minimum wage to be a living wage. Among full-time minimum wage workers, 80 percent are adults. Until 1980, full-time minimum wage income was above the federal poverty level for a family of three. Today, it does not even equal 35 percent of this level. An inadequate minimum wage is an injustice to the working poor, plain and simple.

Still, the adversaries of the working class insist that raising the minimum wage in fact harms workers. This claim is based on classical economic theory that wages are “naturally” set by the equilibrium of supply and demand. To “artificially” raise wages above the equilibrium decreases the demand for labor, thereby causing unemployment. This theory is intellectually appealing to college students, especially Economics students like me, who want to abstractly understand the question of minimum wage. But the point of view that minimum wage creates unemployment is merely a theory, not a fact. Contemporary studies of the effects of minimum wage increases reveal a situation quite different from the one predicted by classical theory. Princeton economist David Card studied the effects of minimum wage increases in various states, including California, where the state minimum wage was last raised in 1998. What he found was little evidence of any increased unemployment. In fact, he often found the opposite to be true. In California, wages rose for minimum wage workers, particularly teenagers, even as unemployment decreased. This type of study flies in the face of political forces who attack the minimum wage, and who thereby attack the entire working class, in the name of “scholarship.”

As students, we are the force that must set right this misunderstanding. There are a variety of sound theoretical reasons why raising the minimum wage should actually help the economy. Higher earnings for the low income portion of the population causes increased demand which leads to increased employment and wages in general. The importance of this point cannot be overstated. Henry Ford himself recognized that his auto factory workers needed to make at least enough money to buy the cars they were assembling. Various economic historians, including John Mannard Keynes, view the Great Depression as a crisis of consumption: the great mass of people simply could not earn enough to buy what was being produced. The so-called “natural” wage was too low to support the economy.

In sum, the minimum wage directly affects us as students much more than we realize. An apathetic attitude only continues the injustice of a low minimum wage. Moreover, as representatives of academia, it is our responsibility to oppose the propaganda, dressed as “scholarship,” that is fed to us by the opponents of the working class. If we act as if the minimum wage is irrelevant to us as students, then we are doing exactly what these forces want us to do.

If you would like to join a coalition of college and university students from all across California in support of the Living Wage Initiative, a proposed November 1996 ballot measure that would raise the state minimum wage first to $5.00 in 1997 and then to $5.75 in 1998, please contact Students in Support of a Living Wage (SSSLW) c/o Anne Marks; 3001 Ellis Street #B Berkeley, CA 94705. Email: messages@acslink4.berkeley.edu

The author is a senior at U.C. Berke­ley, studying Economics and History.
by Patricio Vela

So, what happens to me the other day? I got this little green card from the Service Center, and here I think. "Wow, what could my mom have sent me?" I recalled some kind of conversa- tion about the mall on the radio, and then my categorization of these bands one hears along with many in other coun­ try. That's when I realized that the MallratsCD which I shall now give a small recourse on.

So this CD is loaded with just sold-out, or just made-it-big people. We have Bush (the Nir­ vanawannabees), Girls Against Boys, Belly, Weezer, Elliott, Archies, Loaf etc. Overall the first half of the CD smacks of KROQiness, but it does transcend that (not that KROQ is bad anyway). For example, only the previously indie bands were the ones to really accomplish that. Otherwise, I must admit the Belly song has got to be one of the better ones I've heard from them, stylistically very dif­ ferent from the album was "Stay on it", and I think also from their new album, but I haven't heard much. Anyways, on this track they sounded as if they were coming closer to Velocity Girl's style, but slightly slower pace and not so noisy. But kinda chintz. The Weezer song only reinforced my opinions on Weezer, not too original, too loud. Overall, I have to say that the album is decent, I would buy it if I were a bit presumptuous and The nixons decided not to use CAPS. This action brought Nige­ ria condemnation at the U.N. Security Council. For more info, check the Sierra Club Web site at http:// www.sierraclub.org/news/sc-action/0145.html.

I must admit that the nixons do manage to bolt out some good stuff — the better stuff has a re­ ally nice bass guitar backbeat.

Next on my list, but not sent to unfortunately is the new­ est Babes in Toyland "Nemesises". Due to Caltech's new music restrictions, I have to a little bit behind on the lat­ est and greatest from the noise, indie and punk scene, so this is one of the bands I am just starting to discover. As usual, they were able to dish up a sufficient amount of Babec­ ty. The Babes are pretty con­ sistent, as I mentioned before, this album is very much in the same vein as Fontanelle/Fontanelle (depending on the mood) which I shall now proceed to explore these reserves with precious little regard for the law or for the Ogoni people depend. Between 1976 and 1991 there were 2976 spills in the area. In one case in Ebuo in 1976 the Shell pipeline carrying crude oil split onto farmland. As a clean-up mea­ sure, Shell poured it back and polluted the fields. Overall, I have to say that the album is decent, I would buy it if I were an avid or semi-kid KROQ lis­ tener, because this gives one some good music plus it allows one to taste the other more un­ derground (if you want to call it that). Generally, if you don't listen to KROQ, don't let put you off ever, one of my friends thinks this is an insult to make a couple of people don't so don't take it the way he has. They tried to do the Pul P Fiction thing and have some bites from Mallrats in between some of the tracks. Sometimes it works very well, other times it fail largely because I haven't seen the movie. Nevertheless the bands on the CD are for the most part bands I enjoy and respect musically because they have been able to consistently impress me.

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Bond, James Bond

No, it's not NOTHING to do with Chem 1a. I promise. This has to do with the reinventing of a movie tradition that predates the sixties: 007 returns to the screen most spectacularly in the new release of GoldenEye, with Bond taking the body of that all hunk man, the man who cuckolded Robin Williams in Mrs. Doubtfire. In an attempt to make-over what almost died at the hands of Roger Moore and Timothy Dalton, Pierce Brosnan takes on the role he had been offered nearly ten years ago, and it sounds as if GoldenEye really delivers. I have yet to see the show (as it opens today!), but I have heard a lot of great reviews and also a lot of talk of the flick really capturing what Bond used to be, back when Connery wasn't a hunk of graying matter.

But let us not concentrate on one show alone! I have had the chance to see Ace Ventura II: Call of the Wild, and all I have to say is spectacular. Carrey, in filming, had let it slide that it was twice the "goofiness" of the first, but this movie is definitely one of the better quality movies I have ever seen, even ranking close to Animal House in summing up my feelings about Tech... well, maybe not.

El Teatro

Arthur Miller's Incident at Vichy will be performing through December 1st at the Colony Studio Theatre in Los Angeles for around $8 a ticket. I personally like Miller's plays a lot (he also wrote The Crucible, although I haven't yet seen or read this show, which revolves around World War II. David Copperfield (the magician, not the boy!) will be performing four shows between December 16th and 17th at The Pasadena Civic off East Street. Copperfield is the only other professional besides Kip Thorne who makes it his job to warp space and time-he has in the past walked through the Great Wall of China, escaped Alcatraz and flown without wings. But, unlike Thorne, you have to pay to see Copperfield. Ticket start at $29.50.

Joyous Noises

Well, not having a Calendar section last week has left a great overflow for this week's concert line-up. So, in no particular order: Pavement will be showing up (for a concert, I assume) at the Troubadour on Wednesday, December 20th; Seam will be in concert at the Alligator Lounge with Spent tonight, November 17th (it's no big night!); Shonen Knife will be playing the Roxy with guests Brian Evans on Friday, December 8th; Jawbreaker with That Dog and FLUF will be at the Palace on November 22nd; Voodoo Glow Skulls will be in concert at the Whisky tomorrow and Sunday night, while the Palace will be hosting Urge Overkill with The Geraldine Fibbers on Wednesday, December 6th. And remember, if you don't get out to go to a concert this winter break, get out somewhere! Or, if you really want to be a loser, you could open your wallet to get your ears professionally deformed by going to the AC-DC "Ballbreaker" World Tour on January 30th at the Pond or February 1st at the Great Western at 8pm. Hmm, hmm, sounds good....

Events

This weekend has the happiness of hosting the other Pasadena Parade, the DooDah Parade (which in my opinion, for cheaper or less expensive, is much better quality)!! The Parade starts at Holly Street and Raymond Avenue on Sunday, November 19th, at noon. As always, the Parade promises to be fully offensive and wholly enjoyable; remember to bring your tortillas!
W. A. Mozart's The Abduction from the Seraglio
November 10 at the Dorothy Chandler Pavilion

Last Friday I went to the opera for the first time, and I loved it. What had kept me away from the opera before was not the fact that the music and language are unfamiliar, but just not being aware of the performances and the fear that it was priced out of my league. Serendipitously, I not only picked up a copy of the L.A. Opera's schedule, but also found out that student rush tickets are dirt cheap. These things were a steal—I just went up to the box office at the elegant Dorothy Chandler Pavilion in downtown L.A.'s Music Center, five minutes before the show started and was able to get fifth-row orchestra seats worth $102 each for 15 bucks apiece! With the view from seats like that, I didn't mind at all a little craning of the neck to read the supertitles.

The Abduction is apparently one of the earliest operas, and contains a good amount of spoken dialogue. While I am by no means a classical music critic and even less experienced with opera, I can say that the story is rather elementary and, while trying to be both comedic and dramatic, does not fully succeed at either aspect. On the other hand, the music by Mozart was undeniably magnificent and the performances by the six actors from the United States, Finland, Poland, and Germany reached out with a charisma and talent that enlivened the show and greatly impressed me.

Nearly as important for me as the performances was the sheer spectacle of the event; the set of a Turkish palace resting atop an unusual sandy, gently rolling surface was at once versatile and functional, imposing and beautiful. The Abduction continues Saturday and Tuesday, and the L.A. Opera's next production starts in January, Rossini's The Italian Girl in Algiers.

Lars von Trier's The Kingdom

Just in case you thought we were short subjects, writer-director Lars von Trier's (Zentropa) new horror/black comedy The Kingdom is a staggering four and a half hours long, not counting the intermission. Such a length would be painful in lesser hands, but von Trier's hilarious "Twin Peaks"-esque production originally made for Danish television uses its length to weave an intricate web of the many stories revolving around the doctors, patients, and staff at a huge hospital known as the Kingdom.

Just some of the bizarre goings-on concern an elderly spiritualist who keeps sparsely checking in to the hospital to investigate the ghost of a young girl haunting its elevators, a medical student who tries to win the affections of a sleep researcher by scaling a head off of a cadaver, and an arrogant Swedish neurologist romantically involved with a fawning anesthesiologist who wants to vacation in Haiti to study voodoo. The ghost story becomes the most prominent of the many storylines and is also perhaps the most conventional of The Kingdom's many threads, but that's easily forgivable in a movie this well made.

The theatrical release is the first four episodes of a planned thirteen episode series; as such it ends on a cliffhanger. But despite waiting more than four hours for a story that doesn't finish, watching The Kingdom is a very satisfying experience; the length and format is necessary for the development of a great number of characters and allows many of the film's loose ends to be tied up while leaving a lot of reasons to watch the remaining nine episodes.

It's ironic that such a great movie actually comes from television; the serial nature of television leaves many unexplored possibilities in America. Since it's unlikely for the boob tube to get much better in the next week, check out TV better than nearly all the movies (and funnier than sitcoms) out there at Landmark's Nuart theatre in West L.A., where The Kingdom is playing for the next week.

Dave vs. Jay

Speaking of television, last week's excursion to L.A. by David Letterman was one of the few bright spots in a week marred for me by bronchitis; this week I got a root canal and tuned in to a minute of Jay Leno's week of broadcasting from Las Vegas, only to see a short-haired David Lee Roth doing a garish lounge lizard version of "California Girls." And Jay still pulls in better Nielsen. This does not soothe my pain.
In which the Nut-Brown Maide proved herself to be untrue and is subsequently condemned to the yummy Chesapeake Bay.

Art Modell seems to be getting tired of his Ohio digs. So, it’s off to Baltimore for him, his meal ticket and 40-odd years of Cleveland Brown traditions left behind. But still, the question of why he’s going remains. It couldn’t be the new stadium and gobs of money that theburgers of Baltimore offered him; after all, the city of Cleveland offered to refurbish Municipal Stadium along with the new arena and Jacobs’ Field, and he declined. Does he not like Chrissy Hynde and the Pretenders? I mean, how can you not like that video with the iguana from the old “The Avengers” TV show? Maybe the Rock and Roll Hall of Fame is a bit too close to Municipal Stadium and drowns out the Rachmanoff and Brahms piped directly to his luxury box (which, incidentally, he wasn’t in the week before the announcement for the first time in 30 years). Or, perhaps he become addicted in the seventies to the acetone fumes rolling in off the Cuyahoga River, and now that the pollution’s cleaned up he has to find some other toxic estuary (a.k.a., Chesapeake Bay) to get stimulation from.

Wait, I’ve got it. The Indians had their last World Series appearance in 1954, around the same time the Browns entered the NFL, and since their last high point of interest was when they temporarily took Chief Wahoo off their hats in 1973 that must be it. So now that they’re finally doing well again, Art doesn’t want to be outshined by Dennis, Albert and the gang, and off they go to join the mediocre Orioles. And of course, the Orioles started out as the St. Louis Browns before they moved to Baltimore in 1955. See, if you look close enough you’ll find synchronicity in everything!

Now even the cityites of Baltimore are admitting on the radio talk shows that they’re feeling guilty about nuking the Browns. Tempers still flare when they even mention the word Baltimore as a possible destination of the new franchise. Probable destination of the new franchise as well as the Redskins’ is the New York Jets, though the N.Y. Giants are still in the hunt. The fact that Brown has only won three of 12 games this year, however, may keep some other NFL team from doing anything quite so drastic.

Peter Piper picked a peck of pickled peppers. You can’t pick pickled peppers? Well, how about marinated picks that didn’t make it last week?

There was a squad of Nazi frogmen, yeah, that’s the ticket...
STORY
Beavers Push Through Season Transition
from the Athletic Department

MEN'S SOCCER
Overall: 6-13-2 SCIAC: 0-9-1
The soccer team wrapped up the season with their annual battle against the alumni. Despite a disappointingly low turnout for the alumni, the game still provided the onlookers with much entertainment. Assistant Coach Ken Kiesling was drafted into playing goalie for the alumni and managed to hold the Varsity to only 2 goals. Twelve players showed up to play with the Varsity squad, but three of those were playing with injuries. All 3 were seniors who wanted to play one last time for Tech. Bruce Engelbrecht started, but hurt his back during the game and had to leave the field. Co-captain Rob Bergeron had not planned to play but stepped in to help out, injuring his ankle. Ankle injury also plagued Anir Aliabghan, causing his mobility to be limited. All 3 lasted despite these setbacks with Engelbrecht scoring one goal for the Varsity. The other goal came from senior Chris Mars. Steve Chang and Jeff Flint each pushed the ball into the net for the alumni, and Greg Duddy found the back of the goal twice. The Alumni's 4 goals proved to be too much for the Varsity.

VOLLEYBALL
Overall: 4-10
The Lady Techers played their last match of the season in front of a packed gym on Hallow­een night against L.I.F.E. Bible College. The crowd was alive with excitement as the queens of the court got ready to play. Seniors Angie Bealko, Laura Verhoff, Stephanie Hausman, and Alison Stemp all saw playing time and worked hard in their last CIT career match. Coach Burl stated, "The seniors' skill, motivation and leadership will be missed next year." The team put forth a strong effort against L.I.F.E. but was unable to take the match, losing in 3. Jenny Holland had 7 kills, Bealko totaled 11 digs, and Grace Yang grabbed 6 kills and 8 digs. Stemp did a great job playing middle front for her first front row appearance in a match.

MEN'S CROSS COUNTRY
Overall: 10-4 SCIAC: 4-3
The Beavers ended their 1995 season on Saturday, Novem­ber 11th at the Western Regional meet in San Diego. Caltech placed sixth out of 10 teams, just edging out Whittier College and solidifying Redlands and LaVerne. CIT's first runner, Dan Kleiman, came in at 18th with a time of 27:18. Next for the Beavers was Brian Barris with a time of 28:41, followed closely by Tom Dimauskas. Daniel Richard was the next Tech'er to cross the finish line, followed by Conrad Zeider, Tom Nakatsuki.

WOMEN'S CROSS COUNTRY
Overall: 7-10 SCIAC: 2-5
The Lady Techers also trav­elled down to San Diego this past weekend to compete in the West­ern Regional meet. The lady har­riers gave it their all as they ran in their last meet of the season, plac­ing 8th out of 12 teams. Caitlin Henderson lead the Caltech women, coming in at 20th with a time of 20:51. Janet Sun, follow­ing close behind, crossed the finish line with a time of 21:13. Phyllis Chen followed, coming in at 47th. Gretchen Larson, Karen Bleitzer, Keri Ryan, and Aimee Pierce came in with times under or right at the 24 minute mark.

WATER POLO
Overall: 4-13 SCIAC: 0-10
This year's water polo season ended at the SCIAC Championship with five hard fought games in three days. The first day opened against Occidental College and Pomona Pitzer. Both games fea­tured the outstanding play of Mike Greene and Donovan Stevens. Both players are seniors and played in their last college games. The two games had the script as the score was close at half and then sloppy play cost theTechers dearly and they could not recover. Final scores Pomona 914, Occidental 7-7. Freshman Brian Collins came alive from the outside scoring 2 goals from downtown worth four points against Oxy and two man up goals against Pomona.

Day two found the Caltech squad split into three groups. Group one went to the game, group two was sick with the flu, and group three went to the Mojave desert for an important class that could not be missed. The two games were against the first place Claremont-Mudd-McKenna-Scripps and the second place Redlands. Both games were a little tough to watch but Caltech hung in there and played their best. Sookeetoo Bhuta and Collins scored in the 15-2 loss to CMS, only Rogers could score against Redlands in a 21-1 mass killing. Greene was an injured Stevens reported for the last game against Whittier and both did an outstanding job stealing passes and putting a stop on the Poet's top scorers in the Conference. The Techers shooting was lacking as shot after shot did not make it to the mark and Caltech was forced to play from behind. The score was Whittier 7, CIT 5 one minute into the third quarter. After a number of scouach calls that did not help, the Techers and a two point score from Whittier, at the end of the quarter the score was WC 15, CIT 7. Scoring for the tourna­ment was Greene 10, Collins 8, Stevens 4, Blunt 2, Rodriguez and Jonathan Aldrich each with 1.

Coach Dodd relating about the season said, "I am very happy with this year's team. The level of play was very high early in the year before sickness and injuries took their toll. We still had our moments when we could play with anyone. Added to that the team was just a wonderful group of guys to be around."

MEN'S BASKETBALL
On Saturday, November 11th, the Men's Basketball team hosted the annual Alumni game. Despite the strong showing by the alumni in the first half of the vari­ sant game, the young varsity squad proved to be too much for the alumni to handle. Recent graduate Grant Templin, led field for the alumni to an easy four point win. Despite the strong showing by the alumni, the young varsity squad proved to be too much for anyone. Added to that the team was just a wonderful group of guys to be around."

FENCING
The Caltech Fencing team opened up their '95-'96 season on November 4th against CSUF, CSULB, and UCSD. The saber team was impressive in gaining the first of three victories for the day against CSUF, then struggled to 2 hard fought victories over CSULB and UCSD. The men and women's foil teams struggled to victory over UCSD also, before "flaming" to defeat against the other two schools. Coach George Clovis stated, "We might have done better if we had not lost our third lady foilist due to a sprained ankle the night before the match." Saber team captain, Austin Collins lived up to expectations by win­ ning all nine of his matches. He supported not only the team, but also his chances to win the indi­ vidual championship. His team­ mates were not so lucky with identi­ cal records of four wins versus five losses. Milhoko Kato and Emma Goldberg had identical records of five wins and three losses for the day, but needed at least one more lady on their team to have a chance for team victo­ ries. They both are in good stand­ing for individual honors in the conference. Returners to the squad include seniors Anatole Faykin and Kato, juniors Collins and John, sophomore Dan Hennemue, Emily Jennings, Devon McClain, Andrypr Lucus and Wes Sallito. Newcomers include freshmen Goldberg, and Adrienne Borske. Look for Goldberg to be nationally ranked before the end of the Caltech ca­ reer. Collins is expected to win the IFCSC, (the conference which CIT is a part of, and to lead the team to another championship. All of the team works very hard and should perform strongly.

CASE INTERVIEW WORKSHOP
Are you a graduating senior interested in learning how a "case interview" works? If so, please join us for an informal session given by The Boston Consulting Group on the "case interview" experience.

Thursday, November 14
4:00pm
Student Activities Center Rm# 13
Hosted by
Dan Jansen (BCG LA)
Women Hoosiers Looking to Cause Some Pain

by Angie Bealko

If you stumbled into a Caltech Women's Basketball practice recently, you may think you had walked right into Madison Square Garden. Not bad. Well... maybe they don't play as dirty as the Knicks do, but they're getting there.

This year's team combines some strong returners with a lot of fresh new talent to give the lady hoosiers that extra-aggressive thrust they've been yearning. Thirteen athletes make up this year's squad, led by new head coach Sherry Roche and assistant coach Mike Tice. Coach Roche believes in playing very aggressively so look for the ladies to put a lot of pressure on their opponents on both ends of the court.

Senior Captain Angie "Chevy" Bealko and Junior Assistant Captain Ellis "Shazi" Meng will prove to be strong on the boards and inflict some pain in the key. Sophomores

Michaelleen "bam bam" Callahan, Lori "stormin'" Has, and Irene "Speed Queen" Wong will be stirring up the back court for Caltech, catching many opponents asleep for easy steals. Senior Melissa "the Maniac" Hampton, Sophomore Katie "Texas Two Shooter" Stofler, Freshman Joanna "no not Clinton" daughter Dodd, and Freshman Rachel "the Brute" Steinerberg will make their presence known around the key as well as push their way around. Rounding out the lineup will be Sophomore Frances "Suzuki" Sui, Freshman Hanna "One Eye" Cai, Freshman Nasim "Limpy" Afsarmanesh, and Freshman Kara "I'm Gonna Hurt You" Swedlow adding much speed and aggressive play to the guard positions.

This year's first game is on Monday November 20th at 7:30 p.m. at the Braun Gymnasium. Come for the blood, the sweat, the trash talk, and good old basketball. It'll be worth it.

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Michaelleen "bam bam" Callahan, Lori "stormin'" Has, and Irene "Speed Queen" Wong will be stirring up the back court for Caltech, catching many opponents asleep for easy steals. Senior Melissa "the Maniac" Hampton, Sophomore Katie "Texas Two Shooter" Stofler, Freshman Joanna "no not Clinton" daughter Dodd, and Freshman Rachel "the Brute" Steinerberg will make their presence known around the key as well as push their way around. Rounding out the lineup will be Sophomore Frances "Suzuki" Sui, Freshman Hanna "One Eye" Cai, Freshman Nasim "Limpy" Afsarmanesh, and Freshman Kara "I'm Gonna Hurt You" Swedlow adding much speed and aggressive play to the guard positions.

This year's first game is on Monday November 20th at 7:30 p.m. at the Braun Gymnasium. Come for the blood, the sweat, the trash talk, and good old basketball. It'll be worth it.

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Women Hoosiers Looking to Cause Some Pain

by Angie Bealko

If you stumbled into a Caltech Women's Basketball practice recently, you may think you had walked right into Madison Square Garden. Not bad. Well... maybe they don't play as dirty as the Knicks do, but they're getting there.

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denotes a new announcement.

Today is the last day that the Caltech Student Life Web Team will be collecting your cards and it's your last good chances for the needs in our community. Collections will include all items you'd like to contribute. In each building, all donations will be greatly appreciated.

The Caltech-Occidental Symphony Orchestra will be performing a concert

The next move to serve in the German Film Series (emphasis on Swiss films this year)

The event

A pizza lunch will

The National Security Education Programs

The California Tech

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