Computer Science Advisory Council
Formed in 1995

The Computer Science Department is proud to announce the formation of its Industrial Advisory Council in 1995. The council's goals are to:

- help keep the department up to date on current and future needs of graduates;
- assist the department in developing and implementing its goals;
- create an opportunity for the department to exchange ideas with people in industry;
- help industry leaders better understand the department's mission; and
- assist the department in seeking public and private support.

Current members are:

**John A. Adelsbach** (Grass Valley Group/Tektronix)
**James Basiji** (3Com Corporation)
**Richard Bergquist** (Peoplesoft)
**Peter Bradshaw** (Document Sciences Corp./Xerox)
**Jerry L. Brown** (Tandem Computers Inc.)
**Linda M. Burt** (Silicon Graphics, Inc.)
**Kathy A. DeMartini** (PDH, Inc.)
**Bert Forbes** (Ziatech Corporation)
**Mark S. Gerhardt** (Loral Space & Range Systems)
**David F. Hastings** (Pacesetter, Inc.)
**David G. Intersimone** (Borland International)
**David W. Mitchell** (Chevron Information Technology Co.)
**Emil Sarpa** (Sun Microsystems Labs)
**William Scott** (Hewlett-Packard/Electronic Test & Measurement Org.)
**Dan M. Weeks** (Hewlett-Packard)

Dan Weeks and David Intersimone, both Computer Science alumni, are co-chairing the council. This past year they have reviewed our curriculum with respect to industry needs, and reviewed lab and resource needs.

The Computer Science Department owes special gratitude to Jeanne Aceto, Cal Poly College of Engineering, Professor Emile Attala of the Computer Science Department, and Dan Weeks of Hewlett-Packard for their instrumental assistance in getting the council started.

**Thanks for Great Response to Alumni Surveys!**

Wow! So far we have received more than 500 responses to our curriculum survey mailed to all CSC alumni in November. (This represents a return rate of about 33%.) Many of you took the time to write additional comments and we are taking the time to read all of them. We look forward to reporting the results in a future issue of @CSc.CalPoly.Edu.

In the meantime we will be using the input you gave us to prepare for an internal program review at Cal Poly as well as our accreditation visit next fall.

If you haven't yet returned your survey and it's still sitting on your desk, go ahead and return it. We will still include your response in our final results.

Thank you for the time and energy it took to put your thoughts on paper.
Alumni "Medallion" Award Goes to Weeks, CSC '83

Dan Weeks, (CSC '83), was chosen by the faculty of the Computer Science Department for the 1995 College of Engineering Medallion Award. The award, the highest honor confered by the College of Engineering, recognizes alumni who have demonstrated "above and beyond" commitment to the success of the College departments, programs and activities.

Dan has served as the primary liaison between the department and Hewlett-Packard and has helped facilitate several more than $1 million of equipment awards to the department. Dan is currently the System Reliability Section Manager at Hewlett-Packard in San Diego and is heavily involved in recruiting CSC majors for HP. Dan has also been a favorite speaker for the senior seminar each year and retains close ties with the faculty and students. He was recently chosen as the first chair of the newly formed Computer Science Industrial Advisory Council.

In this distinction, Dan joins David Intersimone (CSC '73) of Borland International, the department's 1994 honoree.

CSC Alumni Home Page Ready for Entries

The Computer Science Department now has an alumni home page. The page allows you to fill out a registration form and view the whereabouts of fellow alumni. Check it out at:

http://kdat.csc.calpoly.edu/~alum/

CSC Students Earn Statewide, Nationwide Honors and Awards

1995 Trustees Award for Outstanding Achievement - This award, given to only three students statewide, was given to Alice V. Books, a computer science senior. It is accompanied by a $2,500 scholarship funded by the Evelyn D. Armer Memorial Scholarship Fund. The award recognizes students who demonstrate financial need, superior academic performance, community service and personal achievement. The selection committee also seeks to award students who have overcome personal tragedies, adversity and hardships, all of which suggest an inner strength in their commitment to maintaining academic progress while being involved in service to others. Brooks, a single mother, a victim of abuse, and a middle-aged college student, epitomizes the award criteria. In addition to long hours studying computer science, Brooks takes time to serve the community as a volunteer at a shelter for battered women and children, as a speaker for drug and alcohol rehabilitation, and as a group counselor for women recovering from childhood molestation.

Graduate Equity Fellowship Program - Stephanie Ludi, Sheree Poon and Anne Marie Porello were each awarded $3,000 to continue their studies and research in computer science.

Rotary Foundation Ambassadorial Scholarship for 1996-97 - Lori Blanc, graduate student in computer science, was awarded $21,500 to study at an overseas university for one year and to further international understanding and friendly relations among people of different countries. Blanc has chosen to study at either the Royal Holloway University of London or the University of Edinburgh, Scotland, because of those schools' strong cognitive science departments. During the year, she will visit Rotary Clubs, schools, and civic organizations as an ambassador of goodwill. Blanc was sponsored by the Rotary Club of San Luis Obispo.
UPE Sponsors First Computer Bowl

The computer science honorary, UPE, and its advisor, W. Chris Buckalew, organized the first of what is hoped to be an annual "Computer Bowl" in May. Five teams entered this year's Jeopardy-style competition.

After two elimination rounds, it was the "We're Not So Nerdy" versus the "Mentally Impaired Grad Students (MIGS)". The MIGS (Jim Pilgrim, Don Lockwood, Stan McDaniel and Steve Gollery) walked away with the championship handily. The prizes this year were laser pointers.

Cindy Biermann won the half-time activity – the manual Tower of Hanoi contest. This win came despite practicing only a few times the morning of the contest and getting no sleep the night before (she was trying to get the buzzer equipment working). For her efforts she won three Dilbert books.

A sample question: If :-) is a smiley face, and :-( is a sad face, what is :-•? (Answer: a regular expression.)

New Student Group Focuses on Women in Computer Science

The Computer Science Department's newest student organization is off to a busy start. FACT (Females Active in Computing Technology) began with an open meeting in February 1995. Computer science graduate student Lori Blanc was instrumental in its formation after seeing the need for a specialized club for computer science students to network with each other. Initial costs were partially covered through an award from the College of Liberal Art's Forum on Women in Science and Technology, through Asst. Professor Mei-Ling Liu.

The purpose of FACT is to provide an environment where (female and male) students can network with one another, discuss computing topics and topics relating to women in computing, and to have fun.

One of FACT's largest undertakings has been a mentoring program for undergraduate computer science and computer engineering majors. More than 50 new students (about 25%) signed up to get mentors this fall. The program matches entering freshmen and transfer students with current students to provide role models and advice. The underlying goal is to retain more students and to provide them with a better picture of the Computer Science and Computer Engineering programs, and academic opportunities therein.

Also in the works are periodic workshops, industry speakers, and a high school recruiting program.

If you would like to become involved in supporting FACT, contact the president (fact@galaxy.calpoly.edu) or the advisor, Mei-Ling Liu (mliu@galaxy.calpoly.edu).

ACM Programming Team Competes Regionally

Two programming teams from Computer Science, along with their advisor, Ron Oliver, traveled to UCSD for the annual ACM Southern California Regional Programming Contest. The teams placed fifth and eleventh out of 35 teams competing. Cal Tech took first place and UNLV took second.

The top-placing Cal Poly team was Tom Dilligan, Christopher Ferris and Brett Moser. Cal Poly's other team was Adam Wozniak, Manish Bhatt and Steve Mead. Both teams finished three out of six programming problems. One of the six problems was not solved by any team.

The first place Cal Tech team completed five problems. UNLV also completed five problems. The time difference between first and second places was about 11 minutes (or a little over two minutes per problem)! Third and fourth were another Cal Tech team and a team from Harvey Mudd College, each of which solved four problems. UCLA was sixth.

As suggested by the close race for first place, and by the number of teams that completed three or more problems, the competition was very tough.

Sample problems are always in short supply and the teams welcome any and all suggestions. Send email to sroliver@galaxy.calpoly.edu.
Computer Graphics Continues its Popularity at Cal Poly

The Cal Poly Computer Science Department is pleased to offer its students a comprehensive Computer Graphics program. The Department has a variety of Computer Graphics courses, instructors expert in several areas of graphics, and excellent laboratory equipment to support the courses.

The curriculum begins with Computer Graphics. This introductory course acquaints students with the basics of Computer Graphics. Material covered includes graphics hardware, graphics primitives, fast rendering and clipping of primitives, transformations, color theory and models, light and shading, rendering, fractals, and texture mapping. Students complete five projects during the quarter and learn the basics of Inventor, an advanced 3-D interactive rendering toolkit.

Once students have taken this course, they may take any other Computer Graphics course in the curriculum. The advanced Computer Graphics courses include Advanced Rendering Techniques, Computer Animation, Computer Graphics Seminar, and soon Multimedia Tool Development.

Advanced Rendering Techniques covers raytracing and modeling topics. Raytracing is the technique most often used by movie and advertisement studios to develop realistic-looking synthetic scenes. Students build their own raytracers for the laboratory exercises during this course.

In Computer Animation, students learn the powerful algorithms used for creating sophisticated animations, including procedural motion, hermite and parabolic blending, time-space curves and surfaces, particle systems, free-form deformation, dynamics and kinematics, morphing, and video issues. The Inventor toolkit is used for creating the five projects required of each student during the quarter. Projects are demonstrated in a theater-like fashion, and usually the audience includes many outsiders who attend to enjoy the student animations.

Computer Graphics Seminar is patterned after industrial research seminars. Students each choose an article from the latest SIGGRAPH conference proceedings and present it to the group in a one-hour talk.

This year the department will offer a Multimedia Tool Development. Unlike most multimedia courses, in which students learn how to use various multimedia tools and applications, this course will teach students how to build multimedia tools. As an example of a laboratory exercise, students will build a video conference application which communicates over the Department's ethernet computer network. This project will introduce them to the issues of video and sound synchronization and multimedia bandwidth limitations.

In addition, the Department occasionally offers topics courses. During the Spring 1995 quarter the Department offered Software Development for Virtual Reality, taught by Dr. Lew Hitchner. The Department expects to periodically hire outside experts to bring fresh viewpoints and material to the students.

A view of the virtual reality model of the Pilling (Computer Science) Building, a senior project by Chris Conley.
Core Language Changes to C++

In spring of 1995, the faculty of the Computer Science Department voted to switch the core language from Ada to C/C++. This decision was based on feedback from employers, alumni and students and faculty concerns that students were ill-prepared for upper division courses, many of which are C-based.

The department believes that exposure to multiple language paradigms is educationally important and is currently considering SmallTalk or a Pascal-based language to provide student exposure to a second language.

The changeover is being phased in over the 1995-96 academic year, with Professor Clint Staley teaching the first section of CSC 118 in C++ in Summer 1995. It will phase into the rest of the core courses during the fall and winter quarters, with the changeover being completed by spring 1996.

Any advice from the alumni would be appreciated. A faculty core committee consisting of Lois Brady, John Connely, John Dalbey, Len Myers and Clint Staley, is managing the change. Address concerns/advice to: lbrady@galaxy.calpoly.edu.

ACM Company Tours Helpful to Students

For the last two years, Cal Poly’s student chapter of the ACM has organized tours of Bay Area companies during spring break. They have toured Borland, IBM Almaden, Tandem, Silicon Graphics, Pacific Data Images (PDI), Synoptics (now Bay Networks), PDH, and NASA Ames. Tours have been scheduled for mornings or afternoons throughout the week-long break (usually in late March). Participation is interest-based, and ranges from four to sixteen students per tour.

A tourgoer/alumni dinner has been held on Wednesday evening of the tour week and up to 40 people have attended.

According to last year’s tour organizer, Heather Robinson, the Spring Tours benefit both Cal Poly students and the companies they visit during the five-day period. They help students familiarize themselves with how things will be in the working world, allow them to give companies their resumes directly and give students a chance to see what kind of companies they think they’d like to work for during a Co-op and/or after they graduate. The companies benefit by increasing student awareness of who they are and what they do and give them a chance to show students what they will be looking for in a prospective employee.

If you are interested in having our students visit your company (especially if you found this helpful as when you were a student here) or are interested in the mid-week dinner, please get in contact with acm@galaxy.calpoly.edu.

Record Numbers Attend New Student Day

We hosted our annual new student day on Friday, March 31 for students who received accommodation letters for the Computer Science and Computer Engineering majors for Fall 1995. It was our largest so far, with 179 students and 191 family members attending.

Students came from many areas of California, with highest concentrations from Modesto, Fresno, Los Altos, Fremont, Palo Alto, Oxnard, Irvine and San Diego. One student traveled from Houston, Texas for the event!

The purpose of the full-day event is to showcase what Cal Poly's Computer Science Department has to offer, answer any questions the students have, and help them make a decision when they have received acceptance letters from more than one university. As is true with many majors at Cal Poly, we find that the students are deciding between a University of California campus and Cal Poly. Most are not considering other CSU campuses. Students are impressed with the department’s facilities and reputation, as well as Cal Poly’s small class sizes and direct contact with faculty from early on in the program.

If you know someone who is considering attending Cal Poly and majoring in Computer Science, this annual event is the best opportunity to learn about the department. Please contact the department office at (805)756-2824 for details about the 1996 New Student Day.
Honor Roll of Donors 1994-95
Your Contributions Make a Significant Difference to Us!

We thank the following contributors to the Computer Science Department. One hundred percent of this money goes to the department and is used to benefit both the students and faculty professional development, which indirectly benefits the students.

Every effort has been made to ensure the completeness and accuracy of this listing of contributions made from July 1994 through June 1995. Regrettably, mistakes do sometimes occur. If you find an error, please do not hesitate to contact the Computer Science Department, (805)756-2824.

Delta Society ($1,000 or more)

Apple Computer, Incorporated
Chevron Services Company
Hewlett-Packard Company
ITT Federal Services, Incorporated
Oracle Corp.
Sun Microsystems Foundation, Incorporated
3Com Corporation

Dean's Associates ($500 - $999)

Fred and Judith Becker, Jr.
Lawrence and Victoria Browne
Charles Dana
Kathy DeMartini
Donald Erickson
Prototyping & Development Heuristics, Inc.

College Partners ($250 to $499)

El Corral Bookstore
Iisumi and Mary Goto
Dennis and Joyce Ikenoyama
Clyde and Annita Millet
North American Philips
Janet Stucke
Donald Van Patten
Iris Walters
Charles and Nancy Wuller

College Friends ($100 to $249)

Atomic Investments, Inc.
Brian Baer
Anthony Barata
George Bayless
Baywood Bed & Breakfast Inn
Bechtel Foundation
J. and Pat Benson
John Bettendorf
Norman and Rita Blumstein
Barry and Jeannic Bruins
Kimi Cousins
Steven and Robin DeJarnett
Richard and Serene Dong
Harland Duncan
Louis and Vicki Geiger, III
Parker Gillespie, Jr.
Glen Goto
Susan Graham
Daniel Hancock
John Hartsell
David Holmgren
Hughes Aircraft Company
Cheryl James
JBL Scientific, Incorporated
Eric Johnson
Dan and Nancy Littrell
Kevin and Sandra McEntee
Bruce Mengler
Robert Nattenberg
Michael Noehren
Connie Paine
Richard and Kei Palmer
Brian Payton
David Perkins
Peter and Deborah Pressley
Eric Radin
Kenneth Ray
Scott Reed
David and Barbara Resch
Jeffrey Richardson
Jackson Rightmyer
J. and Christine Robertson
Steven and Teri Sartain
Barbara Shankwiler
Charles and Linda Spencer, Jr.
Marjorie Stolker
Leonard and Monica Teyssier
David and Lynda Thompson
TRW Foundation
Gary and Catharine Visser
Donald and Jennifer Welch, Jr.
Ka and Kalaine Wong
Robert Black
Lynne Blackburn
Gary Bloom
Emil and Carol Boncich
Lane and Karen Borges
Richard Botta
Kimberly Bowdish
Donald Brenner
Martin Broten
Richard and Patricia Bryant
Karen Buros
Jon and Linda Burt
Bruce and Darlene Campbell
Casa Alegre
Glenn Castan
Jeffrey and Janet Cohen
Bradley and Laurie Craig
Laurene and Monica Cruz
Sonja Cufle
Stuart and Staci de Jesus
Henry Dea
John and Suzanne Dempsey
Ronald and Claudia Larson
Philip and Anna Dinter
Jim and Dusty Edwards
Douglas and Linda Emerson
Gary and Marsha Epstein
James and Mary Ferris
Raymond Finch
Joseph Fiore
Bradley Flood
Willie and Yang Gatlin
General Electric Foundation
Darren Giles
Eugene and Jean Gobho
Andres Gonzalez
Michael and Beth Harper
Tuan Ho
Peter and Hagar Holan
Eric Hummel
David Iden
William Imamoto
ITT Corporation
Robert James
Mahendra and Rosalie Jhala
Jill Johnson
Dennis Jones
K Mart Corporation

Department Friends (Up to $99)

Charles and Catherine Actis
Adobe Systems, Incorporated
Advanced Micro Devices
Norman and Elena Agostino
Lisa Albright
Kevin and Christina Aronson
Kenneth Astl
Alan Bell
Dear Fellow Alumni:

My Cal Poly education provided me with the tools I needed to launch a rewarding career with Hewlett-Packard Company. I was happy to make regular donations to the Cal Poly Alumni Association, in essence repaying the university for what it has done for me.

Six years ago I found a better way to support Cal Poly: I became a sponsor through HP’s corporate grants program. Because HP is serious about philanthropy, I’ve been able to give back to the university orders of magnitude more than what I could give out of my own pocket. In the last 6 years, HP has donated approximately $1,000,000 of computer equipment to the Computer Science Department.

One thing that surprised me about the corporate grants program is how painless the grant process is for me. Ninety five percent of the work is done by the CSC faculty who writes the grant proposal. My main job is to coach that person, then turn the completed grant into the proper person within HP. If you are interested, the HP corporate grants process is defined at: http://www.corp.hp.com/Publish/UG/.

If your company does not have a formal grant program, there are at least two additional ways you can support the Computer Science Department. First of all, the product your company makes can be directly donated to the department if there’s a demonstrated need. Secondly, many companies match their employee’s donations to universities.

I urge you to consider the possible ways you can support the Cal Poly Computer Science Department.

Dan Weeks
'83 CSC
Donations Sought to Support Student SysAdmins

The Computer Science Department now runs twelve major laboratories in which students get hands-on experience. Quite a bit of the work of maintaining these computers falls to the Lab Rats— the overworked and underpaid student system administrators. The Department has started a program to hire more of these sysadmins and pay them better, but we need your help. We seek your donations to help support our student system administrators. Your donations will go DIRECTLY to support these students.

Chevron Information Technology has started the fund by allowing us to use $2,000 of their recent gift to support students in this way.

If you will help us, your company may also help. Silicon Graphics, Hewlett-Packard, and many other companies will match your donations to us dollar-for-dollar. If, for example, you donate $250 and your company matches it, the total will support a part-time student sysadmin for one month. Your donation is tax-deductible, and you'll help Cal Poly continue to produce excellent graduates as well as keep a starving student sysadmin from running out of pizza and Dr. Pepper!

Not long ago you received in the mail a flyer from the Cal Poly College of Engineering requesting donations to help the College maintain its quality of education. If you haven't yet made a donation to the College, please consider supporting the student system administrators. Any donation of $100 or more will enter you in the Dean's Circle as described in that flyer.

Please your note on your check that it is for the CSC Student SysAdmin Fund and send donations to:
College of Engineering
Cal Poly
San Luis Obispo, CA 93407

If your company matches donations, you may also need to send in the appropriate form—check with your Personnel office.