CSUS Co-op Program Named Northern California's Best

The Cooperative Education Program at California State University, Sacramento's School of Engineering and Computer Science has received the Outstanding Program Award for Northern California from the California Cooperative Education Association. The award honors the best cooperative education program at a four-year college or university in Northern California.

The Co-op Program unites industry and the School to provide full-time, paid professional experience for upper-division engineering and computer science students.

Under the Co-op Program, students take a semester off from classroom learning to work for an industry sponsor. This benefits students by allowing them to earn academic credit, gain relevant professional experience and earn money to help cover their educational expenses.

"Many people have worked very hard to make our program outstanding," said Maria Mejorado, director of the Co-op Program. "Faculty, students and administrators have all given strong support to this effort and our students have gained greatly as a result. Special thanks also are in order to our employers who are committed to hiring our students."

"Co-op is a win-win proposition for the student, the employer and the university," agreed Donald H. Gillott, Dean of the School of Engineering and Computer Science. "Our students gain valuable practical experience and financial support while the School develops meaningful relationships with industry." Co-op employers benefit from the program because it affords them an effective means to develop and prepare a constant supply of high-caliber future employees.

"Co-op students are motivated to perform well," said Julie Vivian, internship and Co-op coordinator for Intel Corporation's Folsom site. "Intel's technical personnel are able to proactively influence the future coursework of students. Then students return at a later date academically trained for a specific Intel industry focus."

This exposure to professional demands definitely gives Co-op students a jump on the job market. "The main advantage of being a Co-op is a distinct, clear edge over other new college graduates," said Bill Wrenn, Intel's Folsom site network manager and former Co-op student. "The fact that the company knows your abilities gives you an advantage over outside candidates."

Co-op not only helps to shape a student's educational pursuits, it also allows companies such as Intel to

Continued on page 5

New E&CS Alumni and Development Director

Barbara Caretto has been appointed director of alumni relations and development for the School of Engineering and Computer Science.

Caretto holds a law degree from Loyola Law School and a master's degree in public administration from the University of Southern California. Before joining the E&CS staff, Caretto served as development and public relations director at the CSU, Northridge School of Engineering and Computer Science, and earlier had served as director of precollege programs in the CSU, Northridge Minority Engineering Program.

"We are delighted to have Barbara join our team at this time of challenge for public higher education," Dean Donald H. Gillott said. "Tomorrow's professionals are today's students. It is vitally important to keep our friends and colleagues in corporations, industry and government informed of the need to equip our students with the best possible education."
From the Dean’s Desk

Long-Term Planning Strategy

During the past several months, California State University, Sacramento has been establishing Instructional Program Priorities. More specifically, each Academic School has been required to develop a document which has instructional program priorities as the basis for determining the size and shape of the degree programs. We in the School of Engineering and Computer Science have established our priorities with an emphasis on the long-term importance of sound technical education.

It is clear that education, and particularly engineering and science education, will continue to be the distinguishing factor identifying those nations which succeed economically. It is likewise true that nations which enjoy economic success are also the nations which have the opportunity to improve social conditions and civic harmony. It is the mission of the School of Engineering and Computer Science at California State University, Sacramento to offer high-quality programs and to graduate engineering, computer science, and engineering technology professionals of the highest caliber. This mission is critical to the economic success of the greater Sacramento region.

While the School understands that shrinking State budgets may make it difficult for all programs to be fully funded, we are convinced, that our State dollars can be leveraged using outside resources to assist in the support of our academic programs. As we respond to the need to review the size and shape of academic programs as we set priorities, our plan is to take the positive approach knowing this can be accomplished, rather than giving up on our valuable programs before the battle is joined. Initial results from the School’s development efforts have demonstrated that success is clearly achievable. As one of this newsletter’s articles describes, we have made a key appointment to support our efforts in development and alumni affairs.

Through its planning and development efforts, the School has the talent and resources to move its programs forward. Through dedicated efforts in development activities, it is very realistic for the School to increase its total resources over the next five years from the current seven to eight million dollars annually to 15 million annually, based on 1992 budget figures. However, to accomplish this goal our people must be given the opportunity to focus on our mission and on the management and development of our resources, rather than being totally consumed in the budget crisis. We must also eliminate the morass of restrictions imposed on us by the CSU System and replace them with rewards for results and creativity.

It is our belief that the time is right for a major change in the way we operate. We are proposing that the School of Engineering and Computer Science be permitted to literally reinvent the way academic schools in public universities operate. There is growing support for this approach throughout the CSU. This University has the opportunity to lead public higher education in a process of rebirth which will have a major impact on education and on our lives.

The School of Engineering and Computer Science is developing a three-pronged approach to meeting its future resource needs.

1. Focus on the School’s mission.
2. Reinvent our approach to fiscal management.
We believe long-term budgets (three to four years) can be developed which are result-driven and which encourage each program to save resources by permitting funds to roll over from one year to the next.

Each program is expected to save resources for future use.

3. Develop and leverage both state and outside resources. We believe that the School can significantly increase cash donations in the coming years. Between one and two million dollars per year by 1995 is a reasonable goal. Development funds and State dollars should be leveraged to the extent possible.

Important School Phone Numbers
(Area Code: 916)

Dean’s Office 278-6366
Civil Engineering 278-6982
Construction Management 278-6616
Computer Science 278-6834
Computer Engineering 278-6844
EE Engineering 278-6873
Biomedical Engineering 278-6916
Mechanical Engineering 278-6624
ME Technology 278-7081
ECS Computing Services 278-7350
MEP Program 278-6699
Project Success 278-5468
Cooperative Education 278-7234
Assistive Device Center 278-6422
Women’s Programs 278-7877
MESA 923-0844
Career Development Office 278-7091
ECS Alumni Office 278-6629
CSUS Alumni Office 278-6295
Computer Network System Links School to World

Like many others who work inside a large bureaucracy, CSUS professor Floyd LeCureux dreamed of a world without memos. But his dream has virtually come true, thanks to a unique and complex system of computer interlinks now in place at the CSUS School of Engineering and Computer Science.

Lacking only a clever acronym for its title, the Computer Network System has linked more than 400 student and faculty computer workstations and mainframe computers—with each other, with campus computers, with the University Library, with other CSU campuses, with national networks, and ultimately with global networks.

Network lines are busy, conveying everything from homework assignments to research findings, all in a paperless environment.

LeCureux, director of the Center for Computer-Aided Design, and his staff are among the network’s most enthusiastic boosters. LeCureux uses the network for all correspondence with his students and faculty colleagues. Homework assignments are made and turned in via the network. Has the meeting time or place changed for the class? Students check their electronic bulletin boards, not the ones in the hallway.

Library book searches no longer require hours of scrutinizing the card files or stacks. Thanks to the Computer Network System and a new computer system in the University Library, faculty and students can search the data files of not only the CSUS library, but those of libraries around the state, across the country, and literally all over the world.

All of this takes place in what LeCureux describes as a “seamless” environment, where all computers—Apple, AT&T, DEC, SUN, IBM and others—are connected.

Most of the necessary wiring in the engineering building for the network was accomplished by School faculty and staff at minimal cost. This network then was tied to the campus network which connects to the rest of the world.

“It functions like an extension of the telephone system, only it’s more productive, and, because the state, national and international networks are industry-sponsored, communication across the country is usually free to educators,” LeCureux said.

The CSUS Computer Network System is one of the most sophisticated of its type in the state, and has impressed visitors from industry and government, including the National Science Foundation.

LeCureux confesses that there is still one hurdle to overcome in his dream of an electronic work environment: At the end of each semester, final grades must still be turned in to the Registrar’s Office—on paper.

CSUS Engineering Specialty Centers

The CSU system, through the Computer-Aided Productivity in Engineering (CAPE) Committee, has spearheaded the establishment of Specialty Centers in the system’s schools of engineering. Addressing the need for expertise in computer software used in engineering programs and support for the software, the centers divide responsibility among the engineering schools to provide the best possible support and service to all of the CSU campuses that have similar needs for this service.

The Engineering Specialty Centers coordinate with personnel in the CSU Office of Information Resources and Technology (IRT) and the campus computing centers, and CAPE coordinates the operation of the centers and makes recommendations for adjustments or reorganization as dictated by future changes in technology and needs.

Continued on page 4
Specialty Centers
Continued from page 3

The Engineering Specialty Centers provide help and information for the selection, acquisition, installation, and maintenance of one or more areas of computer software used for research and educational programs in the schools. They also provide training, consultation, and useful interface software.

Services are offered at no cost to the receiving campuses. Although the primary objective of the centers is to support the engineering schools, all available services are extended to non-engineering schools.

The CSU campuses that currently have established Engineering Specialty Centers include: Chico, Fresno, Fullerton, Humboldt, Long Beach, Los Angeles, Northridge, Sacramento, San Diego, and San Francisco.

ECS - SACRAMENTO

The Engineering Specialty Center at CSUS has been in operation since January, 1992, under the guidance of Dr. Floyd LeCureux, director of the Center for Computer-Aided Design at the School of Engineering and Computer Science. The specialty areas covered by our Center are computer networking, the Info Server, and the IMSL software.

The ample connectivity provided by our computer network system (described in the preceding article) allows file transfers and communication among vastly different makes, models and operating systems. Through the tie with the campus network, this local area network has access to vast resources around the globe. Network drawings and consultation are available to interested parties.

A dedicated Digital Equipment Corporation InfoServer system provides on-line access to all current DEC software products. These products include DEC software packages that are downloadable to an off-site system, the complete line of DEC self-paced interactive training tutorials, and the complete set of VMS and Ultrix documentation. The training material and the documentation can be viewed on-line on a DECwindow (or X window) based terminal or workstation. Access to the InfoServer from another CSU campus is through a DECnet or TCP/IP network connection.

ECS-Sacramento is an authorized distributor of IMSL software products and licenses within the CSU system, at reduced prices. Available products include the Complete Library Group of mathematical and statistical subroutines, the Interactive Documentation Facility on-line libraries documentation, and the Exponent Graphics routines for high-quality output. Software licenses are available for computers ranging from workstations to the CRAY. A paid-up license is good for the life of the computer and includes one year of vendor support. Subsequent updates and support can be obtained by paying a yearly support fee. Training from the vendor is also available.

For more information about the support and services provided by the CSU Engineering Specialty Centers, please contact Dr. Floyd LeCureux, Chair of CAPE, at (916) 278-7350, or Cecilia Swift, Coordinator of ESC-Sacramento, at (916) 278-5413.

Dean Gillott to Step Down

At press time, Dean Donald H. Gillott announced his resignation as dean and his intention to return to research and teaching. He will remain in his position through August or beyond until his successor is appointed.

Under Dean Gillott's 17-year leadership, E&C&S has risen to the top ranks of California's engineering schools.
Grant Links Women to Engineering and Science Careers

The School of Engineering and Computer Science at California State University, Sacramento has received a $50,000 grant from the California Community Colleges to encourage women to study engineering and science.

Under the grant, CSUS will provide networking opportunities and conferences for school-college “Links” programs already in existence at Cerritos, Diablo Valley, Glendale and Mira Costa colleges.

“New programs need assistance in attaining resources and developing successful strategies,” said Grant Project Director Louise Chiatovich, who also directs Women’s Programs in Engineering and Computer Science at CSUS. “Our goal is to connect industry and education, creating a pipeline system that takes young women from high school through college and on to challenging careers in the sciences.”

According to Larry Hill, assistant dean of the CSUS School of Engineering and Computer Science, U.S. women are underrepresented in technical and math-based careers, particularly engineering-related occupations, as well as in construction trades, mechanics, and higher paying skilled work.

“The nation needs more engineers and scientists,” Hill said. “Unless more women choose to pursue engineering and science degrees, it will be virtually impossible to create the economic base on which we depend.”

Approximately 17 percent of all engineering students in the nation are women, Hill said. That percentage can be raised significantly with the right programs and support from the community, Hill believes.

The CSUS Women’s Programs project was established in 1987 to increase the number of women pursuing engineering and technical majors in high school and college. The enrollment of women in engineering and computer science at CSUS has increased from 15 percent to 18 percent in the last three years.

Co-op

Continued from page 1

initiate short-term projects, fill temporarily vacant positions and handle backlogs of work. “Our motivation to hire Co-op students is to focus on projects which can’t be justified for a permanent employee, but which yield efficiency and other benefits,” said Bob Casper, Folsom E.S.O. computer operations manager.

Additionally, the Co-op Program saves an employer money by allowing for a six-to-eight month “interview”—an on-the-job evaluation of a potential employee’s performance. Meanwhile, students can decide whether they like the company.

The program also enables students to test their academic expertise in a professional situation. “The Co-op position that I have at Intel is very relevant to what I’m studying,” said Michele Blackwell, a senior majoring in computer engineering who is completing her second Co-op at Intel. “In many ways, having done a Co-op has given me some new direction and raised questions for me so that I can apply what I’m learning to the real world. Some people may feel that taking a semester off is a big price to pay, but I certainly don’t feel that way.”

Cooperative Education began in the School of Engineering and Computer Science in 1986. In 1988, the program received a $76,000 seed grant from the U.S. Department of Education. Since its founding, the Co-op Program has placed 450 students with more than 120 engineering and computer science employers. Those students have earned more than $3.1 million in gross salaries, and most have joined their Co-op employers upon graduation.

Accepting recognition are (from left) Michelle Bennett, office staff; Larry Hill, assistant dean of E&CS; Dr. Mary Burger, vice president for Academic Affairs; and Maria Mejorado, Co-op director.
MESA Trains Precollege Teachers

Capitol Center MESA has completed the first year of a three-year, $543,000 Teacher Training Grant funded under the Dwight D. Eisenhower Mathematics and Science Education Program. More than 150 Sacramento-area elementary and middle/junior high school teachers attended Summer Institutes and professional seminars that provided training with interactive (hands-on) science and mathematics materials.

The grant also provides materials and supplies for classroom use to participating schools. The most popular of these are UC Berkeley Lawrence Hall of Science-developed materials such as the Great Explorations in Mathematics and Science (GEMS) and Full Option Science System (FOSS). The MESA office maintains a lending library of 35 FOSS kits.

The MESA Summer Enrichment Program for Students in grades 2-8 has been used as a demonstration site for the teacher participants in the training grant, resulting in a student-teacher ratio of 8:1. A recent survey of the principals of the project schools revealed that the math and science training had the effect of introducing interactive materials into the elementary/middle school curriculum. Participating teachers are training other teachers at their school sites — an important objective of the training grant.

Minority Sophomore Retention Tops in U.S.

Sophomores from underrepresented groups have given California State University, Sacramento’s School of Engineering and Computer Science the highest retention rate in the country, a recent national study reports.

According to the National Action Council for Minorities in Engineering (NACME), minority sophomores in the CSUS engineering program are ranked first in the nation with a 131.4 percent retention rate. (CSUS retention tops 100 percent because a large number of community college students transfer to the University between their sophomore and junior years.)

The 1983-1990 study also reports that CSUS minority sophomores have a 73 percent graduation rate. In comparison, the study ranks Harvard University in fifteenth place (out of 325 studied) with retention and graduation rates of 16.4 and 63.2 percent, respectively.

“Our transfer figures are a measure of our success with community college students,” said assistant dean of Engineering and Computer Science Larry Hill. “We work closely with the community colleges and strongly encourage students coming to the University via that route.”

To interest minority students in engineering and computer science education and to help them prepare for careers in those areas, CSUS has established what it terms an “educational equity pipeline” for students from grade school through graduate school. “Our goal is to create a student body and graduating class that is representative of the community in which we live,” said Donald Gillott, dean of the School of Engineering and Computer Science. “To meet that goal, we have created programs that serve every educational level in our community from elementary school through the Ph.D.”

Twenty percent of the 2,160 undergraduate students in the CSUS School of Engineering and Computer Science are underrepresented minorities.

Area Contractor Endows CSUS Scholarship Fund

An endowed scholarship fund for construction management students at California State University, Sacramento has been established by family members of KIT Contractors, Inc.

More than $12,000 for the fund has been raised by KIT Contractors president Eugene (Kit) Carson and his family. The family sponsored the Carson Classic Scramble Golf Tournament at their family ranch near Sacramento earlier this year to benefit the Construction Management Program.

“With the steady increase in the cost of a university education, these scholarships will provide critical support to our construction management students,” Dr. Donald Gillott, dean of the CSUS School of Engineering and Computer Science, said. “We deeply appreciate the efforts of the Carson family.”

Carson said he and his family hope to make the fund-raiser an annual event. “We decided we wanted to do whatever we could to help today’s students stay in school.”

The first awards from the fund will be made by construction management faculty for spring semester, 1993. Applicants must be juniors or seniors and meet additional criteria.

Several members of the Carson family are CSUS alumni, including twin sons Mike and Mervin and Mervin’s wife Mary. Other family members who assisted in organizing the tournament include Carson’s wife Hannelore, and Carson’s son Eugene G. Carson Jr. and his wife Stefanie.
Project Success Lowers Barriers to Higher Education

In 1987, a senior engineering student at California State University, Sacramento won first place in a nationwide technical project contest sponsored by the Society of Hispanic Professional Engineers. In researching this outstanding student's background for a news release, it was discovered that he had been in the higher education system in Sacramento for 13 years. Why? Primarily because that was as fast as he could financially afford to proceed, despite his clear ability to complete the degree in four to five years with adequate financial backing.

Soon after the news report was published, the Assistant Dean of Engineering and Computer Science and the Minority Engineering Program (MEP) Director at CSUS conducted a study of juniors and seniors in MEP. Several interesting facts emerged from this study: (1) The average time upper division students expected to spend to complete their degrees was just under eight years. (2) No senior student was receiving financial aid. (3) The average number of hours upper division MEP students worked (mostly in off-campus jobs) was approximately 20 hours per week. In other words, the primary reasons MEP students were unable to complete degrees in four or five years were financial constraints—not academic ones.

The Project Success Concept

Project Success is a joint effort among MEP, the Cooperative Education Program (Co-op) and Industry Sponsors. Project Success organizes participating students' (Project Success Fellows') work and study schedules from the summer before the freshman year through graduation. This translates to approximately 26 months of full-time employment and an estimated income of $40,000 paid directly to the student over a six-year period. This financial plan, coupled with scholarships and financial aid, will enable students to attend school full-time. The result is a significant reduction in the average time to complete an engineering degree. Employers provide summer, vacation and Co-op employment, plus funding for student services, through a membership fee. The University provides recruitment, instruction, orientation, counseling and monitoring of students through the program.

Financial, not academic, constraints delay graduation of MEP students.

The Advantages of Project Success

Project Success offers a number of advantages. Academic performance improves due to concentrated terms of full-time study uninterrupted by shuttling on and off campus to part-time jobs. Scheduling and prerequisite course selection are more controlled and less likely to unnecessarily delay a student's graduation. Students have jobs that relate to their field of study throughout their academic career. Students receive significant financial backing through earned income, permitting graduation in five to six years, a reduction of two to three years from the current average time to degree. Finally, Project Success is an "exportable" program: MEP will develop and implement a strategy to offer its gained expertise to other universities and to MEPs that want to implement Project Success. The net effect will be a significant increase in the number of graduates in technical majors who are well prepared for professional assignments, and a decrease in the number of years to graduation.

A Progress Report

The School of Engineering and Computer Science has received strong industry backing for Project Success from the start. With seed money from the ARCO Foundation, the Project Success coordinator was hired. An Industry Advisory Board was formed. Ben Montoya, senior vice president for Pacific Gas and Electric Company, enthusiastically accepted the role of board chairperson. After two years of operation, 25 companies and public agencies are sponsoring 42 Project Success Fellows and the project. These industry sponsors have pledged $1,680,000 in the form of potential earnings to students over the next several years. This translates to an approximate 4200 percent return on investment from ARCO and CSUS seed funds. Project Success has attracted some of the most talented Latino, African-American and Native American students from high schools throughout California. The Project has also received national recognition through Carnegie Foundation's publication, Carnegie Quarterly.

For more information, contact: Jaime Garcia White, Project Success Director, Minority Engineering Program, California State University, Sacramento, Sacramento, California 95819-6023, (916) 278-5468.
Faculty and Staff News

Professor J.P. BAYARD, EEE, spent last summer at the communications research laboratory at Hanscom Air Force Base in Massachusetts under a summer research fellowship. Dr. Bayard, recently promoted to associate professor, is the new Associate Chair of the EEE Department.

DAVE BUNCH, EEE, Issue Room, retired under the CSU "golden handshake" program.

Professor RORY COOPER, EEE, last year's recipient of the President's Research and Creative Activity Award, has been granted early tenure. He presented two papers at the IEEE-EMBS Conference in Paris, France, October 29 - November 1, 1992: "2-Dimensional Kinetic Analysis of Wheelchairs with an improved SMARTWheel" (with Kimberly T. Asato, Rick N. Robertson, and James F. Ster III); and "Design and Evaluation of a Simple, Inexpensive, Ultralight Wheelchair" (with students David Pettit and Paula Bennet). Dr. Cooper has also been appointed associate editor of the new IEEE Transactions on Rehabilitation Engineering.

Professors STEVEN deHAAS and JIM SIMES, EEE, conducted their second NSF-sponsored GPIB workshop this summer with 16 faculty members attending from universities across the country.

CINDY DESMOND (nee PRICE) has resumed part-time teaching in the EEE Department while completing her Ph.D. work at UC Davis.


Professor ISAAC GHANSAH, CSC, had two papers accepted for publication in conference proceedings this year. The first (with W. Liu, computer science graduate student), "Dynamic Priority Protocols for Integrated Services LANs," was presented at the International Society of Mini and Microcomputers (ISMM) conference on Computer Applications in Design, Simulation, and Analysis in Orlando, Florida, March 11-13, 1992; the second (with J. Liang, computer science graduate student), "Specification and Validation of Communication Protocols Using Executable Logic," was presented at the 2nd Golden West International Conference on Intelligent Systems in Reno, Nevada, June 1-3, 1992, where he also chaired a session. As a program committee member and referee for the 12th IEEE International Conference on Distributed Computing Systems, Dr. Ghansah received an NSF partial travel grant to attend the conference, held in Yokohama, Japan, June 9-12, 1992.

Professors MAHLOM HELLER (project manager), CHUCK NELSON and JEAN-PIERRE BAYARD (EEE) are working with faculty from Mechanical Engineering and Computer Science on an interdisciplinary project. The State of California Department of Transportation project involves developing a lateral guidance system for cars on future "intelligent highways." The project is now in its third year. Testing with speeds up to 40 miles per hour on a quarter-mile test track has begun.

Six international visitors met with Professor KEN KERRI, CE, Office of Water Programs, to learn how the office administers and monitors the U.S. EPA's national field study training program. Dr. Kerri's program serves the operators of drinking water and wastewater facilities and operates on a financially self-sustaining basis. Three executive managers from the National Organization for Potable Water and Sanitary Drainage of Egypt visited in June. Mr. Dinesh Raj Manandhar, director of training and technical assistance for the Kingdom of Nepal's Water Department stayed with Judy and Ken Kerri in July. In September, Dr. Ahmed Fadel, professor and head of the Public Works Department, Mansoura University, Mansoura, Egypt, came to discuss water and Continued on page 9
Faculty and Staff News
Continued from page 8

wastewater technologies applicable to small villages in Egypt. Dr. Graeme Wilson, manager, Training Initiatives Branch, Research and Development Division, Vocational Education Training and Employment Commission, Australia, visited in October to review the Office of Water Program’s activities in the area of vocational training.

Professor B. P. LATHI, EEE, has published a book, Linear Systems and Signals (Berkeley Cambridge Press, 1992). A best-seller in its field, the book is used at CSUS and also at Cornell, Brown, UC San Diego, UC Santa Barbara, and the University of Virginia, among many other prestigious institutions.

Recently retired Professor RICHARD A. (DICK) NICKLES, CE, received the first Outstanding Construction Educator of the Year award from the Construction Education Committee of the Associated General Contractors of California. The award recognizes his individual contribution to the continuing education goals of construction. A fitting capstone to Nickles’ outstanding 17-year career in construction education and 23 years in construction contracting in California, the award also honors him as the guide and mentor of over 400 construction management graduates now working at construction firms throughout California.

Professor S. K. RAMSHE, EEE, received an equipment grant from ILX Lightwave Corporation in response to his proposal, “Equalization Techniques for Binary FSK Lightwave Communication Systems.”

The equipment, which includes ultra low noise current sources and TE coolers for 1300 nm semiconductor lasers, will support his research aimed at improving the performance and capacity of existing lightwave communication systems. Dr. Ramesh was also elected chair, IEEE Sacramento Section, for 1992-1993, following his service as vice-chair in 1991-1992. He has been promoted to full professor and has succeeded Professor MAHLON HELLER as graduate coordinator.

Professor FREDERICK H. REARDON, ME, presented a paper, “Effects of the Barrel and Projectile on the Combustion Stability of Liquid Propellant Guns,” at the Joint Army-Navy-NASA-Air Force Combustion Subcommittee Meeting, held at the NASA-Langley Research Center, Hampton, Virginia, October 19-23, 1992. Last summer Dr. Reardon presented a lecture, “Research Related to Oscillatory Combustion at California State University, Sacramento,” at the University of Technology, Sydney, Australia. While in Australia, he also attended the Twenty-Fourth International Symposium on Combustion, held at the University of Sydney, July 6-10, 1992, and visited the Northern Territory University in Darwin, where he and members of the faculty discussed their emerging program in mechanical engineering.

ROSEMARY SHINAULT has changed departments. Formerly the Biomedical Engineering secretary, she was reassigned to the Mechanical Engineering Department.

Professor JIM SIMES, EEE, was on sabbatical leave during the fall semester to explore the use of GPIB equipment at other universities and in industry.

Professor DONALD V. STEWARD, CSC, has received a $27,000 grant from the National Science Foundation to support a project on engineering systems planning and management.

Professor NORBERT TORZYN, EEE, Associate Department Chair since 1986, retired under the CSU’s “golden handshake” program in August 1992.

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CSUS Student Chapter of ASCE Seeks Concrete Assistance

The CSUS Student Chapter of the American Society of Civil Engineers is again building a concrete canoe to enter into competition against other universities. The CSUS team was narrowly beaten by Berkeley last year in the Mid-Pacific Regional Conference. The members of ASCE have the teamwork, knowledge, and desire to win, but lack the funds. Sponsors are urgently needed for donations of funds, materials, and services.

If you would like to receive more information regarding sponsorship, or if you would like to offer technical advice regarding any phase of the construction and design process, please call Elizabeth Sparkman, Canoe Fundraising, at (916) 369-2206.
EDWARD S. CHALPIN, JR., ME'77, is an aerospace engineering program manager for the Federal Aviation Administration's Certification Office in Brussels, Belgium.

WILLIE (WEIDE) CHANG, MS CSc'90, is a research assistant at the Computer Science Department of New Mexico Tech.

JOYCE COPELAN, CE'84, received the Service-to-the-Profession Award from the Engineering Council of Sacramento Valley. An associate structural engineer with the Office of the State Architect, Seismic Program, she has served as statewide treasurer, Sacramento Section president and director of the Professional Engineers in California Government, and is past chair and section secretary of the ASCE Sacramento Section's Continuing Education Committee. She was also recognized for her membership in the Structural Engineers Association of Central California, where she serves on the Seismology and Hazardous Building committees, for her work as a teacher and mentor to young women and minorities seeking engineering as a career, and for helping establish student scholarships.

SAM CRABTREE, CE'60, teaches navigation and piloting, delivers yachts, and offers charters through his company, Crabtree Maritime Services, Pittsburg, CA. He is winding down his other company, Crabtree Engineering, which provides civil and small structural engineering and land surveying.

DICK CUENCA, MS CE'74, professor of bioresource engineering at Oregon State University, received the 1992 State-of-the-Art of Civil Engineering Award from the American Society of Civil Engineers.

DENNIS E. DAVIS, CE'66, owns a consulting and design firm, Davis & Assoc. Registered in both California and Oregon, he is designing a subdivision in southern Oregon. Davis received the School's 1985 Outstanding Alumni Award. His daughter Carolyn Davis is an engineering major at CSUS.

MICHAEL D. de FREITAS, CSc'90, is a programmer/analyst at Offutt AFB, Nebraska.

CINDY A. ELLING, CSc'86, is an information technology engineer at Hewlett-Packard in Palo Alto, CA.

CHRIS HAYS, CM'81, is a vice president of engineering at Alex Brown Klinefort Benson in Sacramento. He was also a candidate for a seat on the Roseville City Council.

NEAL HUNDT, CSc'89, manages a team of individuals who provide pre-sales technical support for Cognos Corp. in Secaucus, NJ, a major vendor of application development software tools for mid-range computing.

DAVID A. JONES, ME'91, is a design engineer (track-type tractors and loaders) for Caterpillar, Inc. in Clayton, NC.

STEVE MACAULAY, MS CE'72, works for the State of California Department of Water Resources and is manager of the state water bank.

ROBERT E. MARIN, ME'91, is currently working on his MBA degree at CSUS while serving as a part-time reserve police officer for the City of Sacramento.

JANE MENGEL, MS ME'90, is an instructor at Modesto Junior College, teaching engineering courses.

ED MITCHELL, CM'75 (construction engineering) has been appointed district director and board vice president of the Association of California Water Agencies. He is the owner of Mitchell Drilling, Inc.

DEBORAH A. OUELLETTE, MS CSc'88, is the owner and founder of Data Systems Design, a computer systems integration company serving the greater Sacramento area. Her company is certified by the State as a WBE (Women Based Enterprise).

KHALED H. SOUDAH, EEE'86, is employed by General Physics Corp. in Columbia, MD. As a project lead engineer, he provides consulting services to the development and maintenance of the operating equipment data base project for Consolidated Edison of New York, at the Indian Point II nuclear power station.

KHANH G. TRAN, EEE'90, works as a test engineer for Micronics Computers, Inc. in Fremont, CA.
The Society of Women Engineers

The Society of Women Engineers (SWE) at CSUS hosted the 1993 Northern California Regional Student Conference, on February 5 and 6. The conference, cosponsored by the E&CS Office of Women’s Programs, drew over 200 students and professionals. The conference featured educators who have model programs to serve women.

Workshops were held all day on February 6 at the University Union and engineering building. Presentations included career information, professional development issues, and industry discussions about engineering technology trends. A Saturday evening banquet at the Holiday Inn featured a keynote panel addressing future technical challenges and opportunities for women.

Conference proceeds will support the SWE student chapter, Women’s Programs, activities and scholarships for E&CS students.

This year the Office of Women’s Programs is working to encourage more freshman and sophomore women at CSUS to consider engineering as a major and career choice.

What’s new with you?

What are you doing now? What do you think about this newsletter? What articles would you like to see? After all, this news is for you, so if you’d like to share some information with your former classmates and us, just fill out the following survey. Thanks for your help, and we appreciate your donation of a stamp and envelope!

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Please send this to: Dean’s Office
CSUS School of Engineering and Computer Science
6000 J Street
Sacramento, CA 95819-6023

Yes, I want to be involved in the CSUS Alumni Association Engineering and Computer Science Chapter!

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Categories of membership (check one):
□ $35 Annual Individual
□ $45 Annual Joint Spouse
□ $350 Life Individual
□ $400 Life Joint Spouse
□ $40 Annual Friend Individual
□ $50 Annual Friend Joint Spouse

Thanks for your membership!
Please mail this form and your check to:
CSUS Alumni Association
6000 J Street, Adm. 203
Sacramento, CA 95819-6024

or call (916) 278-6295 or 1-800-SAC-GRAD
MEGA: Encouraging Graduate School Attendance

The student pipeline that should provide our future university faculty members is not flowing. Who will provide to our nation the research that leads to cutting edge technology? MEGA, a new program in the School of Engineering and Computer Science addresses these issues by encouraging CSUS students to continue their education at the graduate level.

MEGA was piloted in the Minority Engineering Program (MEP) two years ago with start-up funding from the Pacific Telesis Foundation. Based on the success of the program (MEP graduate school attendance increased 1500%) and with financial support from NEC Electronics, MEGA services are now available to all students in the School.

MEGA was initiated in response to some alarming statistics:

- Less than half of recent Ph.D.s were awarded to US citizens; fewer than 100 (out of 3300) went to MEP-eligible citizens (Black, Hispanic, Native American).
- One-fifth of engineering faculty will retire within 10 years.

The First Annual Graduate Education Expo was held October 2, 1992. Representatives from CSUS, University of California campuses and out-of-state campuses were on hand to inform students about their graduate programs. In addition, a special panel of alumni who had completed graduate school and are now working in industry, as well as CSUS faculty, were present to discuss career options with a graduate degree.

The MEGA Office, with its attached graduate information library, is now open in ECS 2004. MEGA welcomes all students and alumni considering graduate school and invites them to schedule an appointment with Ann Adams, MEGA coordinator, at (916) 278-5911.

Information is available on preparation for graduate school (required academic preparation and exams), choosing the right school and financial support. Students with specific questions regarding graduate programs at CSUS should schedule an appointment with one of the graduate coordinators in each academic department.

MESA's Industry/Education Luncheon and Annual Math Competition drew 250 students from elementary through high school to CSUS on January 15. Following morning math contests, 60 industry sponsors, school officials, and CSUS administrators joined students and their teachers for the luncheon and awards presentations. Dean Gillott and Dean M.S. Ghawi of the UC Davis College of Engineering are shown with four young winners.