



The Department of

# CIVIL

# ENGINEERING



Spring 2005, Volume 11, No. 1

## Newsletter

Civil Engineering • Environmental Engineering • Bioresource and Agricultural Engineering

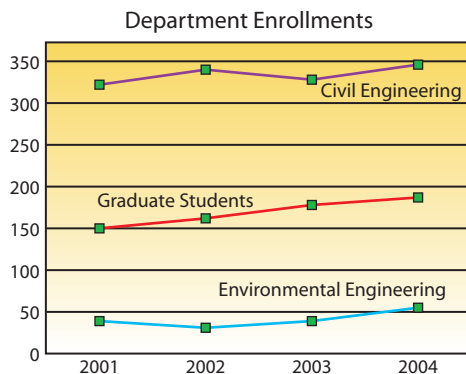
### Selected Recent Research Projects

Steve Abt, Rio Grande Channel Maintenance Mode, USBR  
Israel Broner, CropFlex Modification & Enhancements, USDA  
Deanna Durnford, Influence of Flow Augmentation on Water Quantity & Quality in the South Platte River, USDA  
Jeffrey Niemann, Scaling Properties & Spatial Interpolation of Soil Moisture, DOD  
Christopher Thornton, Hydraulic, Hydrologic, Geomorphic, Sediment & Investigations of the Rio Grande, USDA  
Darrell Fontane, Development of Real Time Water Resources Management System, KOWACO  
Tim Gates, Assessing Irrigation-Induced Selenium & Iron in the Stream-Aquifer System of the Lower Arkansas River Basin, Colorado Dept Public Health  
Larry Roesner, Protocols for Studying Wet Weather Impacts & Urbanization Patterns, WERF  
David Gilbert, Influence of pH on the Electrolytic Degradation of TNT & RDX in Groundwater, DOD  
Neil Grigg, Condition and Security Indicators for Interdependent Infrastructure Systems, NSF  
Paul Heyliger, The Mechanics of Inorganic Nanotubes from Molecules to Materials, NSF  
Jim Loftis, Selenium in the Upper Colorado River Basin: Public Education and Remediation, USDA  
John Nelson, Moisture Migration and Heave in Expansive Soils at the Tracon Building at Denver International Airport, FAA  
Brian Bledsoe, Monitoring of the Little Snake River & Tributaries, USBR \$8,000,000  
Pierre Julien, Rio Grande River Sediment Modeling, USBR \$7,000,000  
José Salas, Quantifying Space-Time Variability in Agricultural Landscapes, USDA \$6,000,000

In this newsletter, I wanted to provide our alumni and friends with a quick update of our department's progress. We've had another great year! With your help, we've built a new geotechnical engineering laboratory, improved our structures laboratory, hired two new faculty, and graduated an excellent class of students! Here's an update of activities for the last few years.

**Merger.** We were very fortunate when the bioresource and agricultural engineering faculty joined the Department of Civil Engineering in 2000. These faculty members continue to make great contributions to our water resources and environmental engineering academic and research programs. Although we phased out our bioresource and agricultural engineering B.S., M.S., and Ph.D. programs, we added options in irrigation engineering in our graduate programs and a soil and water option for undergraduate students.

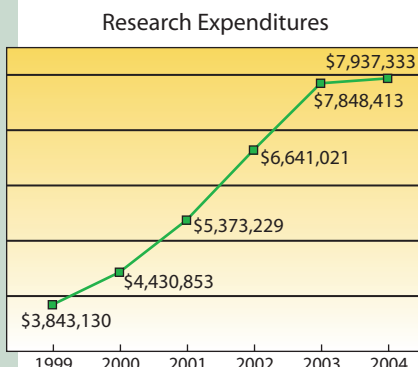
**Enrollments.** Our undergraduate programs are growing. We are home to 412 undergraduate students. Although most of our students major in civil engineering, enrollments in the interdisciplinary environmental engineering program have increased significantly over the last few years. In addition, our graduate program is the third largest at Colorado State University. Graduate enrollments have increased by a factor of 1.24 since 2001 and we are now home to 99 M.S. and 90 Ph.D. students. Our department's



Water Resources and Environmental Engineering Program was designated one of CSU's *Programs of Research and Scholarly Excellence* in 2004.

**Research.** Research expenditures in the Department of Civil Engineering have increased dramatically over the last few years. A few of the projects that our faculty and students are working on together are shown at left and right.

This is a great department with excellent faculty, students, and alums. In spite of budget cuts, the Department has hired five faculty members since 2001.



We look forward to the next several years and toward continuing to build our department so we may provide the best possible education for our students.

As a friend or alum, please keep in touch. Let us know if you'd like to visit the department – we'd be pleased to see you and give you a tour.

*Sandra Woodz*



Tom Sale, Electronically Induced Redox Barriers for the In-Situ Treatment of Contaminated Groundwater, DOD  
Richard Gutkowski, Pultruded Composite Shear Spike for Repair of Timber Bridges, North Dakota State University  
Bogusz Bienkiewicz, Wind Tunnel Study of Wind Loading on Low-Rise Buildings, NIST  
Amy Pruden, Environmental Biotechnology for Engineers in the 21<sup>st</sup> Century, CIT  
Jorge Ramirez, Quantifying the Complex Hydrologic Response of an Ephemeral Desert Wash, DOD  
Luis Garcia, Toward Implementation for Strategies for Remediation of a Salinity-Threatened Irrigated Watershed, USDA  
Tom Sanders, Melting Effectiveness & Corrosiveness of Mild Steel with Inhibitors, City of Fort Collins  
Charles Shackelford, Evaluation of Hydrologic Models for Alternative Covers, EPA  
Ken Carlson, Minimizing Environmental Impact of Pharmaceutical Use, USDA  
John van de Lindt, Reliability-Based Shearwall Design for Multiple Performance Objectives, USDA  
Lloyd Walker and Reagan Waskom, Coordinated Agricultural Water Quality Programming for EPA Region VIII, USDA  
Ramchand Oad, Decision-Support for Improving Water Management in the Middle Rio Grande Irrigation System, S. S. Papadopoulos & Associates, Inc.  
Chester Watson, Demonstration Erosion Control Monitoring, DOD  
John Labadie, Enhancements to the Model Development & Maintenance River & Reservoir Operations Model, USBR

**Colorado State University**

Knowledge to Go Places

## Alumni News

**Carl Hoffman**, B.S. 1930 Civil Engineering, who helped design Hoover Dam and several other Western dams, died in late December 2004. Mr. Hoffman had a 28-year career with the U.S. Bureau of Reclamation and went on to 30 years of international engineering consulting work, first with the World Bank and later with private engineering firms.

**Howard Lane**, B.S. 1933 Civil Engineering, passed away on October 9, 2004. After working for the Bureau of Public Roads and the Army Corps of Engineers, Mr. Lane established Lane Engineering Service in Lakewood with his brother. He was president of the Professional Engineers of Colorado, President of the Lakewood Chamber of Commerce, and Chairman of the Lakewood Planning Commission.

**Wilber Ingalsbe**, B.S. 1940 Civil Engineering, is living in Hollywood, California. Mr. Ingalsbe was founder of Perilter and Ingalsbe in the Los Angeles area, completing mostly large civil projects in that area. Mr. Ingalsbe and his wife, Erma, live in the house that Wilbur built with his own hands in the 1950s.

A Distinguished Alumni Athletic Award was presented in April 2005 to **Lewis Nelson**, B.S. 1949 Civil Engineering. Nelson, who spent 20 years with the Bureau of Reclamation, played a key role in the Big Thompson Canyon project. As a dedicated supporter of the Rams, Nelson created the Lewis J. and Jean Nelson Scholarship Fund with his late wife, Jean, and the Lew and Jean Nelson University Greatest Needs Fund, which has provided funding for many CSU initiatives.

**Ron Miller**, B.S. 1951 Civil Engineering, passed away on October 22, 2004. He worked overseas with Caterpillar Tractor for many years. In 1969 he became CEO of Hastings Deering,

the Caterpillar dealer for Queensland. In 1984, he founded Ron Miller & Associates to assist fellow CEOs, acting as a resource for world-wide best practices in many fields including manufacturing, mining, airlines, railways, and utilities. Mr. Miller became State President of the Australian Institute of Management, followed by a term as the National President of AIM, and later was honored with life membership for his services to the profession of management.

**Stanley A. Feingold**, B.S. 1957 Civil Engineering, now enjoys life as a farmer, after 20 plus years as a civil engineer and over 30 years as an attorney.

**Phil Burgi**, M.S. 1969 Civil Engineering, penned an article in the Summer 2004 issue of *EWRI Currents*. The article, "Is This What Retirement Looks Like?," chronicled his trip to the Ecuadorian jungle working with a volunteer team on a clean water project and then being flown to a jungle base hospital after a fall left him with several breaks to his right femur. The article can be read at [www.ewrinstitute.org/currents/0804/retirement.html](http://www.ewrinstitute.org/currents/0804/retirement.html).

**Karl Dreher**, B.S. 1971, M.S. 1973 Civil Engineering, has been serving as the Director of the Idaho Department of Water Resources since May 1995.

**Jose Sanabria**, M.S. 1971 Civil Engineering, owns a company and also teaches graduate courses in rivers, drainage, and sedimentation in Venezuela. His company focuses on work involving flood plains, scour, channel design, river training, and urban drainage.

**Gary L. Lewis**, Ph.D. 1972 Civil Engineering, is a Senior Water Resources Engineer at Parsons in Denver.

The City of La Junta's New Water Treatment Plant and Denver Water's

New Water Reuse Facility were both honored by the American Council of Engineering Companies at the 2005 Engineering Excellence Awards Competition in November. Richard P. Arber Associates in Denver provided design services for both of the projects. La Junta's new water treatment facility produces 6.6 million gallons per day of water, making it the

second largest reverse osmosis system in the state. The Denver Water Reuse facility supplies over 17,000 acre-feet of recycled water per year to both irrigation and industrial customers, and it is the largest water reuse plant in Colorado, capable of producing 30 million gallons per day. **Richard P. Arber**, M.S. 1974 Civil Engineering, serves as president of the company,

### Alumni Focus: Daud Ahmad, M.S. 1967, Ph.D. 1970, Civil Engineering

The civil engineering department has a long history of international involvement, and a tradition of raising the standard of living in developing countries by creating technical universities or providing engineering solutions. The department is proud of the many alumni and faculty who have engineered global solutions. One of these distinguished alumni recently visited Colorado State and shared his experiences.

During his 28-year career with the World Bank, Dr. Daud Ahmad circled the world many times on assignments in the Caribbean, East Africa, South Korea and China. He feels that one of the high points of his career is when he served as projects advisor and chief of the transport operations division for the China and Mongolia Country Department. "When I was based in Beijing and looking over the World Bank's portfolio, it was 110 projects with a total World Bank commitment of over \$30 billion. And it involved everything – roads, ports, large power schemes, dams, schools, clinics, industry, the environment. It was such a success."

Dr. Ahmad retired from the World Bank in 2000 and has been doing consulting work overseas ever since. He is Technical Auditor for the Roads Maintenance Program for the government of Laos, and was a member of the government's advisory group overseeing the new development plan in Afghanistan in 2003-2004. He finds work in Afghanistan to be both challenging and rewarding. "It's a country which has been in turmoil for 25 years, and all of a sudden there is a new beginning, but there is nothing there on the ground; you have to start from scratch."

Dr. Ahmad has had a satisfying and successful career, and credits Colorado State for his ability to move from water resources to transport operations and urban development, and from basic engineering into management of global-scale projects. "You look back, and what you learn in an institution is the capacity to cope with the challenges in life. And I think that's what I learned from CSU."



**Dr. Daud Ahmad**  
Managing Director of PIASS, LLC and Senior Associate of WASI, Inc.; retired from the World Bank where he served in several management and advisory capacities.

Dr. Ahmad visited Colorado State University on November 8-9, 2004 to meet with faculty and students and present an all-university seminar.

**Dr. A. Ray Chamberlain**, Ph.D. 1955 Civil Engineering, was awarded the Transportation Research Board's W.N. Carey, Jr., Distinguished Service Award for 2004. This award recognizes individuals who have given outstanding leadership and service to transportation research and to the Board. Along with the Crum Award, it is the highest honor the TRB can bestow. Dr. Chamberlain accepted the award on January 12 at the Transportation Board's Annual Meeting held in Washington D.C.

## Alumni: We want to hear your news!

E-mail us at [civil@engr.colostate.edu](mailto:civil@engr.colostate.edu) with your recent promotions, honors, publications, research, speaking engagements, and photos, so we can keep your classmates informed about important changes in your life.

which was named one of the "2004 Top 50 Firms to Work For" by *CE News*. The list was published in the October 2004 issue.

**James Norris**, B.S. 1974 Civil Engineering, is working at Tutor-Saliba Corporation in Sylmar, California.

**Tahir A. Malik**, M.S. 1975 Civil Engineering, is currently the Country Manager for Montgomery Watson Harza in Pakistan. Previously Mr. Malik was Chief Engineer in the Irrigations and Power Department for the Government of Punjab and Chief Engineer Advisor/Chairman of the Federal Flood Commission for the Government of Pakistan, and has been awarded the highest service grade available in Pakistan. In response to an article in the Civil Engineering Fall 2004 newsletter regarding the passing of Professor Koloseus, Mr. Malik wrote: "Professor Koloseus taught us Open Channel Hydraulics. He was a great teacher who had full command over his subject. He made the concepts of Open Channel Flow so clear that I have always remained confident about this subject during the subsequent 29 years of my professional career."

**Jerson Kelman**, Ph.D. 1976 Civil Engineering, and **Francisco Gomide**, Ph.D. 1975 Civil Engineering, were recently at a meeting hosted by former Brazilian President Fernando Henrique Cardoso. Kelman is currently the Director General of the National Electric Energy Agency (ANEEL) and Gomide was formerly Brazil's Minister of Energy.

**Dr. Robert E. Akins**, Ph.D. 1976 Civil Engineering, died of cancer on November 3, 2004. Dr. Akins was the Robert Lee Telford Professor of Physics and Engineering at Washington and Lee University, serving on the faculty there for 20 years. He was an expert on the effects and use of wind, as well as an influential community leader.

**Michael J. Moodie**, M.S. 1979 Agricultural Engineering, has been designing the electrical distribution, and synchronizing and load sharing for over 50 MW of turbine-generators for a future ship. Michael is a Project Engineer for Northrop Grumman in Virginia. He has a daughter in college and a son in high school.

**Kathleen Hancock**, B.S. 1982 Civil Engineering, is an Associate Professor and Associate Director of the Center for Geospatial Information Technology at Virginia Tech in Alexandria. Her research interests include the application of spatial analysis and geographic information systems and intelligent mapping for engineering problem solving; freight planning; and highway safety.

**Riad Elhaj**, M.S. 1983, Ph.D. 1985 Civil Engineering, was featured by *FM Magazine* (Facilities Management Magazine), in an article entitled "Follow My Leader." Elhaj, assistant vice president of Consolidated Contractors International Company, has created a Leadership Training Program and he gives seminars and workshops on various aspects of leadership. He has conducted seminars for nearly 2,000 employees from training zones in Qatar, Egypt, Saudi Arabia, Jordan, Africa, Asia, United Arab Emirates, and Oman.

**Paul Grover**, M.S. 1983 Civil Engineering, works for the consulting engineering firm AMEC in Calgary, Alberta. Most of his time is spent working on water related aspects of oil sands projects in northern Alberta. He misses the warmer temperatures at Colorado's ski areas!

**José A. Raynal**, Ph.D. 1985 Civil Engineering, is a Professor in the Department of Civil Engineering at the Universidad de las Américas, Puebla, Mexico.

**John H. Baionno**, B.S. 1987 Civil Engineering, is a project manager with Tri-State Engineers and Land Survey-

ors in Feasterville, Pennsylvania. John is married and has been coaching his two children's soccer and baseball teams.

**Mahendra Gurung**, M.S. 1987 Civil Engineering, is now the Under Secretary at the Ministry of Water Resources in Kathmandu, Nepal.

**Gabriel P. Sabadell**, Ph.D. 1989 Civil Engineering, is a principal with TSC Group, Inc. in Arvada, Colorado.

**William E. Rice**, B.S. 1990 Civil Engineering, is working as a project engineer at Jacobs Engineering in Arlington, Virginia.

**Michael Malusis**, M.S. 1995, Ph.D. 2001 Civil Engineering, has accepted a faculty position at Bucknell University in Lewisburg, Pennsylvania. He will begin his appointment as an Assistant Professor in the Department of Civil and Environmental Engineering in the fall semester of 2005.

**Brent W. Auverman**, Ph.D. 1996 Agricultural Engineering, was awarded the Nolan Mitchel Young Extension Worker Award from the American Society of Agricultural Engineers. Auverman is an associate professor of biological and agricultural engineering at Texas A&M.

**Matt Cook**, B.S. 1996 Engineering Science, M.S. 1999 Civil Engineering, is manager of water resources operations for Coors.

**Todd Williams**, M.S. 1996 Civil Engineering, is the Deputy Director of Water Resources for the City of Aurora.

**Tom Chapel**, M.S. 1998 Civil Engineering, has joined MFG, Inc. in Fort Collins. He joins the Geotechnical Services Group as the technical lead for Public Works and Infrastructure. Mr. Chapel specializes in geotechnical engineering related to transportation and infrastructure projects, expansive soils issues, and construction.

**Brandon Eisen**, M.S. 1998 Civil Engineering, was a presenter at a seminar held in November at Colorado State. His presentation was titled "Characterization and Remediation of a Site Contaminated with Commingled Chlorinated Solvents and Metals." Mr. Eisen is a groundwater

hydrologist with Komex Environmental in California.

**Junke (Drinker) Guo**, Ph.D. 1998 Civil Engineering, joined the California Department of Transportation (CalTrans) in January 1999. He later accepted an assistant professorship with the National University of Singapore, where he taught a variety of fluids and water resources courses



*Junke and his family on Virgo that cruised for three days on the Indian Ocean, Dec. 7-9, before the tragic Tsunami on Dec. 26, 2004.*

for undergraduate and graduate students, and served as the Supervisor of the Hydraulics Lab. After continuing his interest in open-channel turbulence and sediment transport (collaborated with Prof. Pierre Y. Julien), he extended his research to coastal hydrodynamics and coastal sediment transport, supported by several Singapore government agencies. Junke was also an active consultant for Singapore Public Utilities Board (PUB), National Parks Board, Jurong Shipyard, and the Danish Hydraulic Institute. He helped PUB establish a long-term training program – Core Technology Courses and lectured on Drainage Systems Design. Junke has been very active with professional societies. He organized the 13<sup>th</sup> IAHR-APD Congress in Singapore in 2002, which attracted over 300 participants from 25 countries. He also serves as ASCE Associate Editor for the *Journal of Hydraulic Engineering*. Since January 2005, he has assumed a new tenure-track position with the Department of Civil Engineering, University of Nebraska – Lincoln. Guo is living in Omaha with his wife, Joanne, and their two sons, Alex and William.

**Steven Lukens**, B.S. 1998 Civil Engineering, is working for Lockheed Martin. Upon graduation Mr. Lukens went to work for PSI Engineering. He

*continued on page 12*

Please Mark your calendars . . .

## A Celebration of the Life of Daryl Simons

Saturday, August 27, 2005

Colorado State University campus

## Faculty News

Faculty and staff gathered to celebrate the next generation in the Civil Engineering Department in January. Shown below are **Dr. David Gilbert** and his son **Jensen Howe Gilbert** (born October 2, 2004); research scientist **Julio Zimbron** and his son **Santiago** (born April 1, 2004), and **Brian Bledsoe** and **Olivia Marie** (born February 7, 2004).



resources management." Its main features are to create improved conditions for wastewater treatment, new systems to manage water supplies, and new laws to control quality of groundwater and marine and coastal waters. CSU's report was completed in October and its Colombian partners have completed a draft bill. It is now up to Colombia's new Ministry of Environment, Housing and Territorial Development, working with partners in Congress, to introduce and implement the law, if it's approved by Congress and President Alvaro Uribe.

**Professor Richard Gutkowski** received a grant from the Foundation for Portuguese-American Development to visit the University of Coimbra, Portugal, to foster research cooperation. He visited in 2004 and initiated joint activity in composite wood-concrete structural systems.

**Drs. Richard Gutkowski**, Interim Associate Dean Wade Troxell and Visiting Research Associate Jeno Balogh co-organized the "Colloquium on Advancing the Colorado-Hungary Investment and Trade Development" at CSU in March, 2005. The Hungarian Consul Generals for Denver and Los Angeles, and Economic Affairs and Trade Commissioner discussed potential teleconferencing between CSU and Hungary to facilitate cooperation between Colorado and Hungarian engineering businesses.

**Dr. Pierre Julien** recently explored new horizons in Southeast Asia. In Penang, Malaysia, he delivered the Keynote Address at the First International Conference on River Management. In Hong Kong, he taught a three-day short course with Prof. S. Ikeda at the 4th International Symposium on Environmental Hydraulics. In Laos, he promoted the expansion of the Center for Environment and Development Studies at

## Grigg Receives Prestigious Awards

**Dr. Neil Grigg** was selected to be on *Public Works* magazine's 2004 Trendsetters list. The list recognizes leaders in the public works community, and includes those who have defined policy, brought their community or an issue into the spotlight, or set the standard within the industry. The Trendsetter feature article appeared in the November issue of *Public Works*.



Neil Grigg

Neil Grigg was also selected to receive the 2005 Colorado State University Alumni Association Distinguished Faculty Award for the College of Engineering. The purpose of this award is to recognize a current faculty member for their individual contributions to the goals of excellence at Colorado State and who has demonstrated excellence in teaching, research, and/or service to their discipline, the university, work with students, and/or involvement in the university community.

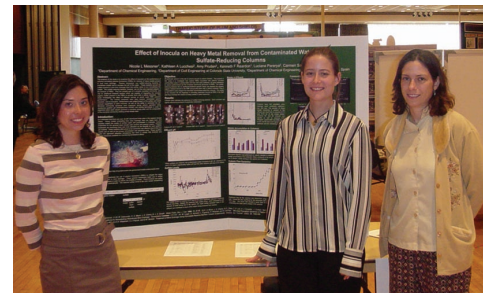
the National University of Laos, in view of the \$1.3 billion Hydropower Project Nam Theun 2.

**Dr. John D. Nelson** conducted a series of short courses in March and April 2005 on Building on Expansive and Collapsing Soils. The two-day courses were held in Denver, Sacramento, and Las Vegas.

**Dr. Ramchand Oad** was featured in a January 19 article in the *News-Bulletin*, Belen, New Mexico.

Oad is developing a computer modeling program to help the Middle Rio Grande Conservancy District establish a watering schedule. By placing the crop and soil types, spatial location and duration of irrigation flow to each piece of property being supplied by the Conservancy District, Oad's model is able to determine the delivery rotation along a canal. By being more efficient with diversions, the MRGCD will be able to meet Rio Grande Compact obligations and delay having to use its stored water upstream until later in the season.

**Dr. Amy Pruden** was awarded a Colorado Institute of Technology grant to promote environmental biotechnology education and research for graduate and undergraduate students. Funds in part have



Students **Katie Lucchesi**, junior Civil Engineering, **Nicole Messner**, senior Chemical Engineering, with **Dr. Amy Pruden**. Their undergraduate research is being funded through Pruden's CIT grant.

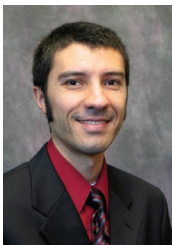
provided major equipment acquisition for a new three credit lab-based course in Fall 2005 – CE580 Molecular Biology for Engineers. In this hands-on course, students will work in collaborative teams to carry out a "mini" research project, and in the process learn and apply methods such as DNA extraction, PCR, FISH, and capillary electrophoresis to samples from a wastewater treatment plant or other sample of their choice relevant to environmental engineering.

**Professors Tom Sanders** and **Robert Ward** announced that the last Design of Water Quality Monitoring Networks short course at Colorado State will be presented June 6-10, 2005. This will be the 25th time that the course will have been presented at Colorado State since it was first offered in 1979. It is estimated that the course attracted over 1000 professionals from all over the world. Sanders and Ward will journey to Denmark, June 20-24, 2005 to present the European version of the course. This will be the sixth time they have presented the course overseas and the third time in Denmark. For more information on the Danish version, see [www.dhi.dk](http://www.dhi.dk).



Work is nearly complete on **Professor Antonio Carraro's** new laboratory space, dedicated to state-of-the-art experimental testing for characterization of the mechanical behavior of saturated and unsaturated soils. Research in this lab will focus on the systematic characterization of both static and dynamic constitutive response (large and small strain) and the effect of micro-structure, anisotropy, intermediate principal stress on the behavior of geomaterials, particularly the so-called non-textbooks soils (e.g. waste materials, sands containing fines, cemented, residual, collapsible and expansive soils).

Colombia is restructuring its environmental programs, and the new water law is a key component. In April 2004, **Dr. Neil Grigg** traveled to Bogotá to present a scheme for the water law. Then, working with a team from Colombia, Colorado State's team began to work on details of the law to be introduced in Congress during the 2004-2005 term. Other members of Colorado State's team include: **Darrell Fontane**, **José Salas**, and **Larry Roesner** (Department of Civil Engineering); **Larry MacDonnell** (former head of CU's Natural Resources Law Center); **Charles W. Howe** (University of Colorado); and **Marie L. Livingston** (University of Northern Colorado). The proposed law is designed to implement the concept of "integrated water



Antonio Carraro



Richard Gutkowski



Ramchand Oad



The honorable Mr. **Phimassone**, Minister of Education of the Laos P.D.R. and **Dr. Julien** in Vientiane

**Dr. Tom Sanders**, an avid baseball fan and regular at Colorado Rockies Fantasy Baseball Camp in Tucson, could be seen in a Fox Sports series documenting this year's Fantasy Camp. Sanders attended the Colorado Rockies Fantasy Camp in January. After playing six games in three days his team won the camp championship.



**Professor Charles Shackelford** spoke last Fall to the senior class in the Department of Civil, Architectural and Environmental Engineering at his alma mater, the University of Missouri-Rolla (UMR), as part of a series inviting distinguished professionals to discuss topics of concern to graduating civil engineering students. In April,



*Charles Shackelford*

Dr. Shackelford was also elected to the UMR Academy of Civil Engineers, composed of outstanding graduates and community leaders.

**Dr. Shackelford** will be presenting the keynote lecture on "Environmental Issues of Geotechnical Engineering" at the 16th International Conference on Soil Mechanics and Geotechnical Engineering, Osaka, Japan, Sept. 12-16, 2005.

**Dr. John van de Lindt** is installing a large steel test frame in the

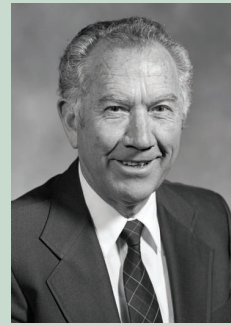
structures laboratory at CSU's Engineering Research Center. The frame, accompanied by high performance dynamic actuators capable of simulating hazards loading, is driven by a state-of-the-art hydraulic power unit and an accumulator bank to enable high load and velocities. Planned projects include adjustment of load factors for combined gravity and lateral loads on wood-frame structures, and development of a mechanistic damage model for woodframe structures. A wind and earthquake load demonstration on a full-scale woodframe structure is planned.



*John van de Lindt*

The World Association for Sedimentation and Erosion Research (WASER) was formed at the 9th International Symposium on River Sedimentation in Yichang, China in October. This organization is the first of its kind devoting its efforts to sedimentation and erosion studies. Professor Walling from the UK was elected as WASER President, and Professor DiSilvia from Italy and **Dr. Chih Ted Yang** were elected as Vice Presidents. At the Symposium, Dr. Yang presented an invited lecture on "Application of GSTARS to River Sedimentation Studies." He also gave lectures at Tsinghua University and the Chinese Institute of Hydraulic Research in Beijing, and delivered a lecture at the Korean Institute of Construction Research in Seoul.

## In Memoriam: Daryl Simons, 1918-2005



You might ask what the College of Engineering would look like today if some of the truly inspired and inspirational faculty members had never banded together during crucial times to take risks that would boost the research and teaching programs to new heights. People such as Daryl Simons are rare indeed, and we are most fortunate to have known Daryl as a friend, colleague, and internationally renowned figure in academia and industry.

Daryl Simons was born February 12, 1918 in Payson, Utah. He was a trailblazer whose name is mentioned when talking about civil engineering and the leaders who made CSU's department one of the top-ranked in the nation. Simons was a key member of the faculty during the 60s and 70s, joining people such as A. R. Chamberlain, Maury Albertson, Vujica Yevjevich, Everett Richardson and Jack Cermak in establishing the department's reputation in hydraulics, hydrology, and wind engineering.

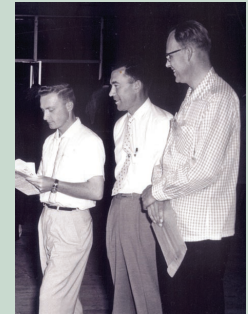
Under Daryl's leadership as associate dean for research, funded projects and graduate students increased to an unprecedented level, and research associations were forged with other strong universities including Cal Tech, Berkeley, Georgia Tech, and MIT. Among Daryl's many legacies are the unique Engineering Research Center that was built to provide large-scale laboratory facilities for the department's premier research programs.

During his years at Colorado State, Daryl produced over 400 technical publications, and mentored over 500 students, sending them into the world to make ties in South America, Nepal, Pakistan, India, Japan, China and Canada. Daryl was a diplomat for the University and instrumental in expanding the college's educational outreach through distance education, technical meetings and short courses. He taught courses in hydraulic structures, erosion and sedimentation, and river mechanics. Daryl was continually optimistic while maintaining a down-to-earth realism that produced results. His students were told to find a subject they were really interested in and when they excelled in that field, the funding would follow. He believed the role of an adviser was to light the fuse, keep it burning, and watch it expand.

His accomplishments were many, and he was recognized not only by Colorado State but also by ASCE with numerous awards and honors. He received some of ASCE's highest awards: the J.C. Stevens Award in 1960, the Croes Award in 1964, the Karl Emil Hilgard Hydraulic Prize in 1979, and the Hunter Rouse Award in 1991.

Daryl Simons kept the fires burning at CSU until he left in 1983 to form a consulting firm that provides services around the world. He actively worked until he was 85 years old, continuing to guide hydro-power and hydraulic projects through agencies such as the World Bank, United Nations and Department of Defense until he passed away on March 13, 2005. His legacy will live in the hearts and minds of all his friends – the students, industry and academic colleagues, international associates and other trailblazers who have made such a difference in the lives of everyone they touch and inspire.

*The Simons' family has asked that memorials be made to the Daryl B. Simons Graduate Fellowship Fund at Colorado State University. To make a contribution, please call 970-491-7028 or mail it to: Colorado State University, College of Engineering, 1301 Campus Delivery, Fort Collins, CO 80523-1301.*

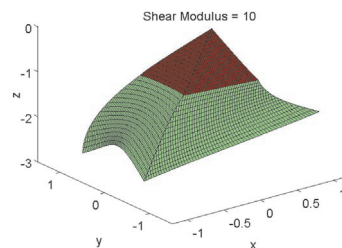


*A.R. Chamberlain, Daryl Simons, and Maury Albertson*

## The Mechanics of Pyramids, Large and Small

The massive Great Pyramid at Giza or those of the Maya usually come to mind when one thinks of pyramids. Although these structures have existed for centuries, the basic mechanics of these structures and those of similar shape have never received extensive study. Recent advances in self-assembled quantum dots have also led to the discovery of pyramid-shaped nanostructures that can influence material properties, leading to even more reasons for reconsideration of these objects.

**John Kienholz**, as part of his MS thesis in Civil Engineering, has studied several aspects of these somewhat novel structures. Along with his advisor, **Professor Paul Heyliger**, he has examined the static and free vibration response of pyramids that can also contain layers of dissimilar media. In the figure, the lowest vibrational mode for a layered pyramid with an upper pyramid with shear modulus ten times that of the lower layer is shown. Further study of these elements can be used to study pyramids large and small, from the earthquake response of existing structures to the sensitivity of nanoscale pyramidal probes.



## Faculty Focus: Luis Garcia User-Centered Tools for Water Management

Associate Professor Luis Garcia takes a user-centered approach to addressing some of Colorado's most pressing water management problems. He and his research team, the Integrated Decision Support (IDS) Group, have specialized in creating decision support systems and computer models based on user input. The IDS Group, which was founded in 1992, is comprised of ten students and two research associates. They utilize a design process that seeks the active participation of water users, helps them prioritize their needs, and then collects or generates the data and modeling tools necessary to meet the needs. This user-centered approach to software development is based on the premise that the users have a good understand-

ing of what their current needs are and what their future needs will be. The programs developed by IDS that have been created through this process of open dialogue and consensus have achieved wide acceptance in the Colorado water user community.

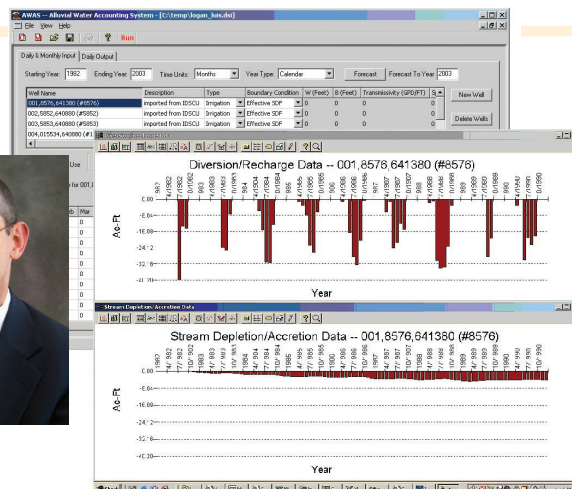
The South Platte Mapping and Analysis Program (SPMAP) is a popular set of user-centered tools designed by the IDS Group. SPMAP consists of a Geographic Information System tool, a consumptive use model, and an alluvial water accounting system for use in calculating augmentation needed to offset consumptive use of groundwater. Although these tools were initially developed for use in the South Platte Basin, the river basin experiencing the greatest water demands in Colorado,



Luis Garcia

the use of the SPMAP programs has spread to other parts of the state.

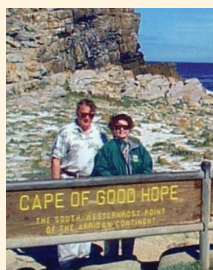
In addition to SPMAP, the IDS Group is working on tools for measuring the impact of salinity and water-logging on the Arkansas River Valley in southeastern Colorado, for schedul-



ing water delivery in the Middle Rio Grande Conservancy District in New Mexico, and for using remote sensing to calculate evapotranspiration (ET) in the great plains and lower Colorado region of the United States Bureau of Reclamation.

## Emeritus Faculty News

**Dr. Lionel Baldwin** writes: "I left CSU in 1984 to start the National Technological University (NTU). Top faculty from 51 universities cooperated on M.S. curricula, teaching, and advising. Live satellite ITV links were another first. I retired from NTU in 2000. In 2001, I joined the board of trustees of the African Virtual University (AVU). Funded by the World Bank and others, AVU uses NTU technology to provide improved engineering education in Africa. Unfortunately politics has slowed progress. Go to [www.avu.org](http://www.avu.org) for an update. My AVU term ended in 2003, and today at 72, I am trying retirement again."



Dr. Baldwin and his wife Kathleen in Africa.

**Dr. Jack W. Cermak** (B.S. 1947, M.S. 1948) received the 2004 Robert H. Scanlon Medal for his pioneering work in wind engineering and wind tunnel simulations and for the advances he has made to the design of structures subjected to wind loading. The Scanlon Medal is awarded to an individual in recognition of distinguished achievement in engineering mechanics through contributions to both theory and practice.

**Dr. Norman A. Evans** (Ph.D. 1963) reports: "Much of my time is spent with the Poudre Landmarks Foundation working to preserve historic buildings and sites in the Fort Collins area. My focus currently is the preservation of the first City Water Works built in 1882. The building will become a museum for display of historic information about the City water supply and system."

**Dr. Robert N. Meroney** retired at the end of the spring semester 2004. In late May, he provided lectures at the *NATO Advanced Study Institute on Penetrative Flows*, Kiev, Ukraine, on the use of computational fluid dynamics to calculate fire penetration in forests and urban centers. In December, he gave a series of lectures on the experimental and computational prediction of dispersion and transport in urban environments at a *Croucher Advanced Study Institute on Wind Tunnel Modeling*, Hong Kong University of Science and Technology. During 2004 into 2005 Dr. Meroney participated in a Colorado State contract using computational methods as well as the CSU Wind Engineering and Fluid Laboratory wind

tunnels to predict drift and dispersion of gaseous plumes and water droplets produced by mechanical draft cooling towers over urban areas. Bob continues to ride his recumbent bike, hikes weekly, reads medieval mystery stories, and provides lectures on the *History and Aerodynamics of Golf Balls* to university and Rotary service clubs.

**Everett V. Richardson** (B.S. 1949, M.S. 1960, Ph.D. 1964) is a Senior Associate with Ayres Associates, a full service Civil and Architecture Engineering firm. He presently is teaching the Federal Highway Administration's National Highway Institute courses on stream stability and scour at highway bridges at several State Departments of Transportation. In addition, he is working on the design and construction of a sediment control structure for a run of the river hydroelectric plant in Idaho and serving as an expert witness on a dam failure in Arizona. The sediment control design includes a model study at Colorado State conducted by Chris Thornton and Michael Robeson.

**Jim Ruff** (B.S. 1959, M.S. 1967), writes: "Since retirement I've been working for Ayres Associates, teaching hydraulic engineering courses to state highway engineers. In increments of four to five days at a time, I've traveled from California to Massachusetts and to numerous places in between. Lest there be any misunderstanding - this is a parttime job, leaving ample time for fishing, hunting, and gardening."

**Dr. Vujica Yevjevich** has almost completed his 260 page autobiography which includes a general biography, professional experiences, consultation in 60 countries, and his contributions in the United States, Serbia, Macedonia, and Bosnia. Recently, he was made the Honorary President for Life of the Serbian Hydrological Association. He was honored as a Full Foreign member of the Academy of Engineering of Serbia, Montenegro. Part of a museum in Prboj, where he was born, has been dedicated to him and his papers, and he received an Honorary Doctorate from Belgrade University. He is active from his home in Highlands Ranch, Colorado.



In Kiev, Dr. Meroney, scientists from Serbia, England and Canada, and Dr. Yevgeny Gayev (NATO ASI conference organizer, host, and CSU exchange visitor in 2003).

## Student News

The CSU student branch of **Engineers Without Borders** (CSU-EWB) spent spring break assessing various approaches to obtaining an abundant, safe water supply with less physical demands on the people of La Laguneta, El Salvador. Recently retired faculty member, **Lloyd Walker**, accompanied the nine students as their mentor. Measurements were taken and data collected. Information is being compiled to further the analysis leading to a sustainable solution. Refurbishing and replumbing existing wells and a storage tank is a possible first step in the phased development of an improved water supply. *See page 8 for more information about CSU-EWB.*

From March 10-19, 2005, masters student **Misty Butler** attended the ATHENS program, a bridge workshop for international students held at Budapest University of Technology and Economics (BUTE), Budapest, Hungary. By cooperative arrangement between BUTE and Colorado State, Misty was the sole U.S. student enrolled with forty one other students from various EU nations.

Seniors **Dillon Cowan** and **Ryan Fleming** have been awarded NSF fellowships to pursue graduate studies in water at Cornell University.

Ph.D. student **Jorge Gironas** is the director and president of Waterscience Research Community (WRC). The function of WRC is to support cooperation and sharing of resources between individuals with a particular interest or concern related to water. WRC hosts free information, tools, and data from individuals, and supports collaboration by uniting individuals with common interests. WRC supports research by providing the infrastructure necessary to obtain research funding, through a tax-exempt non-profit architecture. The organization currently has 152 members from more than 20 countries. For more information, visit the WRC website: [www.watersci.org](http://www.watersci.org).

January 16 - February 4, **Andres Jaramillo**, completed volunteer work in Cobán, Guatemala, for USAID through Winrock International. Jaramillo conducted a ten-day GIS workshop for a group of 18 participants from CARE Guatemala and the University of San Carlos. Topics ranged from the theoretical fundamentals of GIS to the practical hand-on exercises proposed in textbooks as well as with local data. The participants' previous exposure to GIS varied greatly, so the workshop was customized to accommodate and benefit all Jaramillo (*shown at right*), a Ph.D. student, presented lectures and laboratory practices daily in 5-hour sessions. This introduction to GIS will be used to help develop an integral plan and determine decision-making and development of operations in an effort to fight poverty in Guatemala.



Also, **Andres Jaramillo** received the 2004 Summers Engineering/USCID Scholarship. The award was presented during the USCID Water Rights Conference in Salt Lake City in support of Jaramillo's graduate research interests involving the quantification of water used at the field scale.

**Aaron Ogorzalek**, masters student, plays on the CSU Club Soccer Team that finished 2nd in the National Championship to Texas A&M University. Aaron also made the All-Tournament Team (he's No. 4 in the picture on the web site). See [www.nirsa.net/sc/soccer/2004/continuation.htm](http://www.nirsa.net/sc/soccer/2004/continuation.htm) for scores and photos.

Senior **John Treacy**, a long snapper for the CSU football team, was featured in a *Denver Post* article on October 15, 2004. The story centered on Treacy earning his position after walking on the team. It also highlighted the fact that Sonny Lubick is fascinated by the names of the engineering courses Treacy is taking and each year Lubick changes John's nickname based on his current coursework – fluids, concrete, steel.



*The ASCE student chapter brought CSU's concrete canoe and steel bridge to "Scien-Terrific" Night at Lucile Erwin Middle School in Loveland. Above, senior Mike Dunham answers questions of students and their family members.*



### Fall 2004 Commencement

**Front row (left to right):** Sarah Madsen (CE), Charles Beck (CE), Christian MacKay(CE), Justin Doles (CE), Ian Maycumber (CE), Nathanael Bokelman (CE), Tim Moody (CE), Richard Vidmar (CE), Dr. Omnia El-Hakim. **Second row:** Kara Ashbaugh (CE), Andrew Gingerich (CE), Tyler Curtis (CE), Ted Swan (CE), Kevin Warner (CE), Dr. Darrell Fontane, Laurie Howard. **Back row:** Dr. Sandra Woods, Dr. Larry Roesner, Dr. Terry Podmore, Dr. Tom Sanders, Dr. Neil Grigg.

## 2004-2005 Senior Design Projects

Civil and environmental engineering students begin and end their academic careers by completing a significant design project.

Civil's two-semester Senior Design course is wrapping up for the academic year. Team will make final presentations of completed projects at the end of the semester. The design teams have developed websites which are available at [www.engr.colostate.edu/ce/undergrad/senior\\_design/senior\\_design.shtml](http://www.engr.colostate.edu/ce/undergrad/senior_design/senior_design.shtml).

Centre Street Stormwater Treatment Facility. Sponsor: CSU Facilities

Trail Creek Erosion Control Plan. Sponsor: Robert Donovan

Power Trail Railroad Underpass. Sponsor: City of Fort Collins Parks Department

Ski-Hi Rodeo Facility Structural Assessment, City of Buena Vista. Sponsor: CSU Cooperative Extension

Design of Lunar Habitat. Sponsor: Department of Civil Engineering

Structural Renovation of Navajo Dam Building. Sponsor: US Bureau of Reclamation, Durango

Retrofit Power Plants in Dolores Water Project. Sponsor: US Bureau of Reclamation, Durango

Vallejo Dam Spillway Repair. Sponsor: US Bureau of Reclamation, Durango

Mary Blair Elementary School Traffic Congestion Relief Study. Sponsor: Loveland Traffic Congestion Task Force

Spring Canyon Community Park Development - Site Design. Sponsor: City of Fort Collins Parks Department

Spring Canyon Community Park Development - Drainage. Sponsor: City of Fort Collins Parks Department

Traffic Engineering Study for Buena Vista, Buena Vista Public Works. Sponsor: CSU Cooperative Extension

50-yr Drought Survey for Fire Protection Water Supply, Four Mile Fire Protection District. Sponsor: CSU Cooperative Extension



*A member of the Four Mile fire district in Teller County operates an automatic auger to assist a senior design team in their survey of an erosion control dam. He is wearing a gummy suit for protection in case of a fall through the ice.*

Design Renovations for Single Family Residence. Sponsor: Loveland Housing Authority

Municipal Facility Siting Study for Buena Vista, Buena Vista Public Works. Sponsor: CSU Cooperative Extension

Vail Winery - Water Supply Development. Sponsor: Zancanella & Associates Inc.

Vail Winery - Water Distribution System. Sponsor: Zancanella & Associates Inc.

Vail Winery - Wastewater Collection and Disposal. Sponsor: Zancanella & Associates Inc.

Irrigation System Development, Rabbit Creek Ranch. Sponsor: Rabbit Creek Ranch

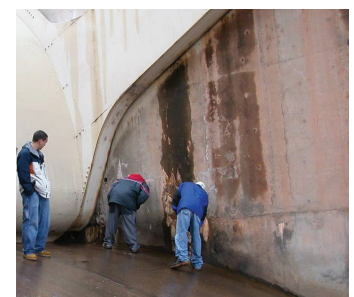
Trail Creek Road Restoration and Pond Reestablishment. Sponsor: Robert Donovan

Dry Creek Detention Pond Inlet Erosion Mitigation. Sponsor: City of Loveland

CSU Equine Center Stormwater Management System. Sponsor: CSU Facilities

Storm Drainage Study for the City of Buena Vista, Buena Vista Public Works. Sponsor: CSU Cooperative Extension

Drainage Study for the Elbert County Fairgrounds, Elbert County. Sponsor: CSU Cooperative Extension



*A senior design team inspects the radial gate offset at Vallejo Dam.*

## CSU-EWB: Making a Difference Around the Globe

Engineers Without Borders (EWB), the non-governmental organization (NGO) established to help developing areas worldwide with engineering needs, partners engineering students with engineering professionals for international aid projects. EWB gives valuable aid to developing communities while involving and training internationally responsible engineering students. EWB at Colorado State University (EWB-CSU) is currently working on several projects detailed below. Because of the high cost of international travel, EWB-CSU is seeking frequent flyer miles to purchase plane tickets for travel to project areas. For more information about EWB-CSU projects and how you can help please visit <http://www.engr.colostate.edu/ewb/>.

### India

EWB-CSU is excited to join Village Earth, an NGO from Fort Collins, for a project in Purulia, India. Located northwest of Calcutta, the project area consists of 51 villages that are severely impacted by drought. Drinking water in the project area comes from streams and shallow wells that are commonly contaminated and that often dry up during the dry season. The incidence of water-borne diseases is high, particularly among children. It is not uncommon for the children to die from these diseases and weakened immune systems before the age of five. The communities are desperately in need of clean water supply systems. For further assessment and implementation, EWB-CSU plans to send Dr. Fred Marinelli, a senior groundwater engineer, and two CSU students to selected villages during the first half of 2005. The site assessment team will perform ground water reconnaissance and conduct a public health survey in these villages.



### El Salvador

EWB-CSU is working with a rural community in La Laguneta, El Salvador, to provide drinking water. For six months out of the year the people of La Laguneta do not have a local water supply. This forces them to walk more than two miles to obtain water. EWB-CSU is developing a plan to provide the community with a year-round supply of safe drinking water. A ten-person site assessment trip to survey the land, locate supplies, and survey community health was completed in March. It is their goal to involve the community throughout the design and implementation of the project to ensure its ownership, appropriateness, and sustainability.

### Nepal

EWB-CSU and EWB at Tribhuvan University in Nepal jointly entered the Daimler-Chrysler Mondialogo Competition last December with their design of improved cook stoves for use in rural Nepal. The Mondialogo team has been awarded an entrance into the final round of the competition and will be sending three students to Germany over the summer to present the cook stove designs. If the design wins, the two universities will be awarded 15,000 Euros to spend on the project.

In 1977, the **Arthur T. Corey Scholarship** was established to pay tribute to Art Corey for his distinguished career in the Department of Agricultural Engineering at Colorado State. Dr. Corey graduated from Colorado State with a masters degree in 1949 and was a faculty member in the department from 1962-1977. Below are previous Corey Scholarship recipient Ryan Taylor, Art Corey, Vera Corey, Dr. Tom Sale, and Dr. Sandra Woods.



Raju Jairam is the President of MBI (Master Builder International) Corporation in Fort Collins. He received his masters degree in 1971 at Colorado State University studying with Professor Jim Goodman. MBI has distinguished itself with its historic renovations including working on a number of the early buildings on campus, such as Ammons Hall. The **Jairam Scholarship** was established in 1999 and is awarded to either a Civil or Mechanical Engineering graduate student annually. Pictured above are Mr. Jairam and previous Jairam Scholarship recipient Fernando Ramirez.



In 1994, The **H. W. Shen Water Resources Engineering Award** was established to recognize outstanding scholarship in the field of water resources. For many years, Emeritus Professor Hsieh Wen Shen has actively engaged in research in the fields of hydrology, water resources development, fluvial hydraulics, and sedimentation. Shen was a professor at Colorado State University from 1964 to 1986.



## 2005-2006 Graduate Scholarships

Students listed below are recipients of this year's departmental graduate scholarships. Currently the department has 187 graduate students and will be welcoming additional graduate students this fall. Our graduate students complete amazing research projects, co-author papers, and make significant contributions in their fields of study.

Morton W. Bittinger Scholarship ..... Luciana Pereyra  
..... Jin Chul Joo

### Borland Advanced Graduate Scholarship

Hydrology ..... Dae Ryong Park  
..... Zeyad Tarawneh  
..... Jennifer Morgan  
..... Jorge Gironas  
Hydraulics ..... James Halgren  
..... Max Shih  
..... Tim Straub  
..... David Varyu

### Borland Fellowships

Hydrology ..... Michael Coleman  
..... Dong-Jin Lee  
Hydraulics ..... Kevin Knuuti  
..... Seema Shah

### Borland New Graduate Student Scholarship

Hydrology ..... Kathryn Goodwin, University of Arizona  
..... Sarah Maxwell, Oregon State University  
..... Christina Omdahl, University of Minnesota  
..... Travis Rounsaville  
..... Danielle Tripp, University of Wyoming  
Hydraulics ..... Daniel Baker, Montana State University  
..... Kyle McKay  
..... Curtis Schoenfelder, University of Minnesota  
..... Kelly Rehder, Mesa State College  
..... Paul Sclafani, Texas A&M University

Jack E. Cermak Wind Engineering Scholarship ..... Munehito Endo  
..... Shilling Pei

Arthur T. Corey Scholarship ..... Gabriel Iltis

Hydroplus Scholarship ..... Joseph Mercure

Raju Jairam Scholarship .....

Bob and Joan Meroney Scholarship ..... Stephanie Pinon

H. W. Shen Water Resources Engineering Award  
..... Linda Vandamme

Tipton & Kalmbach/Stantec Graduate Fellowship ..... Un Ji  
..... Brett Jordan  
..... Roberto Arranz

Dr. Jeng Song Wang Memorial Scholarship ..... Forrest Jay  
..... Jennifer Mueller  
..... John Meyer

*Students listed above are current CSU students unless otherwise noted.*

**Zeyad Tarawneh's** doctoral research with Professor José Salas deals with the mathematical characterization of drought severity based on the theory of runs. While emeritus professor Vujica Yevjevich suggested that theory for analyzing continental droughts, Tarawneh is taking a different approach for defining and analyzing drought severity. A complete analysis of multiyear droughts as a point occurrence is made by introducing an analytical solution that is capable of capturing the modeling of extreme droughts. This analytic solution can be used to evaluate the first occurrence probability of the multiyear drought, the recurrence probability, and ultimately extend to the characterization of regional droughts that hit a specific region.



**Stephanie Pinon** is thinking of building a house – one that will establish the basis for her masters thesis in earthquake engineering for structures. After performing some research and developing Performance Based Seismic Design criteria, she will be building a scaled model (1:4 or 1:3) of a 16' x 8' one-story house. Her goal for the model is to have the same global response as a 16' by 8' house if the same earthquake is induced on a shake table. Following that test she plans to build a scale model for a four- to six-story woodframe building and test it.



Masters student **Forrest Jay** is working with Professor Pierre Julien on sediment transport of the Middle Rio Grande in New Mexico.



With funding from the U.S. Bureau of Reclamation, his research focuses on the Automated Modified Einstein Procedure. Forrest has been evaluating the effectiveness of this code with field data and was able to troubleshoot the error messages of the Modified Einstein Procedure.

# Departmental Donors

The Department of Civil Engineering is fortunate to have many generous alumni and friends whose contributions of time, expertise and financial support have made a significant impact on our department. We thank and recognize the 594 donors who contributed funds in 2004 which allowed us to establish new scholarships for graduate and undergraduate students, support research and our student organizations, and provide discretionary funds to allow our department to develop new initiatives. We are deeply grateful for your continued support of our students, our faculty and our programs.

One of our goals for 2005 is to develop new undergraduate and graduate scholarships to offset rising tuition for our students. If you would like to make a contribution to a scholarship, please go to <https://advancing.colostate.edu/ENG/GIVE>, under Gift Information choose "Select a Different Fund," then choose "Other," and type in a description of the Civil Engineering scholarship (i.e., Sunada Scholarship, Alumni Undergraduate Scholarship, Albertson Scholarship, Alumni Graduate Scholarship, etc.) For all who have contributed to the department with financial support, but also by lending your expertise, thank you.

*Sandra Woods*

## 1930s Alumni

Tom W. Beck  
Ethel L. Dyer  
John W. Lawler

## 1940s Alumni

Frank M. Brown  
Jack E. Cermak  
Arthur T. Corey  
Harold M. Ibach  
Wilbur E. Ingalsbe  
W. Wiley McFarland  
Robert J. and  
Patricia G. Mitchell  
Everett V. and  
Billie K. Richardson

## 1950s Alumni

Robert C. Baker  
Ronald K. Blatchley  
Charles C. Brown  
Donald W. Brown  
Wayne J. Capron  
A. R. Chamberlain  
Jerry R. Dexter  
William J. Edwards  
Jack G. Fisher  
Donald J. Gotschall  
Shoi Y. Hwang  
William P. King  
Keith P. Lautenbach  
Robert D. Layton  
H. Edward Lecuyer  
Calvin E. Lewis  
Robert A. Longenbaugh  
Raymond E. McFarlane  
Eugene A. Miller  
Ralph W. Moore  
Louis V. Muto  
William G.  
Niemantsverdriet  
Richard M. Ralston  
James F. Ruff  
Richard A. Sechusener  
Vern W. Segelke  
Daryl B. Simons\*  
John M. Zasadzinski

## 1960s Alumni

Calvin H. Agatsuma  
Stephen D. Anderson  
Donna L. Baldwin  
Leslie E. Brees  
Donald E. Bressler  
Herbert D. Bruner  
Philip H. Burgi  
James E. Caffey  
Charles E. Carroll

Shih-Cheng Chang  
John T. Corrigan  
J. Alan Dale  
Glenn E. DeWitt  
David J. Dingman  
Rodger B. Dowdell  
Neil S. Grigg  
Dale F. Heermann  
John M. Hill  
Linda L. Hinshaw  
Jerry Y. Huang  
John S. Hunter  
Charles W. Huntley  
Thomas L. Huntzinger  
Elmer R. Jansson  
Harvey E. Jobson  
E. Gordon Kruse  
Merl L. Larson  
Archie J. Lind  
Henry Liu  
Douglas L. Lowery  
Frederic R. Mathis  
David C. Moffitt  
Russel D. Mowrer  
Jayant P. Patel  
Robert W. Redding  
T. Anthony Reid  
Larry A. Roesner  
Sigel L. Ross  
Walta J. Ruff  
Richard A. Rutherford  
José D. Salas  
Michael C. Schiefer  
Verne R. Schneider  
Donald C. Signor  
Harold D. and  
Carol J. Simpson  
Frederick C. Stepanich  
Norma D. Thaemert  
Barnabas R. Urbonas  
Richard J. and Coleen S.  
von Bernuth  
Dennis K. and  
Carla J. Wacker  
Rockford D. Wiley  
Chih T. Yang  
Paul J. Zenisek

## 1970s Alumni

Steven R. and  
Phyllis J. Abt  
Robert E. Akins\*  
Ronald L. Arlian  
Richard S. Asahi  
Raymond L. Baldwin  
Bruce H. Barr  
Charles W. Binder  
Herbert G. Blank and  
Lee A. Ross  
Kerry C. Boekenkamp  
Robert L. Cardenas

Ray H. Center  
Anthony T. Chen  
Yung-Hai and  
Ada A. Chen  
Eric S. Clyde  
George K. Cotton  
Leroy G. Crosby  
William B. Danly  
John A. Davey  
Michael R. Denton  
Dennis E. Dorratcague  
Deanna S. Durnford  
Thomas V. Edgar  
James A. Ferentchak  
Marshall Flug  
Donald K. Frevert  
David M. and  
Gail L. Frick  
Richard L. George  
Paul T. Gilbert  
Martha A. Gilles  
Jerry A. Gomez  
Gary L. Griffith  
Kenneth L. Harris  
Robert T. Hart  
Paul A. Hindman  
Bruce J. Hix  
Keith D. Hjelmstad  
Robert D. Jarrett  
Khalid Jawed  
Thomas K. Kelly  
Shahram Khosrowpanah  
Tatsuyuki Kikuta  
N. Krishnamurthi  
Theodore E. and  
Mary W. Kuehster  
Wayne C. Kuse  
Della Laura  
Daniel L. Law  
Dale S. Lindberg  
Lance F. Lindeman  
Jeong S. Liu  
Jim C. Loftis  
Robert D. and  
Kitty K. Looper  
David L. and Roberta C.  
Marfitano  
Ralph E. Martinsen  
Ed Lee Maycumber  
Michael K. McCaw  
J. Gale McPherson  
Brent W. Mefford  
Richard D. Melton  
Leslie G. Mussetter  
Philip M. Myers  
James R. Noblett  
Curtis J. Orvis  
James E. Pankonin  
Bruce A. Pearson  
Bruce J. Pennino  
Richard A. and  
Kathy A. Phillips

Leslie W. Pittman  
Thomas J. Pokrefke  
Lawrence Quinn  
Harold F. and  
Sally G. Reed  
Thomas E. Richardson  
Stephen C. Roberts  
Larry A. Rundquist  
John F. Scott  
Vijay P. Singh  
William B. Smart  
Peter E. Smith  
Robert A. Spofford  
Kenneth A. and  
Rita B. Steele  
Mark R. Steers  
Clinton L. Strachan  
Peter P. Sullivan and Lea  
A. Courtney-Sullivan  
Gregg F. Travis  
Dale H. Vanderholm  
Michael W. Von Gunten  
James P. Wittstock  
Raymond B. Wright  
Frank Yellico

## 1980s Alumni

Alexander H. Abel  
Russell M. Arakaki  
John H. Baionno  
Cheryl A. Bean  
Brian M. Bennett  
Bogusz Bienkiewicz  
Douglas A. Brown  
C. Warren Campbell  
Joyce C. Cauffman  
David E. Chase  
Brian E. Chevalier  
Ann M. Colpitts  
Matt W. Crain  
Paul C. Currier  
James A. Davis  
Eric J. Dawson  
Marie D. Del Toro  
Larry R. Dirks  
Riad H. Elhaj  
Scott C. Ellis  
John A. Falk  
Mat L. Flores  
Darrell G. Fontane  
Lisa A. Ford  
Alexander H. Abel  
Russell M. Arakaki  
John H. Baionno  
Cheryl A. Bean  
Brian M. Bennett  
Bogusz Bienkiewicz  
Douglas A. Brown  
C. Warren Campbell  
Joyce C. Cauffman  
David E. Chase  
Brian E. Chevalier  
Ann M. Colpitts  
Matt W. Crain  
Paul C. Currier  
James A. Davis  
Eric J. Dawson  
Marie D. Del Toro  
Larry R. Dirks  
Riad H. Elhaj  
Scott C. Ellis  
John A. Falk  
Mat L. Flores  
Darrell G. Fontane  
Lisa A. Ford

Edward L. and Diane G.  
Fronapfel  
George J. Garcia  
Keith D. and Joyce E.  
Garlinghouse  
Xiaoni Guo and  
Chuan-Mian Zhang  
Gilbert Gutierrez  
Kathleen L. Hancock  
Jonathan B. and  
Sarah W. Harcum  
David M. Hartley  
Christopher N. Hattton  
Walter E. Heyder  
David P. Hochmuth  
Henry R. Horsey  
Jonathan B. Howard  
Scott L. Jacobson  
Sundaram Jaishankar  
Gregory A. Jamieson  
Stephen L. Jamieson  
Roderick J. Jensen  
Suzanne A. Jiwani  
Daniel J. Johnson  
Joan E. Kimsey  
Jan R. Kimzey  
Suzanne I. King  
Daniel Klooz  
Kenneth W. and  
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Roy W. Koch  
John A. Koschik  
Yong Q. Lan  
Thomas C. Lange  
Jeffrey B. Lennox  
Michael J. Lewellen  
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Longino  
DuWayne A. Marthaller  
Champney A. McNair  
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William W. Mielke  
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Rong  
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Elton G. Rehmer  
Jerry R. Richardson  
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Peter H. Rude  
Albert T. Rutledge  
Gabriel P. and  
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Brian D. Westfall  
Michael D. and  
Martina G. Wilkinson  
Robert B. and  
Erin M. Wilson  
Dick Wolfe  
J. Brian Zick

## 1990s Alumni

Christopher L. Baab  
Kevin K. and  
Laura L. Banks  
David T. Bauer

Every effort has been made to ensure the accuracy of this donor honor roll. We sincerely apologize for inadvertently misspelling or omitting the name(s) of anyone who contributed through private support or pledges during the past calendar year to Civil Engineering. We appreciate the opportunity to correct our records. Please advise our staff of any errors by calling 970-491-7028 or email [SupportEngineering@colostate.edu](mailto:SupportEngineering@colostate.edu).

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 Timothy G. Brink  
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 Kenneth H. Carlson  
 Katherine J. Chase  
 Gwendolyn W. Christensen  
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 Matthew Gray  
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 Barry J. Gutwein  
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 Jian Jin  
 Billy E. Johnson  
 Marcus A. Kochis  
 Richard H. Kuhlthau  
 Henry H. Kunhardt  
 Eric A. Liedtke  
 Juhua Liu  
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 Peter D. and Lara M. Marxhausen  
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 Keith and Colleen D. Meyer  
 Eileen E. Miyoshi  
 David S. Mueller  
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 Gabriel P. Ortega  
 Carol A. Podmore  
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 Craig C. Remley  
 Amy M. Ritter  
 Michael D. Robeson  
 H. Marilee Rowe  
 Suzette L. Schaff

Michael A. Schreiber  
 Stephen H. Scott  
 Steven S. Sherrow  
 Jason A. Swenson  
 Justin A. Tehrani  
 Christopher I. Thornton  
 Ryan S. Trail  
 An Vinh Tran  
 Bradley D. and Michelle M. Wind  
 Sharon L. Wittstock  
 Qin Yang  
 Kyle Y. Yukumoto  
 Daniel P. Zimmerman  
 Micah D. and Cari A. Zogorski

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 Humberto A. Gallegos  
 Derek L. Glosson  
 Kenneth A. Haley  
 Steven J. Kastner  
 Abigail J. Ortega  
 Christopher A. Ott  
 David A. Patterson  
 David V. Pizzi  
 Rani G. Pradoto  
 Jeremy M. Ross and Katie L. Lang  
 Matthew E. Salek  
 Anne M. Shackelford  
 Michael S. Singleton  
 Jason B. Woolard

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 Linda T. Asahi  
 Paul D. Ayers  
 Thelma K. Baker  
 Alvena Blatchley  
 Ivette L. Bledsoe  
 Whitney M. Borland\*  
 Landis L. and Lila M. Boyd  
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 MaryLee Hix  
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 Cyndie Swenson  
 Debra J. Talvitie  
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 Calla M. Tyner  
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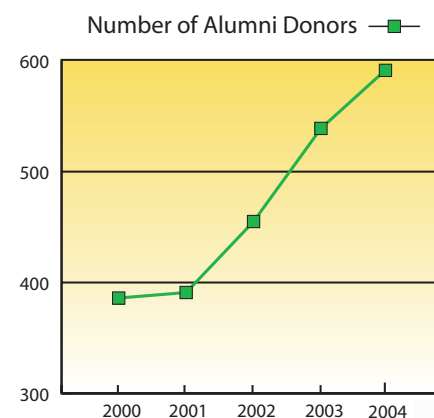
\* Deceased

We've had many successes in the last year. The College of Engineering's alumni participation rate (percentage of alumni who provide financial contributions, large or small, during a given year) is the highest of any College at Colorado State, with Civil Engineering's alumni participation rate leading the way. This data makes a difference in the *U.S. News & World Report* rankings, and is the only indicator of alumni satisfaction used in the calculations. It is also a measure often used by foundations and corporations when they review major gift proposals.

The Department of Civil Engineering swept all awards in the 2004 Engineering faculty and staff fund drive. Civil boasted the highest faculty participation rate, the highest staff participation rate, and the greatest dollar amount contributed by its faculty – an average of \$2,024 per person. In total the Department raised over \$92,000 among its faculty and staff.

Our students are also making a difference. The Civil Engineering students won the 2005 Engineering student fund drive by having the highest student participation rate and raising funds for use by our student organizations.

Thanks to all alumni, friends, faculty, staff, and students who have made donations to the Department and thus make it possible for us to provide a world-class education.



also had the opportunity to volunteer for two years in Mexico City. Before joining Lockheed, he earned his MBA in International Business and Finance. He uses his engineering background in his work as a financial analyst.

**Lela Parsons**, B.S. 1998 Engineering Science, M.S. 1999 Civil Engineering, married Jacob Perkins on March 20, 2004. The couple lives in Denver and works for Black & Veatch.

**An Tran**, B.S. 1998, M.S. 1999, Ph.D. 2002 Civil Engineering, began working for the Colorado Department of Transportation in the Bridge Design Branch in December 2004.

**Enrique Moncada**, Ph.D. 1999 Civil Engineering, completed his Food and Agriculture Organization of the United Nations (FAO) assignment in Iraq about three years ago and is now an international consultant, mainly in Latin America. He wrote the Food and Agriculture Organization's country water strategy for Peru last year and had plans to be involved in a World Bank project in Mexico.

**Joseph Donnelly**, B.S. 2000, M.S. 2005 Civil Engineering, is working as a water resources engineer in the watershed engineering group at URS Corporation in Denver.

**Dan Stiles**, B.S. 2000 Civil Engineering, spent three weeks in China last August, including four days on the Yangtze River and passing through the locks of the Three Gorges



Dam in a ship (*shown above*). The Dam was two-thirds complete with one of the 26 turbines for the hydroelectric plant already in operation. Dan completed his law degree and now works at Isaacson, Rosenbaum, Woods & Levy, P.C., in Denver.

**Ted Webber**, B.S. 2002 Civil Engineering, is a project engineer with Advance Tank and Construction Company in Wellington, Colorado. Ted designs steel storage structures.

**Jason Andrews**, B.S. 2003 Civil Engineering, M.E. 2004 Engineering Science, is working at MFG, Inc. in Fort Collins.

**Carrie Fitzgerald**, B.S. 2003 Civil Engineering and Mathematics,

recently finished coursework for an M.S. in Hydraulics at the University of Iowa.

**Nidal Adeeb Hadadin**, Ph.D. 2003 Civil Engineering, is a faculty member in the College of Engineering at Hashemite University in Jordan.

**Kathryn Muldoon**, M.S. 2003 Ecology, M.S. 2004 Civil Engineering, has joined Ayres Associates in Fort Collins.

**Emily Magnuson Skalsky**, B.S. 2003 Civil Engineering, is working for Merrick & Company in Aurora, Colorado.

**Tyler Curtis**, B.S. 2004 Civil Engineering, is working for Carroll & Lange in Lakewood, Colorado.

**Justin Doles**, B.S. 2004 Civil Engineering, has taken a position with Knight Piesold in Denver.

**Ryan Espoy**, B.S. 2004 Civil Engineering, is working as a staff engineer with Wildermuth Environmental in Lake Forest, California.

**Robert E. Jackson**, B.S. 2004 Environmental Engineering, is an Environmental Engineer/Associate at the Forrester Group in Arvada. Rob also continues to be active with Engineers Without Borders (EWB-USA) and has joined the American Academy of Environmental Engineers.

**Sukhyun Kim**, M.S. 2004 Civil Engineering, is in charge of the Airport Planning Standards Division in the Aviation Safety Authority of the

Ministry of Construction and Transportation in South Korea. He may be moving to the Water Resources Management Division in the summer.

**Jae-Myung Lee**, Ph.D. 2004 Civil Engineering, moved to San Francisco in late August.

**Eric Lombardi**, B.S. 2004 Civil Engineering, is an entry level field engineer with Kiewit Construction Company in Englewood.

**Sungje Park**, Ph.D. 2004 Civil Engineering, is the president of Future Water and Environment Institute in Seoul, South Korea.

**Michael Peel**, B.S. 2004 Biore-source and Agricultural Engineering, is working at Applegate Group, Inc. in Denver in the Water Resources Infrastructure Department.

**Jennifer Regel**, B.S. 2004 Civil Engineering, has taken a structural engineering position at Shear Engineering in Fort Collins.

**Linda Vandamme**, B.S. 2004 Civil Engineering, is currently pursuing her masters degree at Colorado State and is an Engineering Assistant at Natural Resources Consulting Engineers in Fort Collins.

**Richard Vidmar**, B.S. 2004 Civil Engineering, accepted a position with the Aurora Utilities Department, where he is working on water resources cases on the South Platte River.

**Michelle L. Wedell Wood**, B.S. 2004 Civil Engineering has accepted a job with Kimley-Horn and Associates in Chesapeake, Virginia.

**Alumni & Friends: visit us on the web at <http://www.engr.colostate.edu/ce/>**



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Fort Collins, Colorado 80523-1372

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