President Gerth Names New E&CS Dean

CSUS President Donald R. Gerth has announced the appointment of Dr. Braja M. Das as dean of the School of Engineering and Computer Science. Das will assume his new post on August 8. He will succeed Dr. Donald H. Gillott, who stepped down after 17 years as dean, and Dr. J. Kent Butler, who has served as the School’s interim dean since Gillott’s return to the classroom last August.

The appointment followed a nationwide search and intensive screening process during the 1993-94 academic year. The pool of 60-plus applicants was eventually narrowed to four highly qualified finalists, from among whom Das was selected. His appointment by President Gerth followed lengthy interviews of candidates by representatives of all School constituencies — faculty, students, staff, administrators, alumni and community leaders — and even visits by members of the selection advisory committee to the candidates’ home institutions to consult their colleagues.

“Dr. Das has an exemplary record of accomplishment as a university professor, scholar, engineer in private industry and governmental agencies, and academic administrator over the past thirty years,” Gerth wrote in an announcement of the appointment. He observed that Das’ national and international academic and administrative experiences would “further enhance [the School]’s strong academic programs and relationships with the community.” Das delivered an eloquent address to graduates at the E&CS Commencement on May 27, where he was the featured speaker.

The new E&CS dean will leave his current position as associate vice president for academic affairs at the 24,000-student Southern Illinois University at Carbondale, where he first arrived in 1987 as professor and chair of the Civil Engineering and Mechanics Department. Prior to his tenure at SIU, he taught civil engineering at the University of Texas at El Paso (1978-87), at South Dakota State in Brookings (1975-78), and at Tri-State College in Angola, Indiana (1973-75).

He has received many awards for outstanding teaching, including the prestigious Western Electric Fund Award from the American Society for Engineering Education and the Ralph R. Teetor Educational Award from the Society of Automotive Engineers. His many administrative duties at SIU during the past two years included managing the $100-million academic affairs budget and the continuing education and military education programs.

He has written ten books and co-authored three others. Two widely-used books, Principles of Geotechnical Engineering (3rd Edition) and Principles of Foundation Engineering, have been translated into Chinese and Korean. His Principles of Soil Dynamics dominates textbook sales in the soil dynamics area. He is also the author or co-author of over 130 journal articles and proceedings papers. The United Nations, General Dynamics-Convair Division, Orissa (India) government, Illinois Department of Transportation, and Walter Lum Associates, Inc. are among past sponsors of non-academic engineering assignments. He has received grants from industry and from federal and state agencies. Das actively participates on numerous advisory committees and in many professional societies.

Das earned his Ph.D. in Engineering Mechanics from the University of Wisconsin at Madison; his M.S. in Civil Engineering from the University of Iowa; and B.Sc. degrees in both Civil Engineering and Physics (Honors) from Utkal University in India. He is a Registered Professional Engineer (Civil) in Indiana and Hawaii.

Das will be the fifth regularly-appointed E&CS dean since 1961, when Dean Edwin B. Weinberg was named to head the then-designated Division of Engineering.

Das, wife Janice and daughter Valerie, an engineering student, will reside in Gold River.
Message from J. Kent Butler, Interim Dean

The School of Engineering and Computer Science at California State University, Sacramento is alive and well. Despite the recent administrative changes and seemingly endless budget constrictions, there is every indication that the faculty is concerned and actively identifying and pursuing alternatives for improving the quality of the educational experience.

Not only is the faculty concerned but the University administration is concerned with the welfare of our School. I am most impressed with the efforts of President Gerth and Academic Vice President Koester directed to insuring that the problems with, and the opportunities available to, the School are clearly laid out for the new dean. It has been expressed in just these terms by the administration that, "...the professional schools are absolutely essential to a comprehensive university." Their support in the recruitment process for the permanent dean and in funding an external evaluator for the School's programs is ample evidence that our success is high on the CSUS list of priorities.

Despite continuing economic difficulties facing the State of California and California State University, Sacramento, the School of Engineering and Computer Science has been active in the pursuit of academic excellence and engineering research. An important link, assisting in this never-ending pursuit of excellence, is the E&CS Industrial Advisory Board.

The Industrial Advisory Board has met twice this year, focusing on the issues surrounding QUALITY of the engineering and computer science programs and ACCESS to same.

Message from Dr. Braja Das

Throughout the history of mankind, each generation has always set lofty visions and goals for the next generation to follow. This is particularly true in the area of public education. In this evolutionary process, the American educational system—one of the best in the world—has changed and redefined itself during the past decades.

In anticipation of the arrival of the 21st century, once again we, the educators, must (and society expects us to) refine our goals and explore new possibilities for educating America's young in an innovative manner. We, the engineers and computer scientists, are in a people-serving profession, for we are the ones who make today's dreams become tomorrow's realities. In that perspective, I am looking forward to working with the students, staff, alumni, friends, colleagues and Industrial Advisory Board members in the School of Engineering and Computer Science, as well as with the members of the central administration at California State University, Sacramento, in a productive and constructive manner. With the present challenges and future expectations, we can together redefine the roles and responsibilities of the faculty of the School, reach out for moral and financial support from private sources and industry, increase undergraduate scholarships from new endowments, seek new research grants, streamline our undergraduate educational program to meet the needs of the 21st century, pursue excellence in our graduate programs, and seek and implement gender and ethnic diversity in education and employment.

I hope I will live up to your expectations. When we go back home in the evening, it may be gratifying to think that, through our handiwork and dedication to our profession, we might just have changed the life and future of one or more young person who will follow us.

Recommendations from this group will be used, by the E&CS faculty and by the Academic Vice President, in establishing an agenda for the new dean of the School of Engineering and Computer Science.

I am pleased with my stay here this past year and would like to express my thanks to the many individuals who have assisted in helping work through a difficult School transition. I will return to Cal Poly SLO in the fall, with fond thoughts and best wishes for engineering and computer science at CSUS.

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Biomedical Engineering 278-7977
Mechanical Engineering 278-6624
ME Technology 278-7081
E&CS Computing Services 278-7350
Minority Engineering Program 278-6699
Project Success 278-5468
Cooperative Education 278-7220
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CSUS Celebrates National Engineers Week

Over 140 Sacramento-area high schoolers joined E&CS alumni, faculty and students on February 23 for a daylong Open House celebration of National Engineers Week.

The goal of the event, co-sponsored by the E&CS Alumni Chapter and the Institute of Electrical & Electronic Engineers (IEEE) Sacramento Chapter, was “to provide a forum where the entire engineering education chain can interact,” said Hewlett-Packard engineer John Schimandle (BSEE’80), coordinator of the event. “That chain includes high school students and CSUS students, faculty, alumni and student society members.” Activities were designed to spark interest in engineering and computer science careers and to increase the visibility of the School.

Morning activities, which focused on exposing high school students to different engineering and computer science specialties, provided maximum fun, information and interaction with presenters. Faculty and student helpers staged 15 short demonstrations representing all disciplines taught in E&CS. Luncheon speakers were five enthusiastic recent alumni who briefly discussed the rewards of their careers and described recent interesting projects. Following lunch, there were contests and a raffle. Ten advanced scientific calculators donated as prizes by Hewlett-Packard heated the competition.

The focus shifted in the afternoon and evening to E&CS students, alumni and prominent local employers. Nine alumni representing Aeronet, Brown & Caldwell, California Air Resources Board, Caltrans, Hewlett-Packard, Radian Corp. and SMUD presented exhibits of their work in a trade show-like setting. The day culminated in two receptions: a Society of Women Engineers-sponsored Industry Social Hour which brought together alumnas, women students and faculty; and another for alumni, faculty and current students, co-sponsored by the Alumni Chapter and the IEEE Section.

CSUS seniors Arthur Cartwright and Chris Holm of the IEEE CSUS student branch and Dr. S. K. Ramesh, branch counselor and EEE professor, mobilized students from other E&CS student professional societies to direct visitors and help with the day’s many activities.

International ACM Competition Runs on E&CS Software

Software developed by E&CS Computer Science students has been used extensively in ACM (Association for Computing Machinery) competitions at all levels, according to Prof. John Clevenger, E&CS Computer Science Department. Most recently, the software ran the ACM International Collegiate Programming Contest Finals in Phoenix in March 1994.

The present software, one of the most widely used contest control systems, evolved from student projects dating back to 1980. With the advent of PCs, other senior project teams and student volunteers enhanced it over the years. Meanwhile, a complex ACM competitive system grew along with an increase in participating teams and regions. Today, the 36 competing teams in the international contest are the winners of 14 regional competitions held in North America, Europe, Asia, Australia and New Zealand. Over 600 teams at all levels compete before reaching the international finals. Our software is being used at regional sites in the U.S. and in Eastern and Western Europe, in addition to the international finals.

In competition, teams are required to write programs that meet given specifications under a time limit; each team strives to solve the most problems. Judges (usually faculty members) evaluate the output. Frequent ties are broken by adding penalty points to the score (e.g., based on time spent solving the problem, number of submissions to judges). Winners have solved the most problems with the fewest penalty points.

In 1990, contest planners searched for a system capable of running the ACM international finals. Clevenger volunteered our Computer Science students to develop it. They had to find a way to track all of the entries and their scores. The software logs the runs of each team, notifies the judges of the submissions, and displays a scoreboard with current team standings. Their product was adopted and used in the 1990 and 1994 international competitions.

Students are currently investigating both porting the system into a local area network (LAN) environment, and the development of a visual interface using Windows.
HP Grants Major Support to E&CS

Hewlett-Packard has awarded equipment gifts valued at over $278,000 to two E&CS faculty members under its 1994 University Grants Program. These high-end products will benefit students in the Computer Science and Electrical and Electronic Engineering departments.

HP has been a consistent supporter of E&CS' efforts to keep its programs current. Dave Hubka, Engineering Manager at HP and member of the E&CS Industry Advisory Board, said that the company "invests in the technical currency of schools from which we recruit. Exposing students to HP technology provides them a high-quality educational experience and, in their future careers, they will recognize HP equipment as valuable tools in professional practice."

Eight advanced Series 700 workstations and one Series 700 server, along with a CD-ROM, SCSI DAT drive and software, valued at $207,562, have been placed in an open laboratory. "The presence of a 'critical mass' of identical workstations in such an environment will greatly enhance our ability to teach and our students' ability to experiment with and learn concepts of network communication, concurrency and distributed systems," according to Dr. Carole McNamara, Computer Science grant recipient. Moreover, a laboratory with such high-end workstations can support curriculum development in some important emerging areas of computer science, such as user interfaces and user interface management systems, she added.

The HP 8720C network analyzer and related test and measurement equipment that Dr. Jean-Pierre Bayard has received will help EEE students gain a stronger background in the important but abstract area of electromagnetics. According to Bayard, the difficulty in illustrating electromagnetics concepts has been a problem for faculty who want to motivate students to pursue studies in this field, with its burgeoning employment opportunities. With his $70,675 grant of new equipment, Bayard will perform laboratory demonstrations that "will connect real-world measurements to classroom concepts."

Robert Wharton (BSEE'83, MSEE'87), HP development engineer, coordinated the School's grant applications to HP.

E&CS Career Fair Draws 32 Major Employers

Representatives from 32 companies and government agencies came to the E&CS Career Day on March 4 to recruit engineers and computer scientists, a positive sign that the demand for technical professionals is on the rise in most disciplines.


Cici Mattiuzzi, who directs the E&CS Career and Professional Services, is upbeat about CSUS graduates' employment prospects. "Employers are once again in a hiring mode after a two-year recession that has lasted over four years," she said. The annual E&CS Employer Survey, conducted in January 1994, showed 1000 to 1500 positions available for the 67 responding companies, according to Mattiuzzi. She noted that the number of listings on the JETS system is also climbing and that students and alumni now conducting job searches are reporting interviews with multiple companies and receiving multiple job offers.

In Brief . . .

- The National Science Foundation has awarded a five-year, $2.5 million grant to Sacramento City Unified School District and the CSUS-based Capitol Center MESA program to develop systematic approaches that will substantially increase underrepresented minority student enrollment in college-prep "gatekeeper" science and math courses.

- The CSUS supermileage vehicle finished second with 500.09 mpg in the M85 (85% methanol/15% unleaded gasoline) category at the 11th annual SAE/AAA West Coast SuperMileage Competition on June 12 in West Sacramento. CSU Northridge was first with 1,019 mpg; UC Santa Barbara won in the iso-octane category with 1,385.72 mpg. Vehicles were powered by two-horsepower, four-cylinder Briggs & Stratton engines.

- CSUS and IEEE are hosting the 1994 Electric Power Quality Symposium on October 18-19. Engineers in industry and academia can contact EEE Prof. John C. Balachandra (916) 278-7347.

- Twenty Florin High School students and their teachers glimpsed engineers' lives on Job Shadow Day on March 22, thanks to E&CS alumni Ted Glum (BSEE'81) at McClellan AFB, Scott Edmington (BSME'87) at Aerojet, Peter Ouchieta (MSME'76) at California Air Resources Board and Rosemary Davi (BSME'93) at SMUD.

- CSUS student teams took 2nd place in the Heavy Civil Construction Management and 3rd place in the Building Division at the Associated Schools of Construction-sponsored Region VI Construction Competition last Feb. in Reno.
NEC Grant Brings Assistive Technologies to Occupational Therapy Faculty

Faculty who teach occupational therapists can learn the latest in assistive technologies, thanks to a grant from the NEC Foundation of America. The $45,000 grant was awarded to Susan M. Hussey and Dr. Albert M. Cook of the E&CS Biomedical Engineering faculty and the Assistive Device Center (ADC). Both have extensive experience with clients as well as in pre-professional and professional education and training of occupational therapists and biomedical engineers.

The interdisciplinary ADC staff have helped more than 500 people with cerebral palsy, brain and spinal cord injuries, neuromuscular disorders, developmental delay, arthritis and other disabilities to extend their independence through augmentative communication, environmental control, power mobility, computer access, specialized seating, adaptive driving, and other assistive technologies.

Despite the benefits that such technologies offer people with disabilities, only a handful of occupational therapy (OT) educational programs currently offer a specific course in assistive technology. With grant funds, Hussey will conduct regional faculty development institutes in assistive technology and the use of self-guided instructional modules. Faculty participants will share their training and materials with colleagues at their campuses, for integration into the practice of future occupational therapists. The collaboration of the American Occupational Therapy Association (AOTA) will help ensure that participants continue to network regionally and nationally after the institutes.

The NEC facility in Roseville actively supports several E&CS programs. The company is represented on the School’s Industrial Advisory Board, on the BEST (Business Education Science Team) Board, and on the boards of educational equity programs: MEP (Minority Engineering Program) and MESA (Mathematics, Engineering, Science Achievement).

CSUS Water Cleanup Role Grows

The CSUS Office of Water Programs, housed in the School of Engineering and Computer Science, is playing an increasingly important role in the international struggle to improve the world’s waters.

Under the direction of Dr. Kenneth D. Kerri of the Civil Engineering Department, the office continues to administer and monitor the U.S. Environmental Protection Agency’s national field study operator training programs, which consist of nine wastewater collection and treatment training courses and four courses in the area of drinking water. Every state operator licensing board in the U. S. and those in most Canadian provinces recognize enrollment in the CSUS program as a pathway for operators who want to prepare for, qualify for and pass operator certification examinations. The World Health Organization is promoting the training programs globally, and U. S. Agency for International Development funds are being used to translate the operator training manuals into the Slovak and Romanian languages.

Water Programs Office materials are used by individuals in the home study program and by utility agencies for in-house staff training. The training manuals are also widely used as textbooks by colleges and universities.

Worldwide, over 52,000 training manuals were sold and over 13,000 persons were enrolled in the training programs in 1993; from 1972 through 1993, the figures reached 436,336 and 102,737, respectively. Coursework was completed by 70,841 students, with 5,298 receiving university credit.

Susan Sells of the NEC Electronics Inc. Roseville facility presents a check for $45,000 to Susan M. Hussey of the CSUS Assistive Device Center. Looking on are, from left, E&CS Director of Development and Alumni Relations Barbara Caretto; Biomedical Engineering Professor Albert M. Cook; Site Administration Manager Tim Morin, also of NEC Roseville; and Dean J. Kent Butler.
Project Success Attracts Talented Students to CSUS

With their drive, achievements and high marks, Renessa Boley and Roberto Ramirez could easily have gained admission to other engineering schools. Their choice of CSUS demonstrates the attraction of Project Success and some very bottom-line thinking by these two students — and their sponsoring employers.

Project Success, initiated three years ago by the CSUS Minority Engineering Program (MEP), identifies outstanding high school seniors and offers them opportunities to alternate full-time study at CSUS with well-paid, progressively more professional employment in technical environments. PS students, who are drawn from ethnic groups historically underrepresented in engineering and computer science, go to work for their sponsoring employers in the summer immediately following high school graduation, and work during school breaks thereafter until they are juniors. They then work full-time as co-op students during summers and alternating semesters.

Renessa and Roberto joined Intel and Caltrans, respectively, immediately following their high school graduation. Their wages — which will total about $54,000 each by the time they graduate — will meet virtually all of their expenses. Like other PS students, they will also earn their degrees an average of two years sooner than other MEP students. Most important, they gain meaningful technical experience and perform valuable work for employers, who become partners in the engineering education process. PS employers — who numbered 19 this year — will likely want to recoup their investment with offers of permanent employment for the 34 students in the program. Clearly a win-win situation for all concerned.

Renessa and Roberto were quick to spot the advantages of this arrangement. Renessa, former valedictorian and student body president at Highlands High School, first heard about the program from E&CS students at a camping conference sponsored by the National Society of Black Engineers. As a Capitol Center MESA (Mathematics, Engineering, Science Achievement) student, she was already familiar with CSUS and aiming at an engineering career; her godparents, both seniors in the CSUS EEE Power Engineering specialty, influenced her decision. “Having worked in local industry, they know what companies are looking for in employees, and stressed the value of the program here.” She joined three other PS students at Intel.

Roberto was not at all interested in engineering as a student at Live Oak High School near Yuba City. The youngest of three sons of farmworkers, he first heard about Project Success and learned about engineering careers from CSUS outreach staff.

Learning more about the program and the opportunity to fund his education, he changed his mind about staying close to home as a CSU Chico math major and instead applied to CSUS and for a PS fellowship as a precivil engineering major.

The E&CS junior is very satisfied with his earlier choices. He reported that he “is enjoying the experience and is learning quite a lot,” both at Caltrans, his sponsoring employer, and in the PS program. He cited as particularly valuable the PS training in Total Quality Management (TQM) and in communication and other skills useful in the work environment. His family, too, is happy about his participation in PS. “They know that this experience will help me get ahead and do well.”

Employers of both students are rotating them to different areas within their organizations. Renessa and Roberto are pleased about this exposure to different specialities and situations, since they say that they will be able to make better choices about their courses of study and eventual career choices.

E&CS established Project Success as a joint project of the MEP and the E&CS (now campuswide) Cooperative Education Program after a study revealed that MEP students were taking an average of 8 years (some as long as 13) to complete the BS. Lacking sufficient financial support, 85% of MEP students are working 20 or more hours per week, most at dead-end, low-paying, service-type jobs. According to PS Director Jaime White, the purpose of PS is to increase retention of talented E&CS students by providing the financial security needed to accelerate their graduation, while simultaneously providing meaningful work experience in a technical environment. Employers — mostly prominent local organizations — represent both the public and private sectors.

Project Success deserves its name: Studies have shown that PS students are already earning higher GPAs and have a higher retention rate than other MEP students — indeed higher than E&CS students as a whole. 
E&CS Women's Programs Office Offers Activities, Services

Last fall the E&CS Women’s Programs Office (WPO) was given additional space in Room 1204 of the old engineering building. Under the direction of Louise Chiatovich, activities and services emphasizing career exploration and personal encouragement have grown rapidly to fill it.

Historical, social, cultural and political forces have combined to render women vastly underrepresented in engineering and computer science as well as in science, mathematics, and technology. The WPO’s overall goal is to encourage more women to choose, prepare for, and succeed in careers in these fields. Accordingly, the Office serves as a nexus for multiple programs supported by University, local, state and federal resources, targeting women of varying ages.

For E&CS women, the expanded WPO library contains information in several media about employers, jobs (including JETS access), and scholarships. There is also a small conference area for their use. Women can drop in and use any of the resources or get one-on-one support from the friendly, helpful staff.

The Industry Mentoring Program, inaugurated last spring, provides a network of 60 female engineers and related professionals from industry who have made themselves available to encourage E&CS women. To expose their mentees to the realities of professional life and organizational culture, these mentors offer job shadowing, career advice, employment internships and information.

The Freshman Intervention Project is the WPO’s most recent effort to promote enrollment and persistence in E&CS, where fewer than 18 percent of E&CS undergraduates are female. Freshman women admitted to E&CS were invited to a pre-freshman orientation on May 24; current E&CS students telephoned them in advance to share their experiences starting out at CSUS and to discuss their strategies for college success. Callers also provided information about other available campus resources. Respondents to a follow-up survey expressed great satisfaction with this effort. The ongoing CSUS Student Mentoring Program couples upper division women students and incoming E&CS students.

The WPO also runs extensive pre-college outreach programs: PEER, providing technical career information, field trips, job shadowing, tours and regular meetings for seven high school groups in Sacramento; and MECCA (Making Electives Count for Career Achievement), an outgrowth of PEER, encouraging girls at 50 California high schools to pursue technical careers. Last summer’s pilot high school-level SPRINT program offered five two-week, 30-hour, hands-on workshops that featured projects combining technology with art, design and computer skills. The WPO plans to offer this program again.

Finally, LINKS are model programs serving community college women. Coordinated with the MECCA programs, the 23 LINKS sites in California offer supportive services and industry connections to women enrolled in technical curricula.

Engineering and allied scientific and technical fields offer women interesting, relatively steady, high-paying careers. The Women’s Programs Office provides information, encouragement and access to these careers.

Carson Classic Aids CM Students

Carson family members from KITT Contractors, Inc. (from L, Eugene Jr., Hannelore and Eugene Sr.) present a check for $11,000 to E&CS Dean J. Kent Butler and Keith Bisharat (R), coordinator of the Construction Management Program in the Civil Engineering Department. These funds, proceeds from the second annual Carson Classic Scramble Golf Tournament, will be added to the scholarship endowment created with $13,000 raised at the first tournament. The third Carson Classic was held June 10, 1994.
Mini-Baja Teams Triumph in Regional, National Contests

A persistent rain didn’t dampen the spirits of our Mini-Baja teams when they returned to CSUS on April 25, with first- and fifth-place wins in the SAE Mini-Baja West Competition in El Paso, Texas.

The object of the student competition, sponsored by the SAE (Society of Automotive Engineers), is to design, manufacture, and race a single-seat, off-road recreational vehicle appropriate for the mass market.

Competing against 58 vehicles from 50 schools in the U.S., Mexico and Canada, the two CSUS teams—all students in the Mechanical Engineering Technology program—captured a total of six awards. Four went to the first-place team of George Diessen, Derek Cunz, Tom Taylor and Alan Tennyery. Besides the overall first place distinction, the team took firsts for Static Judging (including innovation, design and aesthetics) and for Endurance, and second place for Acceleration.

In addition to taking fifth place, the other E&CS team of Ken Duncan, Steve Ballard, Marius Fine and Vince Underwood won second place for Maneuverability. MET students Steve Kiyama and Paul Hedglin assisted both teams. Kiyama will head up next year’s effort.

Weary from weeks without sleep as they worked to complete the two vehicles, the teams credited their success to persistence, teamwork and attention to detail. “That, and excellent analysis and engineering,” said Prof. Joe Harralson, SAE Advisor and MET coordinator.

“The philosophy of the first place team was ‘good enough isn’t good enough.’ They put 15 hours in on trying to perfect the bushings,” he continued, “and then started over when the part just didn’t meet the standard.”

The team also used finite element analysis to modify the frame, making it stiffer and stronger as well as lighter. Mitchell computer simulation software aided in designing the suspension. Most drawings were created on computers.

George Diessen, SAE president and Mini-Baja project coordinator, thought that a commitment to excellence also paid off: “Our team motto is to do whatever it takes, even if you have to stay up all night to do it.” The race, he admitted, was grueling. “The course was brutal. Out of 58 starters, only 15-20 cars were left after the first two hours of the competition. On the last five laps of the race, our team turned in the fastest lap time of the event.”

The second team, co-captained by Marius Fine and Ken Duncan, redesigned the rear suspension and power train of a vehicle raced in three previous competitions. Their philosophy differed but still aided them in placing higher than any other previous E&CS team using this car: To think too long about doing a thing often becomes its undoing. “This saying was received by our team members in a fortune cookie and we unanimously found it appropriate,” said Duncan.

“I’m sure glad we did so well,” an exhausted but excited George Diessen stated. “It would not have been possible to do what we did without the dedication and passion of the team members and the support of the community and all our sponsors. Central 4 Wheel Drive, Sierra Airgas and Mario Castillo donated money, parts and lots of advice. Our sponsors are too numerous to mention as is the list of faculty who stayed nights to help us out or gave us financial support.”

“I just want to say that the team’s success is directly linked to the support of everyone involved,” he continued. “The whole community can take pride in our achievement.”

Note: The two teams caught their collective breath, headed out in June to the nationals in Wisconsin and captured second and fourth places, respectively, against all other regional teams.
Second APWA Community Forum Fuels Discussion

“Alternative Fuels: Taxation/Coalition Building,” the second in a Community Forum Series presented by the Sacramento Chapter of the American Public Works Association, brought an impressive lineup of prominent officials from the petroleum industry, utilities, and government agencies to CSUS on May 9 to address major trends, impacts and opportunities arising from converting public vehicle fleets to alternative fuels. CSUS and PG&E were co-sponsors.

According to Orin Bennett (BSCE’71), APWA member and one of the forum’s organizers, the topic was selected to advance public discussion of the consequences of such large-scale conversions, particularly for air quality and tax revenues. High interest in the issues and presenters drew an enthusiastic audience of over 120 to the daylong event in the University Theatre. Alternatively-fueled vehicles and a mobile compressed natural gas fueling station were displayed in front of the Library, attracting passersby.

Illa Collin of the Sacramento Board of Supervisors opened the forum, followed by E&CS Professor of Transportation Engineering Joan Al-Kazily, who introduced and moderated presentations by Bruce Cannon, FHWA legislative and strategic planning division chief; K. C. Bishop, Chevron Companies senior consultant; Stan Kawczynski, City of Sunnyvale council member; and Larry Dahms, Bay Area Metropolitan Transportation Commission executive director. They considered transportation financing, various alternative fuel options, and opportunities for funding and taxation.

President Donald R. Gerth introduced luncheon speaker Ed Smeloff, SMUD board member, who outlined a novel approach to encourage the public to purchase cleaner, energy-efficient vehicles. An afternoon panel discussion on “Coalition Building: Partnering for Infrastructure,” moderated by E&CS Associate Dean John Hester, featured George Oaks, City of Oakland; Nate Reed, Federal Department of General Services; Chuck Hammond, City of Santa Rosa; and Albert Colon, Caltrans. Successful efforts to convert vehicle fleets was the focus. Adriana Gianturco, former director of Caltrans, gave closing remarks. PG&E provided a wine and cheese reception.

Many E&CS alumni, faculty and emeriti are instrumental in organizing the forum series. Their goal is to bring the CSUS community together with government and industry representatives twice each year to discuss topics of mutual interest. The May forum was a sequel to last fall’s “Electric Vehicles: Perspectives on Widespread Introduction.” “Flood Control: How Safe Is Our Valley?” is the topic of the third forum on Oct. 28.

New Faces at E&CS

Adrienne M. Scott, who joined the University Cooperative Education staff in April to coordinate the E&CS Co-op program, has excellent credentials: During the previous three years, she was the education director for the Sacramento Tree Foundation where she recruited, trained and placed volunteers in schools in 16 school districts. Earlier, she was a career development counselor for the Cooperative Education Program at Roxbury Community College in Boston. Scott earned her M.A. in Higher Education Administration at Boston College and her B.A. in English Literature at Wesleyan University in Middletown, CT. The CSUS Cooperative Education Program originated in E&CS and expanded campuswide last year under a U.S. Department of Education grant. Employers offering placements and E&CS students seeking them can find Scott in Engineering 1202 (278-7220) and in Student Service Center 203 (278-4965).

Andrea S. Hicks directs BEST (Business Education Science Team), an E&CS/school district/business partnership serving over 600 Sacramento-area students in grades 4-12. BEST’s goal is to increase the number of high school graduates who select engineering and other math-based university majors through challenging academic and peer support activities that also involve parents, teachers and volunteers from sponsoring companies. Hicks has experience as a coordinator and instructor in both the public and private sectors, including part-time teaching in the CSUS Health and Physical Education Department. Hicks, who has been BEST’s part-time acting director since last November, recently received the full-time appointment. She holds an M.A. in Rhetoric and Communication from UC Davis and a B.A. in Speech Communication from CSU Fresno.

BEST shares office space with the Capitol Center MESA (Mathematics, Engineering, Science Achievement) program at 655 University Avenue (923-0844).
Improved Traffic Flow, Safety are Goals of E&CS Projects

Dr. Mahlon Heller of the CSUS Electrical and Electronic Engineering Department has used nearly $800,000 in joint federal and Caltrans grants to lead two research projects that could lead to improvements in safety and traffic flow on the nation’s highways and to safer and more efficient freeway maintenance operations.

Vehicle Lateral Guidance — automatic steering control using advanced electronics technology — is one possible approach to help avert the total gridlock that appears imminent in California’s major metropolitan areas. Drivers who don’t steer can’t cause accidents or slowdowns by gawking at accidents or wandering out of their lanes. Such a control system could play a critical part in a totally automated IVHS (intelligent vehicle highway system).

The Federal Highway Administration/Caltrans funded a four-year feasibility study of each of three sensor technologies for detecting and laterally guiding vehicles on freeways at speeds of up to 70 mph, by determining their positions relative to a stripe in the center of a lane. Heller and EEE colleagues Drs. Jean-Pierre Bayard and Charles Nelson completed the work last summer, assisted by their students.

Caltrans lent a 1989 Chevrolet Celebrity station wagon and the CHP provided access to a 1/4-mile paved section of its oval training track in West Sacramento. The team used the same steering controller in testing each of the three sensor modules — radar, vision, and passive wire — to evaluate the relative performance of each. All three sensor technologies proved successful in actuating a motor mounted on the steering column which steered the vehicle to the center of the lane at speeds of up to 55 mph on the test track. Each technology proved viable for vehicle lateral guidance.

The Autonomous Tracking Shadow Vehicle is Heller’s second project. Dr. Joan Ak-Kazily of the Civil Engineering Department joined the team for this three-year, $423,000 effort funded by the U.S. Department of Transportation/Caltrans through the Advanced Highway Maintenance and Construction Technology Center at UC Davis. The group will design and develop a driverless, shadow vehicle (SV) that will track a lead vehicle (LV) at a desired range.

Typically, an SV follows an LV which carries freeway maintenance workers, along with cones and other supplies. SVs have shock-absorbing material — such as a rectangular container of sand — in the rear and, at about 25,000 pounds, don’t roll far if hit at high speeds by errant vehicles. Countless shadow operations occur daily throughout the U.S., placing SV drivers and maintenance crews at risk. A successful project outcome could eventually free SV drivers to perform more productive tasks.

In Phase I, completed during 1993-94, the team researched and evaluated candidate sensor technologies for mounting on the SV to sense the location and orientation of the LV relative to it; this information will be used to control the steering, throttle, and brakes of the SV to regulate its distance behind the LV. Three selected technologies — antenna system, vision system, and global positioning satellite (GPS) system — are used for redundancy and therefore safety.

The antenna system consists of a dish mounted on the LV that transmits a 10 GHz narrow beam back towards the SV; a 7-element dipole array mounted on the SV senses relative amplitude and relative phase information, which is used to feed a neural network executed by a Pentium PC aboard the SV that computes the range, lateral displacement and yaw (RLY) angle of the LV relative to the SV. This information is sent to a safety redundancy checker (see below).

The vision system includes a 3-D symbol on the back of the LV and a video camera which is mounted atop the SV and pointed down toward the symbol. A machine vision algorithm executed by the PC determines that the camera has acquired the symbol and no other object. Points on the symbol found by the algorithm are then fed to the neural network to determine RLY angle of the SV relative to the LV. These measurements are also sent to the safety redundancy checker.

GPS (global positioning system) is the third technology. There are GPS receivers in both the LV and the SV; the two vehicles receive xyz global coordinates simultaneously. The GPS coordinates received by the LV are transmitted back to the SV using spread spectrum techniques. The GPS coordinates of the SV are subtracted from the LV GPS coordinates to obtain range and lateral displacement information. This information is also sent to the safety redundancy checker.

The safety redundancy check system considers the RLY angle of the SV relative to the LV as determined by the three systems; it checks for agreement of the current data produced by all of the sensors and compares this information to predicted values based on past sensor data. If two sensors do not agree within an allowable tolerance, data from the most likely correct sensor will be used and a warning will be issued.

See E&CS Projects on page 15.
Interest in CSUS SMES Research Surges

Dr. John Balachandra and his research team in the CSUS Electrical and Electronic Engineering Department have won a three-year, $600,000 grant from the Defense Nuclear Agency to improve superconducting magnetic energy storage (SMES) units in collaboration with McClellan AFB, the University of Wisconsin, and private industry partners.

Typical power disturbances such as outages, surges, sags, swells, waveform distortions, frequency deviations, and electrical noise adversely affect power quality. Digitally-controlled computing, manufacturing and other equipment is particularly sensitive, yet use of these sophisticated devices is dramatically increasing in industry, commerce, defense and utilities. Consumers now depend primarily on batteries for power continuity, but this technology is less precise in power distribution than SMES and more costly because frequent replacement is necessary. The price tag for poor power quality is estimated at $25-30 billion/year in lost productivity and products.

SMES units improve power quality by ensuring that electrically-powered devices continue uninterrupted operation despite fluctuations, which they can sense in advance. A patented superconducting coil in SMES units stores sufficient energy to carry the load until normal voltage is restored; the units, which come in various power capacities for different applications, can do thousands of switching actions in an instant and have less impact on the environment.

The Defense Nuclear Agency provided a massive Dual Use Initiative grant totaling $17.65 million to the partnership which, besides the CSUS Electric Power Systems Group, includes Science Applications International Corporation (prime contractor), the Power Conditioning and Interfacing Equipment Office of the Sacramento Air Logistics Center at McClellan AFB, the University of Wisconsin at Madison, and Superconductivity Inc. The project aims to help boost the U.S. economy by transferring the benefits of SMES development work performed under the Strategic Defense Initiative and at federal laboratories to civilian applications. Improved SMES technology will also aid the military by ensuring uninterrupted availability of advanced electronic equipment at military installations. Moreover, because a global market awaits new SMES devices that will significantly improve power quality, the U.S. has a vital interest in retaining its technological lead.

Under Balachandra's direction, the CSUS group will contribute to the project by providing engineering analyses and evaluation of the power electronic components of a trailer-rig-sized SMES device which is representative of those fielded by the USAF E&CS undergraduate and graduate students will assist by performing literature searches and by analyzing and exhaustively testing the unit under a variety of environmental conditions. Through this effort, CSUS will demonstrate the benefits of university knowledge transfer while providing training to students in an important future technology.

E&CS has one of the nation's largest electric power systems education programs. The program received a national award for its excellence from the Institute of Electrical and Electronics Engineers (IEEE) in 1992-93. Besides the program's reputation and Balachandra's eminence in the power electronics field, the efforts of Reps. Matsui and Fazio and Maj. Gen. John F. Phillips, SM-ALC Commander, were instrumental in securing the School's inclusion in this important project.

PG&E Gift Benefits E&CS Programs

Richard Cashdollar, PG&E Transmission, Maintenance and Construction Manager (North), presents a $9,400 check to Dr. Karl Stoffers, former EEE chair. Looking on are PG&E Marketing Representative Monique Hunt (BSCM’92) and Dean J. Kent Butler. The gift benefited the EEE Power Option, Electric Power Educational Institute, Minority Engineering Program and the Society of Women Engineers.
Alumni Notes

Congratulations to new E&CS alumni ANDREW CHERNISKI (CPE), PATRICK ISAKANIAN (EEE), USHASRI SUNKARA (EEE), and ROBERT WIEST (EEE), who were among the 21 Outstanding Graduating Seniors of 1994. Faculty, staff and alumni were asked to nominate seniors who had demonstrated academic excellence (minimum 3.40 GPA), leadership qualities and campus community service during their student years. The campus community joined recipients’ families and friends at the President’s Concert on May 1 at the CSUS Music Recital Hall for formal recognition and celebration of their achievements.

NIZAR S. ALSHIMABI, MSCE’91, is a division manager for Saudi-Oger in Riyadh, Saudi Arabia.

PER BJORKE, MSCS’93, was instrumental in developing a breakthrough software engineering standard (“Standard for a Concept of Operations Document”), adopted by the Department of Defense as part of the new DoD software engineering standard (Mil-Std-498). The standard documents a process for defining and documenting user software requirements. The DoD’s decision followed a rigorous review process. Bjorke worked on the standard as a graduate student.


KEVIN P. DALY, BSCS’89, will leave his position as a software engineer for Radian Corp. to study medicine at the Yale School of Medicine. He and his wife, Anne, will move to Connecticut during the summer.

LINDA DAVIS, BSEE’86, is vice president of the SMUD Board and an associate electrical engineer at the California Energy Commission.

RANDY ERICKSON, BSEE’85, senior electrical engineer for the Modesto Irrigation District, earned his MSEE in Power Systems at USC in 1991 and his California Registration in EE.

MEHDI GANDOMI, BSEE’92, is an electrical engineer at the California Department of Water Resources in Sacramento. He is also pursuing an M.S. in electrical power engineering.

TED GLUM, BSEE’81, is chief of the Science and Engineering Division, Sacramento Air Logistics Center at McClellan AFB, over-

seeing the physical sciences laboratory and the advanced technical areas of microelectronics, electro-optics and composite materials.

JOHN M. HAVERKAMP, BSME’83, is the manager of the engineering department at ValAir in Sacramento.

MONIQUE HUNT, BSCM’92, is a marketing representative in the commercial new construction marketing department of PG&E in Vacaville.

MILTON W. LIM, BSEE’89, is a program manager for Watkins-Johnson Co., Palo Alto. He manages application-specific microwave components for customers in Japan and Europe. He is pursuing an MBA in international business at San Jose State University.

MARK P. LUNA, BSME’89, was recently promoted to senior gas distribution engineer for PG&E in Bakersfield, supervising 13 engineers. He is responsible for the natural gas distribution system throughout Kern County.

MARK D. MEEKS, BSCE’80, is area manager for Kaiser Permanente in Oakland.

ALAN L. MITCHELL, BSCE’88, is an assistant engineer for the City of Woodland.

YVONNE W. NELSON (formerly Quinn), BSEE’85, is a policy advisor to Commissioner Sally Rakow of the California Energy Commission.

LARRY ORCUTT, BSCE’79, has been appointed deputy district director of project development, Caltrans District 1 in Eureka. He is in charge of the District’s $150 million delivery plan and project management programs, staffed by approximately 75 employees.

LISA M. PARKER, P.E., BSME’89, became president of Building Systems Engineering, an HVAC/plumbing consulting engineering firm, last January.

WILLIAM ROBERT SCHELL, BSME’86, is a senior specialist engineer for Boeing Commercial Airplane Co. in Seattle, WA.

WILLIAM B. SCOTT, BSEE’72, is the senior national editor for Aviation Week & Space Technology in Washington, DC.

SANDRA SENEGLAL-PURDOM, BSME’93, is an engineer/project manager at Versar, Inc. in Fair Oaks.

ANDREW J. SCHMIDT, MSBSME’86, is a senior project engineer for Delco Electronics in Kokomo, IN.

MICHAEL B. TRAND, BSCS’82, has been a captain with West Air/United Express Airlines for the past six years. He is married to C. Renee Leed, a senior data analyst with the City of Sacramento.

MARIBEL YOUNG, BSCS’86, network consulting service manager for Hewlett-Packard’s Corporate Network Services; and BOB WICHERT, BSME’77, coordinator of SMUD’s Advanced Resources and Technology Development Group, received formal recognition for their achievements at the CSUS Alumni Honors Luncheon on October 4, 1993.

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SUPPORT HEALTH CARE!

CSUS has mounted the CAPITAL CAMPUS CHALLENGE, a campaign to raise $50 million by June 30, 1998 — a million for each year since the campus was founded.

That $50 million includes the School of Engineering and Computer Science’s goal of $5,850,000 to meet our needs:

- student support: recruitment, retention, scholarships, tutoring
- laboratory equipment
- computing equipment
- software
- facilities upgrades

Such support will keep E&CS not merely alive, but HEALTHY. Alumni contributions are especially important. They show that you valued your CSUS years and care that those who follow you thrive and share your feelings.

E&CS thanks alumni who responded so generously to our recently concluded E&CS Alumni Annual Fund campaign, despite discouraging economic conditions. We urge you to dig deeper when you get that next telephone call — and/or send a gift now to E&CS.

Your care today will insure a healthy School tomorrow.

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Faculty News

Prof. KEITH A. BISHARAT, CM, presented a paper, "Alternatives to Traditional Methods of Delivering Construction Education: Implementing Experiential Education Models," at the 7th Annual Associated Schools of Construction West Region Conference in Reno, Feb. 6-8. The organization is dedicated to advancing professionalism and excellence in construction education.

Prof. FRED BLACKWELL, CSC, has a biographical sketch in Who's Who in America (1994).

Prof. ALBERT M. COOK, BME, is president-elect of RESNA (Rehabilitation Engineering Society of North America). He discussed rehabilitation technology training ideas with a panel of experts from the European Economic Community's HEART (Horizontal European Activities in Rehabilitation) project, Stockholm, May 2-3. The Mosby Co. has published Assistive Technologies: Principles and Practices, by Cook and SUSAN M. HUSSEY (see below).

Prof. CYNTHIA DESMOND, EEE, had her article, "The Effects of Process-Induced Defects on the Chemical Selectivity of Highly Doped Boron Etch Stops in Silicon," published in the Journal of the Electrochemical Society, Jan. 1994. She presented two papers at the Society's Spring 1994 meeting in San Francisco: "Characterization of Thin-Film BESOI" Using a Chemical Vapor Deposition Etch Stop," at the 7th International Symposium on Silicon Materials Science and Technology, and "P+ Removal Techniques for Thin-Film BESOI," at the 6th International Symposium on Silicon-On-Insulator Technology and Devices (collaborators on both: Charles E. Hunt, UC Davis; and Tom Wetteroth, Motorola, Mesa, AZ).

Prof. and former E&CS Dean DONALD H. GILLOTT, EEE, received the 1994 Honorary Alumnus Award at the CSUS Alumni Association's Distinguished Service Awards Banquet on March 1 at the Radisson Hotel. Golloit was lauded for boosting educational equity within E&CS and through pre-college outreach programs, landing a new $13 million building, and boosting private financial and in-kind support for E&CS.

Profs. JOHN GWYNN, CSC, and Peter Griffin, Mathematics, had their paper, "An Analysis of Caribbean Stud Poker," accepted for publication at the 9th International Conference on Gambling and Risk-taking, May 31-June 3, Las Vegas, NV.


Lecturer SUSAN M. HUSSEY, BME/ADC, received a $45,000 grant from NEC Foundation of America for the project, "Faculty Development for Assistive Technology Instruction in Occupational Therapy" with co-investigator, Prof. ALBERT M. COOK. She produced a video for RESNA intended for third-party payers on funding assistive technologies, specifically communication devices. She will chair OTAC (Occupational Therapy Association of California)-sponsored occupational therapy conferences for the next two years.

Prof. RALPH B. HWANG, CE, received a $30,000 research grant from the California State Office of Emergency Services for research and review of dam break inundation mapping studies of 20 non-federally owned dams in California, one of four OES grants totalling $110,000 he's received since summer 1991. He completed a California Department of Education-funded study of potential floodwave inundation of the Chaparral High School site in Riverside County, due to breaches in the Domenigoni Valley and Skinner reservoir dams.

Prof. KENNETH D. KERRI, CE, presented a paper, "Education, Training and Skills Needed by Small Water System Operators," at the Water Quality Association's Annual Conference, March 17 in Phoenix. The WQA is working with the E&CS Water Programs Office to bring operator training opportunities as part of a membership service package. Kerri was formally designated a Charter Member of the Ambassador Order of the California Water Pollution Control Association's Collections Systems Committee in recognition of his service to the committee, association and the profession on April 28. The committee also recog-

nized E&CS for fostering active involvement in the CWPCA. On April 11, Kerri met with two visitors from Beijing, Assoc. Prof. Zhao Genrong and Prof. Qu Ge-Ping, regarding operator training programs; both serve on the Environmental and Resources Protection Committee of the National People's Congress.

Prof. JAMES W. KHO, CSC, who has served on the Computer Science Accreditation Commission of the Computing Sciences Accreditation Board (CSAC/CSAB) since 1985, received an award from the IEEE Computer Society "for significant service to the profession." Commission accreditation teams evaluate professional programs throughout the U.S. He also received a plaque from the American Academy of Higher Education recognizing his "outstanding achievement in promoting Computing Sciences education."

Prof. B. P. LATHI, EEE, was elected an IEEE fellow—the first at CSUS. The Institute's board of directors confers this highest honor only upon those judged to have made outstanding individual contributions to one or more of IEEE's designated fields. Lathi was cited "For contributions to electrical engineering education in the field of signals, systems and communications. He is known worldwide through his seven books, which have been translated into many languages including Spanish, Portuguese, Polish, and Japanese; these books have been used at leading universities such as MIT, Caltech, Cornell, Carnegie-Mellon, and UC Berkeley, Davis, Santa Barbara and San Diego. Only .1 percent of IEEE's members attain the status of fellow. Lathi is working on three other books during his 1993-94 sabbatical.


Continued on page 14
Faculty News
Continued from page 13

Prof. S. K. RAMESH has succeeded Prof. KARL E. STOFFERS as EEE chair. Ramesh represented the CSUS Sigma Xi Chapter (scientific research society) at the annual Sigma Xi meeting and forum in Atlanta, GA, April 13-17; the forum's focus was improving science and mathematics education in grades K-12. Ramesh heads a working group that is developing information superhighway-related research proposals for submission to the California Trade and Commerce Agency's Defense Conversion Council. Members are from McClellan AFB, UC Davis, and Science & Engineering Associates, Inc. Preliminary proposals are aimed at the design and fabrication of channelized optical filters and fiber optic Bragg gratings; they will form the basis for regional activity aimed at advancing optical communication systems theory and applications.

Prof. FREDERICK H. REARDON, ME, presented a paper, "Analysis of Pressure Oscillation Data in Liquid Propellant Guns," at the annual Combustion meeting of the Joint Army-Navy-NASA Air Force Propulsion Subcommittee, Nov. 1993, Monterey, CA; Gloria Wren and John Knapton of U.S. Army Research Laboratory, Aberdeen, MD were co-authors. Reardon has a faculty research grant to investigate unsteady air flows in a duct downstream of a discontinuity, a condition often found in inlet ducts of combustion chambers and in some heat exchangers. He is using a University migrant to develop computer-based tutorials to assist students in learning thermodynamics fundamentals, of basic importance to all engineering study.


Prof. NGO DINH THINH, ME, was awarded a Certificate of Recognition by NASA for "the creative development of a technical innovation as a NASA Tech Brief, entitled 'Low Flow Rate Vortex Shedding Flow Meter for Hypergolics/All Media.'"


On two-year leaves: Profs. RORY COOPER, ME, and KATHERINE FERRARA, EEE. Cooper is at the Human Engineering Research Labs. Veterans Affairs Medical Center at the University of Pittsburgh; Ferrara is in New York at the Riverside Research Institute and Cornell Medical School.

SAE President Visits CSUS
A standing-room-only audience of mechanical engineering students and faculty heard Randall R. Richards, president of the 60,000-member Society of Automotive Engineers, speak on "Leadership for the Future" on March 9. His campus tour included an inspection of student-built vehicles displayed in the E&CS courtyard. SAE officers and faculty from the northern and mid-California regions accompanied Richards.
I Want to Help!

by John Schimandle (BSEE '80)
E&CS Alumni Chapter Social Chairperson

I get upset when I get those donation request letters or phone calls wanting me to personally donate cash! I want to help the School, but I just can't find room in the family budget to send a check for $100. But there are many ways to help without depleting your checking account.

You've heard the stories: State funds for higher education are being reduced, no money for capital equipment, etc. Yes, the stories are true and we, the alumni, are a key resource for filling the budget gaps. You can help, and your help is important to the community, our businesses and the economy.

So how can you help besides donating cash? There are two main areas: volunteering your time, and leveraging your company's resources.

Most companies have some form of cash or equipment donation programs. If your company doesn't, maybe it's time somebody set one up. Use your personal power to persuade your company to donate to the School. Go to your personnel department, pick up the forms or any information concerning donation programs, and send it to E&CS Director of Development Barbara Caretto. Even gifts of used equipment are needed—PCs, printers, lab test equipment, anything.

Secondly, most companies have some form of summer or co-op employment programs. Make sure that CSUS students are recruited for these types of positions, or even try to create some in your own departments. It's a great recruiting tool and a way to help students finance their education. Contact Career Development Coordinator, Cici Mattiuzzi, for more information on student employment programs or to obtain resumes.

Thirdly, get involved. We have an active E&CS Alumni Chapter and we need help with special events and projects. It takes just a few hours a month to be involved and it's very rewarding. We need volunteers to help in all aspects of our chapter, from special event planning to event participation. Contact Membership Chairperson Ish Briseño for information on how you can help (916-654-8101).

You may think that you can't make a difference, but I have personally seen the difference a small effort can make. I encourage everyone to find creative ways to help the School. Its future and the next generation of engineering and computer science students are depending on you.

You CAN make a difference, even without opening your checkbook.

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You Are News!

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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E&CS Projects

Continued from page 10

be sent to the LV driver. The RLY data determined to be correct are sent to adaptive controllers that send commands to the SV's steering, throttle and brake actuators.

During Phase II the CSUS faculty/graduate student team will implement a feasibility prototype using the 1989 Chevy wagon used in the lateral guidance project as the SV and a truck for the LV. They will demonstrate the Chevy tracking the truck by the end of spring 1995. In Phase III, the team will form a partnership with the private sector to design and construct a prototype that will be widely replicated in the U.S. for other shadow-lead vehicle couplings.

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

Categories of membership (check one):
1. $35 Annual Individual
2. $45 Annual Joint Spouse
3. $350 Life Individual
4. $400 Life Joint Spouse
5. $40 Annual Friend Individual
6. $50 Annual Friend Joint Spouse

Make check out to CSUS Alumni Association. Thanks for your membership!

Please send this correspondence and/or membership dues to:
Barbara Caretto, Director of Development and Alumni Relations
CSUS School of Engineering and Computer Science
6000 J Street
Sacramento, CA 95819-6023
(916) 278-6629
Fall ASEE Conference in Sacramento

"Delivering Technical Education in the 21st Century" is the theme of the annual fall meeting and conference of the Pacific Southwest Section of the American Society for Engineering Education on October 6-7, at the Sacramento Hyatt Regency.

Dr. Floyd LeCureux, director of E&CS Computing Services, is organizing the event; the UC Davis College of Engineering and the University of the Pacific School of Engineering are co-hosts with E&CS.

Participants will consider the implications for and impact on engineering education of new technology available to students, faculty and staff, such as distance learning, CD ROMs, compressed video, multimedia classrooms and electronic access to the information superhighway. Faculty have been invited to organize and sponsor groups of undergraduates to enter a student design competition; the winners will be invited to present their design projects and receive their awards at the conference. The event will also feature industry exhibits, demonstrations, and a banquet in the Capitol building.

Attracting educators from throughout Arizona, California, Hawaii and Nevada, the conference provides an excellent forum for those interested in engineering education.

The registration fee is $95. Registration information and materials can be obtained from Denise Nicholls of the E&CS Dean's Office (916-278-6366).

JOIN THE FUN!
MEET THE NEW DEAN!

E&CS alumni are invited to bring loved ones of all ages to the Third Annual E&CS Alumni Picnic on Sunday, September 18, 1994, from 12:00 to 4:00 p.m., at the CSUS Aquatic Center. Enjoy wonderful food, games, contests, swimming, canoeing, volleyball, basketball and the great company of other E&CS alumni and faculty in a lovely setting. Chat informally with Dr. Braja M. Das, incoming E&CS dean. Lots of fun games and projects for little future alumni too. Use the flyer in this publication to make your reservation.

John Schimandle, E&CS Alumni Chapter social chairperson, is the picnic’s organizer. Call him for information — or to volunteer — at 785-4401. Or call Barbara CARETTO at 278-6629.

John Schimandle (BSEE'80) shares a tasty morsel with WENDY WELLS at last summer's Second Annual E&CS Alumni Picnic.