

COLLEGE OF ENGINEERING FACULTY/STAFF E-NEWSLETTER



SAN DIEGO STATE
UNIVERSITY
College of Engineering

DECEMBER 2008

In The Spotlight

- **Dr. Tummala Honored:**
During his recent trip to Australia for the 9th Global Congress on Manufacturing & Management (GCMM2008), Dr. Lal Tummala was presented an award for *Outstanding Research Contribution to Manufacturing Engineering Education*.
- **The Fall Faculty Meeting is scheduled for Friday, Dec. 12th from 8-10 a.m. in room 423B**
- **The Holiday Lunch for faculty and staff will take place Monday, Dec. 15th at Noon in the back room of the Cuicacalli Dining Hall. Please RSVP to Carly**

Tracking the Dean December Activities

12/1	Dean Hayhurst will meet with Mike Niggli, the COO of San Diego Gas & Electric and Engineering's 2009 Monty Award Recipient
12/1	Dean Hayhurst will meet with the Dean and the Director of Engineering programs at UCSD
12/2	Dean Hayhurst and Assistant Dean Westermo will meet with representatives from QUALCOMM Incorporated
12/3	Dean Hayhurst will meet with SDSU and Carpi and Clay representatives regarding SDSU priority requests for the FY-10 federal budget
12/4	Dean Hayhurst will have lunch with Doug Barnhart, retired CEO of Barnhart, Inc
12/4	Dean Hayhurst will participate in the EGCA Foundation Board Meeting
12/4	Dean Hayhurst will attend a reception for council member elect

Shake Table Makes Media Splash



October 28th, 2008 marked the unveiling of the new SDSU shaking table, which was demonstrated with TV, radio and print media groups in attendance. The table, powered by a fast-moving hydraulic actuator and controlled by computer, can mimic any displacement time-history profile, ranging from seismic ground motions to floor motions at any level of a building structure. A computer model of a steel-frame building was loaded with a Magnitude 8 earthquake to determine the displacement time-history response of an upper floor of the building. The shaking table was driven through this floor response.

Housed within the shaking table is a 5 ft-by-5 ft concrete slab that is 10 inches deep, and represents a portion of the building floor of interest. An autoclave weighing over 2000 pounds was anchored to the concrete floor, and therefore the dynamic test was of the mechanical component and its connection to the concrete.

Past earthquakes have shown that electrical and mechanical component failures often result in more cost than from any damage to the buildings themselves. Furthermore, for critical facilities such as hospitals it is often important that these attached components continue working properly after an earthquake.

The shaking table is now being used to study the response of mechanical and electrical components that are attached to different floors of buildings subjected to major earthquake loading, as part of a multi-year research project. In the current research the structural tests are considered to be full-scale, as the full concrete slab thickness is used, and because the building components are full size. Complete building structures can be put on the shaking table if a reduced scale is used.

The table was built by Dr. Rob Dowell along with both graduate and undergraduate students as well as Greg Morris and other technicians. Dr. Dowell explains the significance of this project, stating that "This new shaking table represents a major advancement for structural engineering at San Diego State University. It is something that we can all be proud of, especially the students who helped me build it with their own hands - welding, drilling holes, cutting and bolting it together. The shaking table makes a statement that we are serious about earthquake-related structural engineering at SDSU. I expect that it will be used for cutting-edge research for at least the next 30 years."



Ad Hoc Committee Formed

Dean Hayhurst has recently created an ad hoc committee, referred to the "Dean's Budget Advisory Committee," which will be similar in nature to the President's advisory group. This committee is composed of department chairs, faculty, staff and representatives from the Dean's office. The first charge to the committee is to review the current practices in developing a budget for the college and then to use this background to help with the planning process for handling budget reductions college-wide. It is hoped that this committee will not only serve in challenging budget times, but that it will be made a standing committee to help with budget decisions when economic times strengthen. A list of committee members as selected by the Dean and department

Solar Research Growing

The recent grant award received by Dr. Fletcher Miller from the Google Inc. Foundation to fund small particle solar receiver research is a step toward making SDSU a notable institution in the area of concentrating solar power. The new Google program that funded the grant is called RE<C, which stands for Renewable Energy less than Coal.

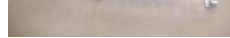
This achievement is complimented by the recent equipment donation Dr. Miller secured from Silicon Solar, a Bainbridge; New York based company, who gave the College two Solar Thermal Evacuated Tube Collectors



council-member-elect
Marti Emerald

chairs was sent out on November 24th.

with a total value of \$800.



12/9	Dean Hayhurst will participate in the STEP Partnership of San Diego (SPSD) Advisory Committee Meeting
12/12	Den Hayhurst will attend the CONNECT Most Innovative Products Awards
12/12	Dean Hayhurst will meet with the President and VP of Engineering of Cymer Corporation

Joe Kiani Lecture a Hit With Students, Faculty

Joe Kiani's November 13th Lecture at the SDSU BioScience Center was a hit with both students and faculty alike. A successful entrepreneur, Joe applied his degrees in Electrical Engineering to create the medical device company Masimo Corp. , which he took public in 2007. Joe was able to connect with students during his lecture to both inspire and motivate them, as many prepare to graduate this December.



Joined by his wife Sarah, Joe used his lecture to summarize his journey from student to business success. Many students were impressed with Joe's humility and genuine personality as he discussed the financial and ethical struggles that he endured as he rose to a company executive at the ripe age of 22 before branching out to create his own company.



Despite his successes, Joe takes pride in holding himself to the highest standards, both in his business and in his personal life. Joe credits professor fred harris with helping him achieve all of his educational and career goals, both during his time at SDSU and in industry. Many students were excited to have the chance to talk with Joe after the lecture as well, as they mingled over pizza. Students were pleased to see someone who started at the same place as them who has taken their education to a new level and applied their knowledge to make the world a better place.

Research Corner—Projects Submitted & Awards Granted in October

Name	Dept.	Title of Project	FA	Status
Dr. Keshoolai Bakhru	ECE	Position Location Using Desk Algorithm	DOD/ARL	Awarded
Dr. Asfaw Beyene	ME	Industrial Assessment Centers	US DOE	Awarded
Dr. Subrata Bhattacharjee	ME	A Multi-media Module for a Thermo Textbook	PH	Awarded
Dr. Temesgen Garoma	CCEE	Disinfection of Secondary Effluent Using Surfactants Immobilized on the Surfaces of Minerals	MWD of SCA	Awarded
Dr. Rand German	ME	Development of High Performance Nano-Sized Tungsten Heavy Alloy Composites by Powder Metallurgy	AEE	Submitted
Dr. David T. Hayhurst	DNS	Math, Engineering, Science Achievement (MESA) Math Engineering Program (MEP) Imperial Valley Campus	UCOP	Submitted
Dr. Tom Impelluso	ME	A Mechanics-based Virtual Synthetic Muscle and its Assessment	DHHS	Submitted
Dr. Guss Jacobs	AE/EM	Petascale Analysis/Simulations Tools for Liquid-Fuel Combustors	NSF	Submitted
Dr. Sunil Kumar	ECE	Analysis of 3D-Shape of Mutant HIV-1 Protease Binding Pocket-Srinivas Alla Fellowship	UCOP	Submitted
Dr. Karen May-Newman	ME	NSF/NAE Gender Equity Grant	NAE	Awarded
Dr. Fletcher Miller	ME	Small Particle Solar Receiver Research	GIF	Awarded

DOD/ARL = Department of Defense / Army Research Lab

US DOE = US Department of Energy

PH = Prentice Hall

MWD of SCA = Metro Water Dist. Of Southern CA

AEE = American Embassy Egypt

UCOP = University of California Office of the President

DHHS = Department of Health and Human Services

NAE = National Academy of Engineering

GIF = Google Inc. Foundation

Story ideas, award notifications, suggestions and comments can be sent to Carly House at chouse@mail.sdsu.edu