

CEEM Ends Its 2005 Centennial Celebration

The Department of Civil Engineering and Engineering Mechanics (CEEM) ended its centennial celebration with a gala banquet at the Marriott University Park Hotel in Tucson during Homecoming 2005. To honor the accomplishments of individual students and faculty over the past 100 years, over 320 guests, including UA President Peter Likins, attended the banquet that was held on Friday, November 4, 2005, in conjunction with the Arizona Society of Civil Engineers' annual section meeting.

The banquet included a hosted reception with cocktails, dinner, and dancing to Still Cruisin' and the Shear DeLites. It was emceed



L to R: Kristina Swallow and David Swallow

by Michael Barton ('87) and Steve Pageau ('83).

Awards were given to four distinguished alumni, one outstanding young alumna, and four former professors. Kristina L. Swallow ('94) of Las Vegas, NV, received the Outstanding Young Alumnus award. Centennial Distinguished Alum-

nus awards were given to David G. Areghini ('65) of Phoenix, Oscar T. Lyon, Jr., ('42) of Phoenix, Gene R. Morris ('51) of Sun Lakes, AZ, and Naresh C. Samtani ('91) of Tucson.

David J. Hall and Edward A. Nowatzki, both of Tucson, received Centennial Professor awards. In addition, Centennial Professor awards were given posthumously to Erasmus S. Borgquist (UA tenure: 1926-1961) and John C. Park (UA tenure: 1926-1958). Arthur Neil Borgquist of Calabasas, CA, and his aunt, Beverly Borgquist Sayers, accepted the award on behalf of his grandfather, Erasmus S. Borgquist. Park's award was mailed to his son, John N. Park of Mooresville, NC.



L to R: Mike Barton, David Areghini and Steve Pageau



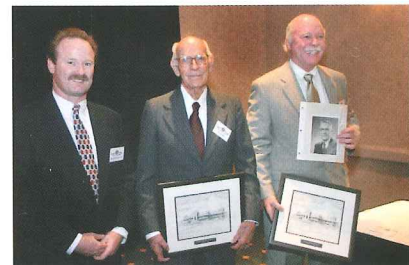
L to R: Mike Barton, Ed Nowatzki, Naresh Samtani and Steve Pageau



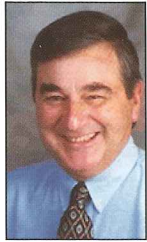
L to R: Mike Barton, Oscar Lyon, Gene Morris and Steve Pageau

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L to R: Mike Barton, Dave Hall and Arthur N. Borgquist



Centennial Celebration *One Hundred Years of Building Our Foundation*

Highlights from this year

By Juan B. Valdés, CEEM Head

The past year has been extremely rewarding for our department. The centennial celebration was a success, we received a six-year accreditation from the Accreditation Board for Engineering and Technology (ABET), and our fundraising efforts were fruitful. The department continues to keep in touch with our graduates via assistance from our Alumni Industry Council, Friends of the Department, and the Centennial Steering Committee. Many alumni attended the gala on November 4, 2005.

I want to personally thank everyone involved in the centennial planning: the Centennial Steering Committee, alumni, CEEM faculty and staff, current students, and our sponsors. I also want to thank the emeritus faculty and alumni who served on the History and Heritage Committee. Headed by Jim Barber, this committee compiled a 123-page commemorative book with a CD and a DVD that present a written and pictorial review of the department's history since 1905. This book stated:

"It is clear from the centennial history presented here that our foundation has been well built. It is now up to the succeeding generations of faculty, students, alumni, staff, and friends and benefactors of the department to build an equally

strong structure based on that foundation and the well-established traditions of the first 100 years."

After an Accreditation Board for Engineering and Technology (ABET) site visit in October 2004, CEEM received final approval in August 12, 2005, for a six-year accreditation, the first in many years. The department was given an NGR (Next General Review) accreditation until 2011.

We received over \$250,000 from contributions made by corporate donors and friends of the department, as well as donations from current and past students and their parents. Centennial fund raising revenues will be used to assist the department in establishing an endowment for the department to be used for student support, professor retention, and faculty upgrades. In 2005, the CEEM Department awarded 33 student scholarships totaling \$39,950 from 23 donors.

T-shirts, polo shirts, and the History & Heritage book are available in the CEEM Department. Please call 520-621-2266 if you are interested in purchasing them.



Centennial gala at Marriott University Park Hotel in Tucson

According to *U.S. News and World Report*, our department was ranked 40th best civil engineering department in the nation in 2005. CEEM currently has 242 undergraduate students, with 48 females and 66 minority students.

Three positions in the areas of transportation, hydraulics and water resources, and geotechnical engineering were vacated in 2005, so we are now actively searching and recruiting candidates to fill these faculty vacancies.

On March 9, 2006, the Arizona Board of Regents unanimously passed a differential tuition proposal for undergraduate programs in the College of Engineering. The CEEM Department will create an undergraduate advisory committee composed of 3-5 students graduating after May 2007 to determine what areas needing improvement

Continued on page 7

CEEM Mission Statement:

"We are committed to work together to provide a quality educational experience for our students, to pursue excellence in research, and to serve the profession, state, and nation."

Student Profile

Amanda Plourde Wins Scholarship for Public Service

UA News Services
November 02, 2005

Amanda Plourde, a master's student in civil engineering, has been awarded one of two UA Cares Graduate Scholarships for 2005. The other scholarship went to Depree Marie Shadow-walker, a Ph.D. student in Language, Reading, and Culture.

The \$6,000 scholarships recognize students for their public service work and are awarded by UA Cares, a program in which UA employees designate a payroll deduction or one-time gift to UA programs through The University of Arizona Foundation and to non-profit agencies or Impact areas through the United Way of Tucson and Southern Arizona.

Plourde served two years in the Peace Corps in Ghana, is president of UA's chapter of Engineers Without Borders, and is a Peace Corps Fellow. Peace Corps Fellows receive funding for school and complete an internship in return.

Last spring semester, Plourde's internship involved helping the Tohono O'odham Nation explore green building options for a senior citizens' complex. She researched straw-bale, rammed-earth, cast-earth, and adobe building technologies. She also explored building orientation and solar power as additional components of "green" building design.



Although Plourde studied industrial and manufacturing engineering as an undergraduate at Penn State University, she plans to pursue a career in environmentally friendly civil engineering technologies. "That's why I chose to come to the Southwest," she said.

"The environment is really conducive to energy efficient building."

Right now, however, she is pursuing coursework in traditional structural engineering. "Later, I'll start to apply everything I've learned to energy efficient designs, after I have a solid background in traditional building techniques," she said.

Plourde is working on her thesis project with civil engineering Professor Mo Ehsani. The project focuses on developing hurricane-resistant roofing materials.

She recently traveled to Ghana with other members of UA's chapter of Engineers Without Borders on a site survey for a drinking water project. The UA chapter competed against several other organizations for the project.

The system provides water from a reservoir for about 10,000 people in 30 villages. The UA team, under supervision from a professional engineer, will work on increasing the dam's capacity, improving the filtration system, boosting pump efficiency, and repairing the piping system. They also will make a health assessment of the project.

"Although we are undergraduate and graduate students, many of us already have a lot of technical expertise that we can bring to a project like this," Plourde said.

Before joining the Peace Corps, Plourde worked on internships at a steel foundry in Portland, OR, and a semiconductor factory in Israel. She also worked for six months at the Disney MGM Studios park in Orlando, Fla., studying efficient pedestrian flow.

"They were thinking they might need a new bathroom and another exit, and so I did a study and concluded that the current facilities were adequate, so that saved them between \$500,000 and \$1 million in facilities they didn't need to build," she said.

Although engineering undergraduates often find high-paying jobs right out of school, Plourde decided that public service work was more important to her. "If you're doing any kind of work, you want it to be meaningful and I think trying to improve other people's lives is really meaningful," she said.

In addition, service work is part of her family's background. Her uncle is a doctor and runs a mission in Haiti, and her mother is a teacher.

"When I was an undergraduate, I felt like there was always a mad rush," Plourde said. "Everything seemed directed at getting a job and making money, and I wanted to step away from that. I didn't want to get pulled into that rush yet. I wanted to do something else."

So she joined the Peace Corps, spent 10 weeks in training and then served two years as a math teacher at a seminary school for boys in Ghana.

But the Peace Corps was not all about sacrifice, she said. "It was fun. You get to meet so many interesting people. It is a step in a different direction that you would normally not have a chance to do in taking a job with a corporation.

"And it is a great time to just think about what you want in life and what's important to you because you are down to the basics of living — things like 'where am I going to get my water?' and 'where am I going to get my food?'"

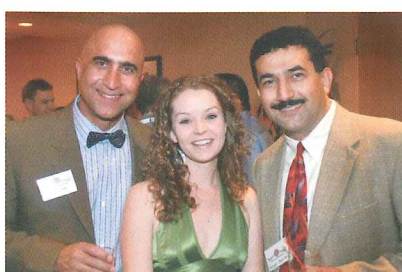
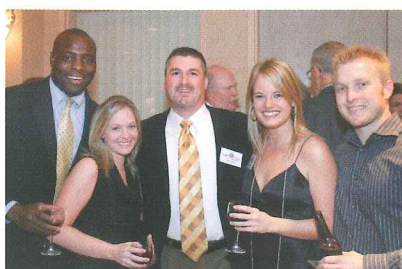
Plourde originally thought she wanted to be a doctor when she started college. "But then I decided I did not want to do that," she explained. "But I still wanted to help in another way, and I can do that in engineering, through sharing knowledge that I have that will be helpful and useful to others."

The ARIZONA Civil View

Spring 2006 Issue

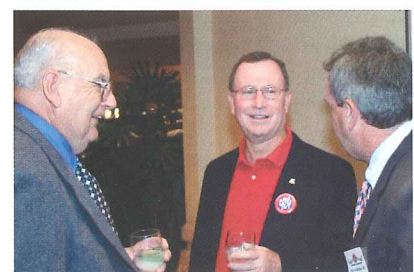
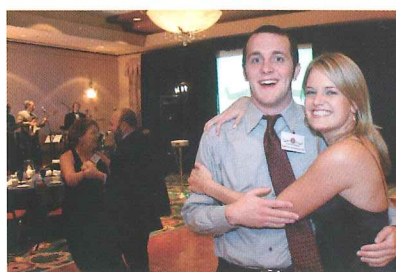
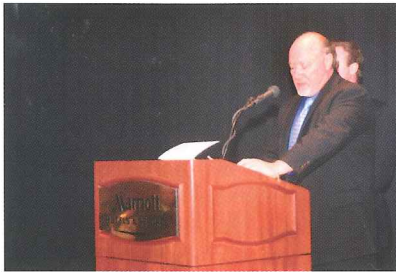
The *Civil View* discusses research, student activities and news of the Civil Engineering and Engineering Mechanics Department of The University of Arizona.

Editor/Writer:
Susan Kinsey Demma



CENTENNIAL

G A L A P H O T O S



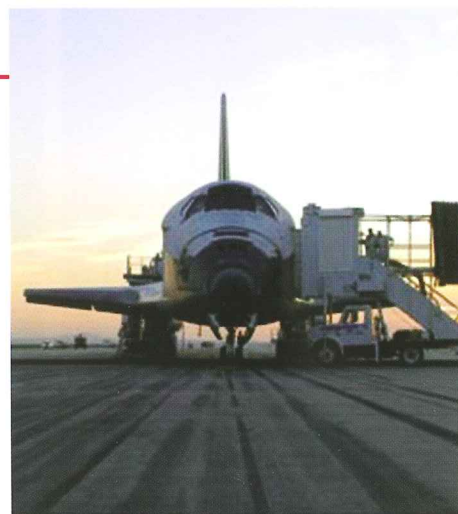
Faculty Profile

Tribikram Kundu

In the summer of 2005, Dr. Tribikram Kundu, a CEEM professor specializing in engineering mechanics, worked at Wright-Patterson Air Force Base in Dayton, Ohio, as part of a team to design a way to test thermal protection tiles on space vehicles for safer re-entry into the earth's atmosphere. This team demonstrated that ultrasonic signals generated by piezo-electric transducers can be used to test how well the tiles are bonded to a shuttle or if they contain hidden cracks. (In February 2003, space shuttle Columbia disintegrated on re-entry—killing all seven crew members—because it was hit by a piece of foam that damaged the thermal-protection tiles on its left wing. Superheated air then surged into the wing and possibly a wheel compartment, causing the shuttle's destruction.)



Kundu and his graduate students are continuing the project on the UA campus by using computer models to further develop the testing technique and to determine the number and position of sensors needed to make it work most efficiently. The project is being conducted under the supervision of the Air Force Materials and Manufacturing Directorate.



The sun rises on the Space Shuttle Discovery as it rests on the runway at Edwards Air Force Base in California after a safe landing at 5:11 a.m. (PDT) on August 9, 2005. UA Professor Tribikram Kundu is working on ways to test thermal-protection tiles on similar space vehicles to make for safer re-entry into the Earth's atmosphere. (NASA photo)

Centennial Gala Photo Captions

Photo captions on Page 4 (L to R)

(column 1)

Catherine Preble, Bob Preble, Beth Weaver

Group shot of faculty members

Group including James Attebery, Bob Ewing, Gene Morris

Ed Nowatzki, Rob Turton

Manny Tytler, Kristin Richards, Tim Huval, Brooke Morton, Scott Audsley

Mo Ehsani, Elizabeth McGehee, Farhad Moghimi

(column 2)

Steve Pageau, Nanette Pageau, Marissa Pargas, Ricardo Pargas

Jeannie Sierka, Ray Sierka, Dave Hall

Karyn Vick, George Frantziskonis, Bikram Kundu

Frank Castro, Karl Kohlhoff

Overview with Kevin Lansey, Ernie Smerdon

Bobbie Young, Benny Young, Jim Barber

(column 3)

Joe Gervasio, Rudy Jiminez

Maria Valdés, Juan Valdés

Photo captions on Page 5 (L to R)

(column 1)

Kimberly Stewart, Christina Perpich

Jim Davey, David Healey, Rudy Jiminez

(column 2)

Linda Turner, Dave Turner

Steve Pageau

David Swallow, Kristina Swallow, Ed Konrad

Sagar Samtani, Grace Samtani, Sindhu Samtani, Naresh Samtani

Steve Jimenez, Michael Beehler, Rudy Jiminez

Derrick Schumacher, Brooke Morton

(column 3)

Mariachis

Still Cruisin' (Band)

Dancing

Ed Konrath, Ralph Richard, Sue Richard, Cindy Konrath

Christina Perpich, Dennis Richards, Sheina Pool

Bob Wortman, Gary Harper, Mick Mathieu

Centennial Steering Committee

Michael Barton '87, Chair

Molly Ankney

David Areghini '65

Robert Barksdale '58

Bob Ewing '51

Eric Froberg '98

Chuck Gajda

Joseph Gervasio '57

David Gildersleeve '80

Kevin Lansey

Juan Lopez '04

Thomas McGovern '74

Edward Nowatzki '65

Nanette Pageau

Steve Pageau '83

Nancy Patania-Brown '85

Claudia Perchinelli '85

Christina Perpich '05

Robert Preble '54

Kimberly Stewart '05

Alice Stilwell

Robert Suarez '75

Lucy Thurston '85

Belle Tom '72

David Turner '58

Robert Turton '87

Juan Valdés

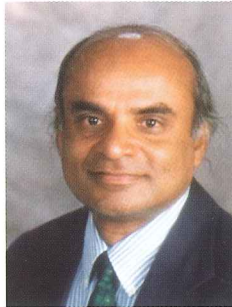
Beth Weaver

Dave Zaleski '84

Faculty Awards

Haldar Named as daVinci Circle Fellow

Dr. Achintya Haldar, a CEEM professor specializing in structures, received one of three da Vinci Circle Fellowships awarded by the College of Engineering. (The other fellowships were awarded to Anthony Muscat of Chemical and Environmental Engineering and Charles Higgins of Electrical and Computer Engineering.) These fellowships, which were presented for the first time starting in 2005, are designed to recognize those faculty members having distinguished and sustained records in teaching, research, and service to their departments, the College of Engineering, the UA, and their professions. These prestigious fellowships were established through the da Vinci Circle, a new College of Engineering society named for Leonardo da Vinci. Haldar, who is known for his innovative teaching style using video, physical models and computer-based learning, has been recognized at various national and international levels for his services to the civil engineering profession.



Hickman Named as Delbert Lewis Professor

Dr. Mark Hickman, an associate professor specializing in transportation, was named the first Delbert Lewis Professor. The \$500,000 Delbert Lewis '51 Endowed Professorship provides support for an outstanding faculty member in CEEM who is in the early stages of his/her career. It provides funds for supplemental salary, graduate student assistance, professional travel, and research and academic activities.



Mark Hickman's research focuses on improving transportation systems using computational analysis and modeling tools. Part of the research involves videotaping traffic from a helicopter to measure speeds, flows, and queuing behavior at intersections. This image, from I-10 and Congress Street in Tucson, was taken during one of the helicopter flights when Hickman was measuring traffic speeds on I-10. North is to the right.

Current Centennial Sponsors

Joseph Gervasio '57
(Gervasio and Assoc.)

David Turner '58

Tom McGovern '74
(MMLA Psomas Inc.)

Salt River Project
(David Areghini '65)

Daniel Neff '73
(M3 Engr. & Tech.)

Mark '79 and John Woodson '03
(Woodson Engineering)

Sundt Construction Co.

HDR Engineering, Inc.
(Rob Turton '87)

Frank Castro '78
(Castro Engineering)

Kiewit Western Co.
(Dennis Grenier '76)

Sargent & Lundy
(Alan "Bud" Wendorf)

The Industrial Company
(Dick Hall)

Gala Sponsors

Michael Baker Jr., Inc.
(Garry Rice '69 & Dave Millikan '76)

Brown and Caldwell
(Mike Fleury)

Pima County
(John Bernal '69 & Chuck
Huckelberry '72)

Tucson Electric Power

Highlights from this year

Continued from page 2

will receive this funding. I want to thank our students who supported this differential tuition proposal. A recent survey completed by current students indicated that our top funding priorities in our department are: 1) more faculty and 2) improvements in teaching labs.

Connections with our alumni and the profession are strong and have been reinforced with the 2005 centennial celebration. After completing our program of studies, CEEM graduates hopefully are able to successfully function in the civil engineering field and engage in life-long learning experiences.

SCE Student Branch Competes in Annual Conference

Approximately 40 members of the AUA student chapter of the American Society of Civil Engineers attended the Pacific Southwest Regional Conference (PSWRC) on March 29-April 2, 2006, at the University of California, Los Angeles (UCLA). They competed with students from 18 universities in a series of canoe races, a bridge-building event, and a seismic design contest where scale models built by the engineering undergrads were subjected to simulated earthquakes.

Although the final overall scores were not available by press time, Christina Perpich, SCE president, won first place in the technical paper competition and



SCE students who competed in conference activities.

Ted Swithwick won second place for the concrete frisbee. The coed canoe sprint team won fourth place and the girls slalom canoe team won fifth place.



SCE officers for 2005-06.

Write to Us!

If you have an interesting event that you want to share with former classmates and friends, please send a letter with an update on your activities to:

Attn: Editor
"Arizona Civil View"
The University of Arizona
P.O. Box 210072
Tucson, AZ 85721-0072

Or e-mail: ceem@engr.arizona.edu
Please include your name, degree (BS, MS, PhD), year of graduation, address, home and/or business phone number, e-mail, and your current employment information. Thanks!

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Arizona Civil View Newsletter

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