

# THE NATURAL PHENOMENA

SUMMER 2007



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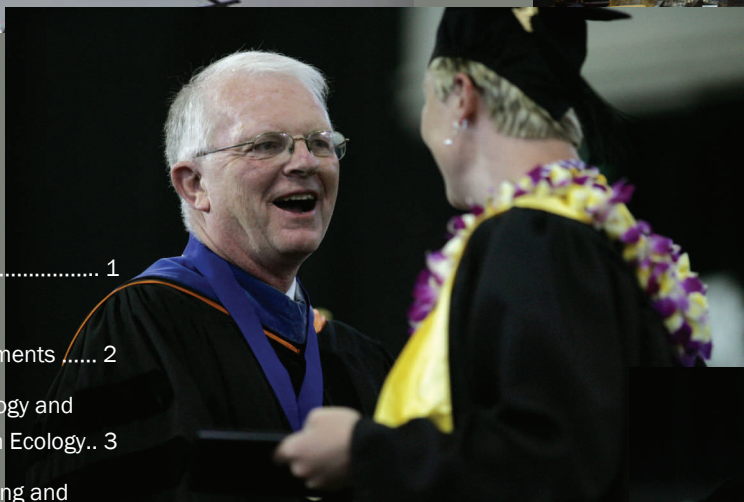
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# A MESSAGE FROM THE DEAN



B. Robert Carlson, Dean of the College of Natural Sciences

To the spring and summer 2007 graduates of the College of Natural Sciences, let me be among the first to congratulate you. All of us – faculty, staff, administration and family – are very proud of you and what you have accomplished. Whether you are looking forward to additional study next year or entering the workforce, our thoughts and best wishes are with you.

The 2006-2007 academic year has been a very good one for the college. Let me mention a few of the highlights:

CNS is the only college at CSUSB to have made its enrollment goals each quarter, a recognition of the faculty strength, the popularity of the CNS programs among student majors, and effective scheduling of classes. It would have been nice if we could have offered more classes on Tuesdays and Thursdays in the middle of the day, but available facilities make that impossible to do!

CNS is initiating new undergraduate degree programs that will make popular programs more accessible and create new majors for students. New programs include a computer engineering degree program and a bioinformatics degree option within computer science. The Department of Computer Science and the Department of Physics will share in the leadership of the computer engineering program. The bioinformatics program is a joint program of the departments of computer science, biology, and chemistry and biochemistry. In addition, the Department of Nursing will be initiating a BSN program at the Palm Desert Campus by accepting the first class of 33 students.

CNS welcomed its first graduate students in the master's in environmental science program last fall. The Department of Chemistry and



Biochemistry and the Department of Geological Sciences welcomed four students last fall and anticipate eight new students for fall 2007.

CNS will be the first college in the history of the campus to achieve its advancement goal. For the 2006-2007 year, donors contributed more than \$1.3 million in support of departments and programs in the college. With the difficulty that the state of California has had in providing adequate budgetary support for its colleges and universities, the support of alumni, interested individuals and foundations has become more important than ever to the quality of the programs that we can offer. Please take time to read about specific gifts that have been received this year in another section of this publication. Perhaps you will discover ideas as to how you might join others in making a difference in the future education of others.

The renovation of the Biological Sciences Building was completed in May 2007. For those of you who have not seen this building recently, you are not going to believe the transformation: new laboratories, new lecture rooms, new equipment, enhanced technology, new restrooms, paint on the



walls, new tile on the floors and much more.

The departments of biology and geology should be quite pleased. In late May 2007, we started the renovation of the Physical Sciences Building. This building will become the future home of the Department of Physics and the Department of Health Science and Human Ecology. At the end of this building project, all of the CSUSB instructional science laboratories (in traditional science degrees) will be new, a fact that should greatly improve the effectiveness of science instruction at CSUSB.

The CNS faculty continue to be the backbone of the college. Their collective commitment to students and their ability to create a positive environment within which students can learn is unparalleled. I have had the pleasure of being associated with four different universities during my career. Clearly, the commitment to teaching of the CNS faculty is the strongest that I have ever experienced, and that is what a university should be about. This year, three faculty were recognized by the college as being the most outstanding faculty.

Anthony Metcalf of the Department of Biology was selected as the Outstanding Faculty in the area of teaching. His commitments to teaching and student needs are well recognized by his students. Last year, he was recognized as the Outstanding Faculty in the area of professional growth, so this

year's recognition affirms the breadth of his profile on the campus.

Yuchiro Kakihara of the Department of Mathematics was recognized as the Outstanding Faculty in the area of professional growth. His commitment to the research process evidenced by 31 refereed publications and three books for both students and professionals in the field is well recognized among his peers. He also serves as a reviewer for two of the major journals in his field.

Mary Molle of the Department of Nursing was selected as the Outstanding Faculty in the area of service. Her giving of time to service activities within the Department of Nursing Department, the college and the university has been huge during a period of transition within the department. Her knowledge of the nursing field and experience in various leadership roles have been instrumental to the continuity of the department.

Obviously, facilities are crucial to the growth of CNS. Our dependency upon laboratory experiences, both on-campus and off-campus, require that appropriate facilities be available. Construction will begin on a new laboratory facility for the Department of Nursing near the existing Health and Physical Education Building. When the Nutrition laboratory moves to the remodeled Physical Sciences Building, the Kinesiology Department will assume that space for a biomechanics laboratory. As the campus project building needs for the growth of the campus to 25,000 students, two buildings are being projected for this college. First is a building to house mathematics, computer science, physics and computer engineering programs. A second building being projected is some combination of nursing and biology.

Again, congratulations to all of our graduates. We appreciated your being a student at CSUSB and hope that, when you decide to further your education, you will once again think of CSUSB. We wish you the best of luck and fortune in your future plans.

Sincerely,

B. Robert Carlson, Dean



# COMMENCEMENT 2007

The College of Natural Sciences' Commencement ceremony takes place on June 17, 2007, at 2 p.m. in the Coussoulis Arena on the CSUSB campus. Before a crowd of their family and friends, more than 270 students will receive their diplomas that day. Among those students are several who are being singled out for various honors.

Each year the college chooses students it determines to be outstanding, both from the undergraduate and graduate student populations. This year, the outstanding graduate students are Keri Maher, a biology major; Tom Lee, a graduate student in computer science; Sara Hernandez-McLoughlin, from mathematics; and Paula Spencer from nursing. These students have shown great promise in their chosen fields, and the college is proud to recognize them. The outstanding undergraduate students are Alec Fillmore from biology, Michelle Millage from chemistry and biochemistry,

Brian Strader from computer science, Amber Olney from health science and human ecology, Andrea Brandt from kinesiology, Jennifer Winter from mathematics Cecilia Sung from nursing, and Wendy Neander from physics. These students have worked very hard and richly deserve the honors.

Additional students have received departmental honors. From the **Department of Computer Science**: Raini Armstrong, David Cumbow, Christopher Dufault, Doug Ellison, Bryan Hepburn, Phillip Lucas, Brian Strader, Kevin Yetter; from the **Department of Health Science and Human Ecology**: Bridget Berg, Amber Olney, Zareen Samad; from the **Department of Kinesiology**: Andrea Brandt, Brooke Etter, Stephanie Hettes, April Lane, Aurora Medina, Madelina Monreal, Dennis Reams, Joshua Smith; from the **Department of Mathematics**:

Angelica Brisenio, Christopher Duran, Mark Gutierrez, Lorena Pulido, Di Phan Reagan, Michael Rosas, Colleen Scott, Jarom Viehweg, Jennifer Winter; from the **Department of Nursing**: Eliza Ajero, Michelle Baca, Darrell Bernabe, Naomi Chester, Melissa Dowd, Renee Ernst, Jennie Franco, Robin Freeman, Elizabeth Hernandez, Jennifer Horan, Melissa Huntley, Theresa Longo, Stephanie Looper, Erin Lynch, Gavin McMullen, Angela Mendoza, Jennifer Miller, Su Moran, Hunter Newton, Trang Nguyen, Anna Parangue, Batoul Rahme, Brenda Ramos, Lucille Saucier, Jennifer Spellman, Cecilia Sung, Suong Thai, Tara Tokijikla and Sarah Van Tine.

The College of Natural Sciences wishes all the new graduates the best of luck.

## DEPARTMENT ACCOMPLISHMENTS

### Department of Chemistry

The Department of Chemistry and Biochemistry experienced phenomenal growth of more than 10 percent during this year. As part of the new Chemical Sciences Building, a new JEOL 400 MHz NMR was installed. The department also purchased over \$200 K in analytical instruments, including a gas chromatograph, UV/Vis spectrometer and a GC/MS. This was the first year of the M.A. environmental sciences degree, a collaborative degree with the departments of geological sciences and public administration. Department Chair and professor David Maynard was Co-PI of a three year California Science Project-Teacher Retention Initiative and was appointed co-director of the Inland Area Science Project, a K-12 teacher education initiative involving the University of California, the California State University system and local school districts. Dr. Yu Jung Kim was hired as a new tenure track faculty for the biochemistry program. She has a Ph.D. in biochemistry and molecular biology from the University of California, Riverside and performs research in the area of molecular biochemistry. Dr. Stanley continued his research of perchlorates, and one of his research students, Dario Gutierrez, gave a presentation entitled the "Utilization of Iodide as a Perchlorate-Laden Resin Regenerating Solution and Isolation of Perchlorate from Simulated Ground Water Samples" that won first place at the CSUSB Research Competition. Dr. Yang was on sabbatical most of the year, but was very busy in her laboratory working on a \$467,000 National Institute of Health grant project titled the "Cytotoxic Effects Nicotine on Coronary Endothelium." Dr. Noblet was awarded a contract (\$65 K) from MWH Global, to perform water quality monitoring on Lake Elsinore. Students in his research group will be measuring 23 parameters in support of efforts by the Elsinore Valley Municipal Water District and the Santa Ana Regional Water Quality Control Board to improve water quality in the lake.

### Department of Computer Science

In Fall 2007, the B.S. in computer engineering degree will be offered. This is a joint program of computer science and the Department of Physics.

At the same time, the B.S. in bioinformatics degree will be offered. This is a joint program with the departments of biology and chemistry. Seven students from the computer science department will spend part of summer 2007 doing internships at the Center for Bio-Image Informatics, UC Santa Barbara. The Computer Science Department has formed an Industry Advisory Board consisting of leaders in industry and government agencies. The board had its first meeting in April 2007. Its charge is to advise on current computer science practices and needs of the industry so that programs in the department are attuned to their needs.

### Department of Geology

Sally McGill received two grants from the Southern California Earthquake Center, one to conduct earthquake education outreach and the other to continue her work on the San Andreas Fault in the area of San Bernardino. Geological sciences in collaboration with chemistry and biochemistry have just successfully completed the first year of the new master's of environmental science degree program. Alan Smith and Joan Fryxell are continuing their successful Research Experience for Undergraduates program by taking nine students (five from CSUSB) to Dominica in the Caribbean this summer. Geology faculty continue to play active roles in professional societies especially Joan Fryxell - (Geological Society of America), and Erik Melchiorre - (Society for Mining Engineers)

### Department of Kinesiology

In addition to publishing articles and books, giving presentations and serving on editorial boards, members of the faculty have secured grants. Bryan Haddock has received a NIH-funded EARDA grant for \$460,000 in direct costs over a five-year period, in addition to an NIH-funded SCORE grant, "The use of active video games to combat obesity," in the amount of \$150,000.

### Department of Mathematics

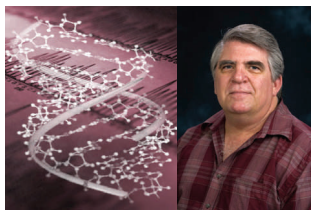
Dr. Corey Dunn is our newcomer this year. The B.A. teaching track has been approved by the California Commission on Teaching Credentialing as a waiver program for the CSET exam. Dr. Addington received a grant from the AT&T Foundation for a mobile computer lab. She and Dr. Han have been using the laptops in developing a new course, Technology in Math Education through Problem Solving. She has also been on the National Selection Panel for the Presidential Awards for Excellence in Math and Science Teaching for the past three years. Dr. Dyakevic, Dr. Fischman and Dr. Bob Stein gave presentations of their research at some meetings. Several professors have their papers published/accepted in professional journals: Dr. Addington, Dr. Dunn, Dr. Dyakevic, Dr. Han and Dr. Kakiyara.

### Department of Physics

Dr. Leo Connolly, professor of physics and currently associate dean in the College of Arts and Letters, received the Inaugural Richard H. Emmons award for lifetime achievement in the field of astronomy education. Dr. Sue Lederer was notified that she received a \$60,000, two year Cottrell College Science Award from Research Corporation to support her comet impact simulation project using the hypervelocity gun at NASA Johnson Space Center. Dr. Laura Woodney presented the results of her observations on the Spitzer Space Telescope at the AAS Division of Planetary Sciences meeting in Pasadena in October. She was joint author on a paper on formaldehyde in comets published in *Astrophysical Journal*, and she continues her research on cometary gas dynamics, part of which was funded by an ongoing NASA grant. Dr. Tim Usher is Co-PI on a \$31,000 award from the California Space Grant Foundation to support his project investigating Nafion membranes, which have applications to hydrogen fuel cells. Alumni are strongly encouraged to contact the department so we can keep in touch. E-mail your favorite professor directly (for addresses check out our Web site: physics.csusb.edu), or else contact Donna Murphy at dmurphy@csusb.edu.



## THE DEPARTMENT OF BIOLOGY



## Department Chair:

David Polcyn

## Professors:

Nicole Bournias

Richard Fehn

James Ferrari

Stuart Sumida

## Associate Professors:

Anthony Metcalf

John Skillman

Colleen Talbot

Kimberlyn Williams

## Assistant Professors:

Michael Chao

Paul Orwin

## Department Office:

Katrina Baldwin

Debbie Reynolds

The Department of Biology has experienced some significant changes this year. First and foremost, we recently moved back into a completely renovated Biological Sciences building, and the department continues to grow, with more than 600 undergraduate and graduate majors. In addition to offering our traditional B.A., B.S. and M.S. degrees, we've developed some novel programs aimed at enhancing the quality of education at CSUSB. Beginning next fall, we will offer a bachelor of science track in evolution and ecology, which will better accommodate students interested in careers in conservation biology, wildlife biology and botany. In an effort to increase the number and quality of science teachers in the Inland Empire, the Department of Biology (through the efforts of Dr. Stuart Sumida) has partnered up with the Department of Mathematics and the College of Education and was awarded a Noyce Grant from the National Science Foundation, which is structured to facilitate teacher training and retention with San Bernardino City Schools. Furthermore, Dr. Polcyn and Dr. Herbert Brunkhorst (Department of Biology and College of Education) are developing a "blended program" in biology, which will provide students the opportunity to earn both their B.A. in biology as well as

their single subject teaching credential simultaneously. On the pre-med front we are in our second year of an articulation program with Western University of Health Sciences medical school, and the CSUSB Department of Biology recently welcomed three more of our students into its articulation program. The program reserves seats exclusively for CSUSB biology students, guaranteeing them admission to medical school while still early in their undergraduate careers. In addition to recruiting from and serving students in the local communities, Dr. Michael Chao and Dr. Paul Orwin have set up a collaboration with the Department of Biology and Biochemistry, University of Bath, United Kingdom. Bath students carry out research in CSUSB biology labs, providing the students valuable research experience while advancing the research programs of the biology faculty. This year we'd like to highlight Dr. Sumida's research on primitive reptiles and amphibians, which is now taking him to places few have ever ventured. Dr. Sumida was invited as the first non-native American to ever be allowed to search for vertebrate fossils on the Jemez Indian Pueblo property in north-central New Mexico. In just his first few days of collaborative fossil hunting, Dr. Sumida and colleagues from Jemez

have found evidence of 280 million-year-old fossils the famous sail-backed reptile *Dimetrodon* on the Pueblo property. Dr. Sumida also continues his work on similarly aged fossils in Utah and in central Germany, where he will be excavating this summer. Dr. Sumida's impact on the worlds of film and animation continued during this past year. He was the animal anatomical consultant for both Pixar/Disney's *Ratatouille* and SONY Animation's *Surf's Up*. He provided aggressive mathematical training in the anatomy and locomotion of rodents for Pixar and penguins for SONY. His work with them landed him screen credits in both films. Since then he has taken on the task of explaining dog, cat and hamster anatomy and function to the animators at Walt Disney Feature Animation for their upcoming film *American Dog*. His work with the animation industry was featured in keynote addresses for the National Science Teachers' Association in Anaheim and the RedStick International Animation Film Festival in Baton Rouge. We would like to encourage all the biology alumni to keep in contact with us. Please get in touch with Dr. Colleen Talbot at [ctalbot@csusb.edu](mailto:ctalbot@csusb.edu) and let us know where you are and what you are currently doing!

## THE DEPARTMENT OF HEALTH SCIENCE



## Department Chair:

Ted Coleman

## Professors:

Lal Mian

Cynthia Paxton

## Assistant Professors:

Marsha Greer

Joseph Hughes

Robert Phalen

## Associate Professors:

Dorothy Chen-Maynard

Kim Clark

Dan Fahey

## Department Office:

Cindy Levin

Leann Bactad-Pulido

The academic programs available through the Department of Health Science and Human Ecology (HSHE) includes: public health, school and community health, nutrition and food sciences, health administration and environmental health. Students will find a broad array of potential career applications through our major. This year the department welcomed two new full-time faculty members. Dr. Ted Coleman returned to CSUSB, having taught here in the 1980s, as department chair for the Department of Health Science and Human Ecology. Coleman is involved in research projects about diabetes and thanatology and was appointed to the board of directors of the University Center for Developmental Disabilities. He was also appointed director of the Palm Springs Institute for Environmental Sustainability (PSIES). Also new this year is Dr. Bob Phalen who brings many years of experience as an industrial hygienist working in occupational health and a recently acquired Ph.D. from UCLA to his position in environmental health. Phalen has been invited to serve on the board of directors of PSIES. Dr. Cindy Paxton, former department chair, is currently serving half-time as assistant dean in the College of Natural Sciences. Dr. Marsha Greer, assistant professor

and coordinator of the master's of public health and undergraduate community health education and promotion programs, spent the fall 2006 quarter on a Fulbright Fellowship assignment to Nepal, teaching at Kathmandu University. During winter quarter, Greer and her HSCI 273 students created a service-learning project that focused on disaster preparation for people with disabilities. Their project was carried out in collaboration with the Competency Update Project of the Society for Public Health Education and the CSUSB Emergency Response Office, under a grant from the Corporation for National and Community Service. In addition, Greer presented a session entitled "HIV Infection in Thailand: Past Successes and Challenges for Today" at the Asian Roundtable. Dr. Joe Hughes was invited to present a series of talks at Chiang Mai University in Chiang Mai, Thailand last summer. One of his three talks was "Health Benefits of Phytochemicals." Dr. Dan Fahey is president of Healthcare Executives of Southern California, a chapter of the American College of Healthcare Executives (ACHE). The 50-year-old organization sponsors the College Bowl competition each year, and Fahey led that effort at CSUSB during spring quarter. The team from HSHE competed with CSU Long Beach,

CSU Los Angeles, CSU Northridge, UCLA, USC and Loma Linda University. In addition, Fahey had a manuscript selected by the editors of the *Journal of Health Organization and Management* as one of their outstanding papers for the year. Dr. Dorothy Chen-Maynard was advisor and coach for the Nutrition Bowl team. She also worked with 14 students who attended the California Dietetic Association annual meeting in Oakland (funded by participation in the tree-planting project from Watson and Associates). Dr. Kim Clark received a certificate of award for his participation on the National Health Education Standards Review and Revision Panel. Dr. Lal Mian conducted an accreditation self-study within the Environmental Health section of the department this year. Mian has been invited to serve on the Board of Directors of PSIES, and he is serving as editor of a professional journal.

# THE DEPARTMENT OF NURSING



Department Chair:

Lynne Leach

Associate Professors:

Ellen Daroszewski

Mary Molle

Donna Rane-Szostak

Marilyn Smith-Stoner

Assistant Professors:

Mikel Hand

Susan McGee-Stehsel

Department Office:

Claudia Braune

Angela Garcia



In the first 15 years of the Department of Nursing, a lot has happened! The department has been at the forefront of improving patient care and addressing the nursing shortage through constantly developing innovative ways of providing educational opportunities. The Palm Desert campus has an online hybrid R.N.-B.S.N. program, which will graduate its first R.N. to B.S.N. class this June (2007). The first generic nursing students start at the Palm Desert campus this fall (2007). The master's in nursing program is scheduled to transition to a hybrid of online classes and Saturday on-campus classes beginning in the fall of 2007. Sophisticated human simulators are being integrated in to the program. These simulators can do everything from simulating a patient conversation to simulating dying. You can find CSUSB nursing students just about anywhere in the two counties served by CSUSB. You will see community students at health fairs and clinics doing health teaching. You will also see them working with parish populations to meet their health needs through comprehensive, holistic and culturally competent care. As a result of the Healthy Kids Healthy Smiles Grant, students also work with the San Bernardino County Department of Public Health, in

collaboration with the Rialto Unified School District, to provide fluoride applications, dental and health education, and case management services to a vulnerable population. CSUSB nursing students work with the San Bernardino county Juvenile Detention and Assessment Centers located in San Bernardino, Apple Valley and Rancho Cucamonga. The department has entered in a three-year contract with Riverside Community Hospital to double the enrollment of nursing students to assist with the nursing shortage. Grants from the California Endowment, California Wellness Program, Workforce Investment Office also support the work of the department. The members of the Department of Nursing faculty are some of the most experienced nurses in the state. Take Dr. Mary E. Molle, for an example. In addition to being a registered nurse with a doctorate, she is board certified as a Clinical Nurse Specialist in community/public health. She is also the College of Natural Sciences' professor of the year for service this year. Dr. Marilyn Stoner and Cheryl diPreto, R.N., M.S.N., are nationally certified End-of-Life Nursing Educators through the City of Hope and the American Association of Colleges of Nursing. Dr. Mikel Hand is certified in

both oncology and as a nurse administrator. Dr. Donna Rane-Szostak, Paul Wielenga, R.N., M.S.N., and Anna Wilson, R.N., M.S.N., are also certified nurse practitioners. You'll find the faculty and graduate students working on all types of research, including the use of patient simulators, issues of commuter stress, men with breast cancer, end-of-life care and many more important topics of concern to nurses and those they care for in and out of the hospital. Students may want to join the Coyote Nurses Association and participate in the department through service learning and mutual support. Members of the community, students and alumni can work collaboratively through the Honor Society Rho Beta, a chapter of Sigma Theta Tau International.



# THE CENTER FOR THE ENHANCEMENT OF MATHEMATICS EDUCATION—CEME



Director:

David Fischman



The Center for Enhancement of Mathematics Education was established by the Department of Mathematics, CSUSB, to collaborate with local K-12 entities to address the needs of K-12 mathematics education in the Inland Empire. Our focus is primarily on enhancing content and pedagogy skills of pre-service and in-service teachers, while building capacity throughout the Inland Empire, with the ultimate goal of increasing readiness for college-level mathematics among students.

In partnership with local schools, districts, the San Bernardino County Superintendent of Schools and the Riverside County Office of Education, CEME provides support in several areas, including ongoing professional development programs for teachers, building K-12 leadership capacity, assisting teachers in earning their California teaching credential, providing financial support and mentoring opportunities for undergraduate pre-service teachers working in low-performing schools, and collaborating with other CSUSB programs and projects to provide adult and student enrichment in mathematics. Some of our activities are described below.

The Noyce Math and Science Scholars for the Inland Empire provide talented undergraduate mathematics and science majors with financial support along with a mentored, gradual immersion into the teaching profession. The Noyce Scholars will work with mentor teachers in their classrooms in San Bernardino City Unified School District, participate in professional development seminars, and ultimately become full-fledged teachers in the district. They will be supported by a team of College of Natural Sciences and College of Education faculty, city of San Bernardino district personnel, and top teachers from the district. Funding for this project was awarded by the National Science Foundation.

CEME is home to the Inland Counties Mathematics Project. Through funding from the California Mathematics Project, ICMP provides a wide array of curricular and professional development opportunities to in-service teachers in San Bernardino and Riverside counties. These opportunities include an eighth-grade algebra readiness program for students (with support for their teachers); periodic institutes to help teachers earn their single subject

teaching credential and so become "highly qualified" and institutes to enhance teachers' mathematical knowledge and pedagogical skills. These opportunities are offered in wide-spread geographical locations such as Indio, Nuevo, Victorville, Barstow, Rialto, as well as San Bernardino.

ICMP has recently been awarded a Supporting Teachers to Increase Retention grant to work with teachers in districts in the high desert. STIR will support the creation of Professional Learning Communities in these districts so that teachers may support one another, deepen their mathematics knowledge and teaching skills, and build local leadership capacity. CEME also collaborates with CSUSB entities such as the CSUSB Watson and Associates Literacy Center and GEAR UP Inland Empire to offer parent and student learning opportunities that combine mathematics with literacy to the benefit of both.

### Endowment created to honor Retired College of Natural Sciences faculty member

Dr. Ralph Petrucci has pledged \$50,000 to establish the Gerald M. Scherba Endowed Program to commemorate Scherba's many contributions to the founding of CSUSB. He is pledging to match all contributions on a dollar for dollar basis up to the first \$50,000. Petrucci challenges all those who remember Scherba to help him create a permanent memorial to him. The Gerry M. Scherba Endowed Program: *Promoting Public Understanding of the Natural Sciences* will honor Scherba for his many "firsts," such as being the first science faculty hired, the first chairman of the Natural Sciences Division and a member of the first planning staff that created what is now CSUSB, and the program will help to stimulate public appreciation of the natural sciences. For more information, please call the CNS Development office at (909)537-7638.



In 1982, Dr. Scherba celebrates the name change from California State College, San Bernardino to California State University, San Bernardino.

### Nursing Receives a Big Boost at the Palm Desert Campus

In an unprecedented move, The California Endowment granted California State University San Bernardino's College of Natural Sciences and the Palm Desert Campus of California State University, San Bernardino funding in the amount of \$723,489. These funds will be used to help meet the goal of The California Endowment to develop a culturally competent nursing workforce while supporting CSUSB's efforts to address the nursing crisis in the Coachella Valley. Specifically, the funds would cover the costs of two faculty positions for a three-year period. Given the Coachella Valley's shortage of nurses and the low number of high school graduates who choose to pursue a college education, the administrations of PDC, CSUSB and COD, along with their hospital partners, are committed to meeting the Coachella Valley's need for more nurses. The implementation of the traditional four-year B.S.N. program represents another step in the work of building a health sciences education infrastructure to serve the medical and wellness needs of Coachella Valley residents and the California Endowment's mission to provide increased access to healthcare, culturally competent nurses and increased workforce diversity.

### Bogh Construction and KCB Towers Reaching for the Stars

Family-owned Bogh Construction and KCB Towers, Inc., have joined forces in a joint venture to help build an observatory at California State University, San Bernardino. The observatory will be the first of its kind to serve area schools and the community with a twin-tower facility for both day and night viewing. The observatory at CSUSB will be a state-of-the-art research center as well as a teaching center to serve K-16 education and the community at large. The observatory will provide youth with an opportunity to use the telescopes and see the wonders of our universe.

"We at Bogh Construction are very excited about the observatory project. The observatory is a great opportunity to develop a facility that will be used to develop future engineers, architects and other science related professions. Our communities in the Inland Empire will greatly benefit from the observatory, and we look forward to working with the university to make this project a reality," said Mark Bogh, president of Bogh Construction.

KCB Towers, Inc., which began in the early 1980s by fabricating and erecting communication towers, has joined forces with Bogh Construction to help in the construction of the observatory. KCB Towers, Inc. is a full service steel construction company with the expertise and experience to build anything from residential houses to large commercial buildings.

You can still contribute to help build the observatory by making a gift. We accept cash, checks, credit cards and stock or IRA transfers. Pledges may be paid over three years. Gifts can be made in honor or in memory of a loved one. There are still naming opportunities to recognize your gift. For more information or to make a gift please call the office at (909) 537-7638 and ask for Roberto Redondo, director of development.



Mark Bogh, PE- President of Bogh Construction

### Congressman Jerry Lewis

The Water Resources Institute of CSUSB held a recognition dinner for United States Congressman Jerry Lewis on Nov. 4, 2006. Lewis was honored for his outstanding achievements in the field of water resources by the establishment of an endowed scholarship in his name:

the *Jerry Lewis Endowed Scholarship in Water Resource Studies*. More than 200 persons attended the evening and contributed to the scholarship fund as a way to show appreciation to Lewis for everything he has done for California in getting our fair share from Washington to protect water quality, provide flood protection, build new infrastructure for development and provide regulatory assistance. The many friends of Jerry and Arlene Lewis contributed more than \$100,000 in scholarship funds for CSUSB students interested in the study of water-related topics.



Congressman Jerry and Arlene Lewis and President Albert K. Karnig

### College of Natural Sciences Reaches a New Milestone

The College of Natural Sciences will reach a new funding milestone of the 2006-2007 academic year in fundraising with more than \$1.3 million private funds received. In addition, CNS has assisted other colleges in raising an additional \$700,000. This is the first time that CNS has exceeded the million dollar mark. A big thanks goes to the those donors whose generosity this year will provide a better learning environment for your students.

### What's Happened in Development This Year

The California Endowment approved a \$723,489 3-year grant to support the Department of Nursing's bachelor of science nursing degree program at the Palm Desert Campus

The California Wellness Foundation approved a \$224,000 grant to assist in recruiting and retaining a diverse student body for the CSUSB nursing program at the Palm Desert Campus.

The AT&T Foundation granted \$25,000 to Susan Addington, professor in the Department of Mathematics, to establish a mobile math laboratory. This is the largest grant that the AT&T Foundation gave this year.

Eisenhower Medical Center, JFK Memorial Hospital and Desert Regional Medical Center have pledged more than \$900,000 to support the CSUSB Department of Nursing BSN Program at the Palm Desert Campus and continue their \$150,000 support of the RN to BSN Program on the campus.

The Community Foundation serving Riverside and San Bernardino Counties provided \$19,459 for nursing scholarships.



# A BIG THANKS TO OUR DONORS

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## IN MEMORY OF



During this past year the College of Natural Sciences mourned the passing of a great leader with the death of Dr. Marcia Raines, chairperson of the Department of Nursing from 1999-2006. Raines was a devoted faculty member and administrator whose tireless efforts in the community resulted in a significant increase in resources as well as improved quality of programs available to nursing students on this campus as well as at CSUSB's Palm Desert Campus. Dr. Raines' work earned her many prestigious awards including recognition as a Robert Wood Johnson Foundation "Fellow" in 2004. Awards and honors aside, Raines' first love, indeed her life's commitment, was the preparation of well-trained and supported nurses for local hospitals. Her loss has been felt by all who knew her. Dr. Raines will be long remembered in the hearts of her students, colleagues, family and her family of friends at CSUSB.

### CNS OUTSTANDING ALUMNUS



The College of Natural Sciences has selected Dr. Nerissa Concepcion Safie as this year's Outstanding Alumna. Dr. Safie graduated with a B.S. in Biochemistry in 1996, at which time she was selected as the college's Outstanding Undergraduate. She married a fellow CSUSB alumnus, Mustafa Safie in 1997 and graduated from

Harvard Medical School in 2000. She was the chief resident in her residency program at Cedars-Sinai in Los Angeles and currently has a private practice in obstetrics and gynecology in Temecula. Dr. Safie has been a keynote speaker at the CSUSB Presidential Scholars Banquet and has given presentations to pre-med students on what to expect when attending medical school. Her parents teach here at CSUSB; Arturo in computer science and Aurora in chemistry and biochemistry.

### CNS OUTSTANDING GRADUATE



This year the College of Natural Sciences' Outstanding Graduate is Tom Lee. Tom graduated in December 2006 after only four quarters with a master's degree in computer science and a cumulative GPA of 3.93. Tom was an active member in both the Student Alumni Association and Student Ambassador

Society, volunteering more than 450 hours of his time for CSUSB events. He was selected by Dr. Keith Schubert as one of a few students to participate in a joint venture with Loma Linda University Medical Center and CSUSB. This project is part of a

multi-faceted system used for performing functional proton radiosurgery, to treat cancerous tumors and functional disorders. The goal of the project is to target brain regions using MRI and to deliver a high-energy dose of protons, with an accuracy of less than 1mm. Tom's role in the project was to develop software that is capable of correcting gradient nonlinearity distortions inherent in MRI, thereby enabling submillimeter target localization. In six months time, Tom developed the software from scratch and had successfully implemented it, correcting the gradient with an accuracy of less than 1 mm. This enabled LLUMC to test the software with animal subjects. In June, 2006, Tom competed in and took first place in the CSUSB Student Research Competition. He has also presented his research at two IEEE conferences. Through his involvement in this project, Tom was able to obtain a position as a software engineer at PerMedics, Inc., which develops the radiation treatment planning software used by LLUMC to perform functional proton radiosurgery. There are current plans to integrate Tom's software into the radiation treatment planning software, so that LLUMC and other hospitals and treatment centers worldwide can use the MRI correction.

### CNS OUTSTANDING UNDERGRADUATE



The College of Natural Sciences' Outstanding Undergraduate is Andrea Brandt, a Presidential Scholar graduating with a cumulative GPA of 4.0 with a B.S. in kinesiology: exercise science. During the course of her college career, Andrea has participated on the women's cross country team, serving as the team captain and representative at athletic functions for the

past two years as well as serving as the treasurer

of the Student Athlete Advisory Council which is a NCAA sanctioned organization. She is also a member of the Student Ambassador Society and the Phi Kappa Phi Honor Society as a result of her academic achievements. Andrea has also accumulated many accolades during her college career. She received the prestigious Hal Chernovsky-CCAA Award of Academic Excellence for the past two years in addition to the CSUSB Female Student Athlete of the Year Award. Andrea was recently the recipient of the NCAA's Women's Enhancement Program Postgraduate Scholarship for Careers in Athletics. This scholarship was awarded to 13 women across the nation who participated in athletics as an undergraduate and who wish to pursue a career that relates to athletics. Finally, she received the Obershaw Athlete of the Year Scholarship based on her academic success. Andrea has been assisting Dr. Bryan Haddock with a research project being funded by the NIH: "Examining the Metabolic Cost of Interactive Video Games in Obese Children" by collecting, recording and analyzing data. She wrote two abstracts that were submitted and accepted by organizations where she gave presentations of the research. She is currently helping Dr. Haddock with manuscript preparation which will hopefully be accepted into a peer review journal. In her "spare" time, Andrea volunteers at the Wellness Office in the new Student Health and Fitness Center.

## RETIREMENTS

Dr. Cynthia Paxton — Health Science and  
Human Ecology



