

# COLLEGE OF ENGINEERING

## FACULTY/STAFF E-NEWSLETTER



SAN DIEGO STATE  
UNIVERSITY  
College of Engineering

NOVEMBER 2008

### In The Spotlight

The Dean's Advisory Board met Tuesday 10/21 for their semi-annual meeting in the Mezzanine Suite in Cox Arena. Executives from 16 of the region's largest and best-known companies attended. Topics included the University's Comprehensive Campaign, the importance of the College's connections with industry, Project Lead the Way's 5 Year Business Plan, research vision for the College and a research report on digital signal processing by Dr. fred harris.

Fundraising Results: In the month of October over \$120,000 was given to the College of Engineering & its various programs. The J.R. Filanc Construction Engineering & Management's Program's campaign to fund an internship and career development center led the way, raising \$114,000 of that total.

### AE/EM Faculty member helps solve 100-year-old Engineering Problem

An October 7th article published by Science Centric highlights an MIT research study co-authored by AE/EM faculty member Dr. Gustaaf Jacobs.

The article refers to a theory that is credited with solving a 100-year-old engineering problem related to the aerodynamic separation that occurs when an accelerating vehicle slows to maneuver around corners.

According to the author, Elizabeth Thompson, this now-completed theory could "lead to ways of controlling the effect {of aerodynamic separation} with potential

### fred harris receives PhD

After over 40 years of teaching, researching, publishing and inventing, fred harris has now added a PhD to his list of accomplishments. fred pursued his doctoral course work from 1968-1973, but his interests and successes as a professor and researcher proved too distracting -- fred finished all coursework, but did not defend his dissertation. Knowing that it's never too late, Professor harris established residency at the University of Aalborg in Denmark, wrote a dissertation based on his recent research activity, defended it on June 19th, 2008 and officially earned his Ph.D.

One of the most influential faculty members on campus, fred impacts the lives of students and colleagues each day while continuing to educate, learn, joke and travel the world. He shared with us that the degree was unfinished business and is glad that he finished the task.

Dean Hayhurst offered his congratulations to fred, stating that "this achievement is and outstanding complement to fred's years of service at SDSU. fred has been a Monty award recipient (2003) and has authored an internationally recognized text on DSP entitled "Multirate Signal Processing for Communication Systems".

Congratulations Dr. harris!



### Alumni Mixer Held

SDSU Engineering alums from all corners of San Diego gathered on October 14th at Gordon Biersch Brewery in Mission Valley for a University Relations and Development supported event aimed at engaging alumni and getting them excited about all of the great things happening in the College.

The lively group of more than 60 guests, largely consisting of younger alumni, were

### Joe Kiani Distinguished Lecture

The Dean's office, working with University Relations and Development, has initiated a series of bi-annual Distinguished Lectureships.

The first will be held on November 13th when SDSU Engineering alum and Monty Award winner Joe Kiani will return to campus to give a lecture entitled "Bringing New Technology to Market", which will highlight how Joe used his degree in Electrical Engineering to create a successful medical device

### Sintering 2008

Eugene Olevsky will serve as this year's co-chair for the annual Sintering Conference, which will be held from November 16-20th at the Hilton Torrey Pines in La Jolla.

Dr. Olevsky will be joined at this conference by other SDSU Engineering Faculty, including Associate Dean Rand German, who, along with Gary Messing, began this conference series in 1995 at Penn State.

impacts on fuel efficiency and more". To read the full article please go to

<http://advancement.sdsu.edu/marcomm/news/clips/>

a successful medical device company, Masimo Corp.

The lecture will be held at the SDSU BioScience Center in the Allan & Debbie Gold Auditorium at 11:00 am and is open to all Engineering Students, Faculty & Staff. **Please encourage your students to attend!!**

Overall, this event was a great success and we look forward to increasing our numbers for these events in the future.

The sunshine of Southern California is sure to attract engineers from all over the globe to this exciting event sponsored by the American Ceramic Society. For more information please go to [www.ceramics.org/Sintering2008](http://www.ceramics.org/Sintering2008)

## Tracking the Dean

11/5 - 11/7	Dean Hayhurst will be attending the CASE (Council for Advancement and Support of Education) Development for Dean's Conference in Phoenix, AZ
11/11	Dean Hayhurst will attend the CONNECT High Tech Venture Roundtable Screening Committee Networking Reception
11/12	Dean Hayhurst will attend the L. Robert Payne Distinguished Entrepreneur Lecture with Ron Fowler, CEO and Chairman of Liquid Investments, Inc.
11/13	Dean Hayhurst and the College will host the first College of Engineering Distinguished Lecture by Joe Kiani.
11/19	Dean Hayhurst will attend the CONNECT Board of Directors meeting
11/20	Dean Hayhurst will participate in an SDSU visit to UCSD to investigate sustainability infrastructure programs
11/25	Dean Hayhurst will lead the Comprehensive Campaign Sustainability Initiative meeting and committee chair

## Arizona Alumni Event Planned

Dean Hayhurst's upcoming trip to Phoenix, Arizona for the 'CASE Development for Dean's Conference' provides the perfect opportunity to engage the large demographic of SDSU Engineering alumni who reside in the Phoenix area.

A casual reception will be held at Garcia's Mexican restaurant, giving the Phoenix area alumni a chance to meet and mingle with fellow alums and Dean Hayhurst as they learn about all of the great things that you are making happen in the College.

## Prestigious Award Granted

"Air Force Link", the official website of the U.S. Air Force, announced on October 21st the names of the grant recipients from their Young Investigator Research Program (YIP). Of the 210 proposals received, only 39 investigators will get a slice of the 12.1 million dollar pie.

One of these select few is the College of Engineering's own Dr. Gustaaf Jacobs, for whom this award is career determining. Dr. Jacobs was very pleased to secure this funding in such a competitive environment.

His funding will allow him to do "basic research on advanced modeling of high-speed particle gas flows found in high-speed combustors and dust explosions". He also adds that "the interaction between fuel droplets shocks and flow turbulence in high-speed combustors, between water mist and shock waves in mitigation of blasts, and between debris and the shock induced turbulent flow in explosions are critical issues to the mission of the U.S Air Force".

His project will greatly benefit the Air Force, as he explains "the optimization of fuel droplet and fuel-air mixing improves performance of scramjets and pulse detonation engines, the propulsion systems of choice in Air Force air vehicles. Blast and mitigation thereof, has a significant impact on mission accomplishment and safety of Air Force personnel".

Associate Dean Rand German commented on this great accomplishment stating that "over the last decade federal funding agencies have selected top young faculty in an intense competition of the best and the brightest. In its early years of existence, the highly competitive program honored awardees with a trip to the White House".

Dr. German continues to say that "as only the second SDSU Engineering faculty member to receive this award, Dr. Jacobs is a great representation of the high quality young researchers and faculty that we are attracting to the college who represent the future of the programs".

**Congratulations Guus!**

## Research Corner—Projects Submitted & Awards Granted in October

Name	Dept.	Title of Project	FA	Status
Dr. James Banks (Co-pis Ming-Hsiang Tsou & John Kim)	CCEE	Integrating Transportation Simulation and Wildfire Spread Models to Improve Emergency Evacuation Decision Making	NSF	Submitted
Dr. Luciano Demasi	AE/EM	An Infinite Number of Composite Plate Theories Based Upon an Invariant Model: The Generalized Unified Formulation	NSF	Submitted
Dr. Robert Dowell	CCEE	Simulation and Testing to Support Seismic Design of Anchorage	UCSD	Awarded
Dr. David T. Hayhurst (Co-pi Theresa Garcia)	MEP/DNS	STEP Partnership of San Diego (SPSD)	NSF	Submitted
Dr. Gustaaf Jacobs	AE/EM	Computational Study of the Interaction Between Particle Clouds and Shocks with a Novel High-Order Particle-Source-in-Cell Algorithm	CSGF	Awarded
Dr. Sunil Kumar	ECE	Design of Intelligent Cross-layer Routing Protocols for Airborne Wireless Networks	DOD/AERI	Awarded

Dr. Sridhar Seshagiri	ECE	Under Dynamic Spectrum Access Paradigm Applications of the Nonlinear Output Regulation Problem	NSF/DCMS	Submitted
Dr. Satchi Venkataraman (Co-pi Dr. Gustaaf Jacobs)	AE/EM	Collaborative Proposal with Vanderbilt University to Air Force Research Laboratory for establishing a Collaborative Center in Multidisciplinary Sciences.	VU	Submitted
<p>CSGF= California Space Grant Foundation  AFRL= Air Force Research Laboratory  DCMS=Division of Civil &amp; Mechanical Systems  VU= Vanderbilt University</p>				

Story ideas, award notifications, suggestions and comments can be sent to Carly House at [chouse@mail.sdsu.edu](mailto:chouse@mail.sdsu.edu)

## Inside Story Headline

This story can fit 150-200 words.

One benefit of using your newsletter as a promotional tool is that you can reuse content from other marketing materials, such as press releases, market studies, and reports.

While your main goal of distributing a newsletter might be to sell your product or service, the key to a successful newsletter is making it useful to your readers.

A great way to add useful content to your newsletter is to develop and write your own articles, or include a calendar of upcoming events or a

product.

You can also research articles or find "filler" articles by accessing the World Wide Web. You can write about a variety of topics but try to keep your articles short.

Much of the content you put in your newsletter can also be used for your Web site. Microsoft Publisher offers a simple way to convert your newsletter to a Web publication. So, when you're finished writing your newsletter, convert it to a Web site and post it.



Caption describing picture or graphic.

calendar of upcoming events or a special offer that promotes a new

## Inside Story Headline

This story can fit 100-150 words.

The subject matter that appears in newsletters is virtually endless. You can include stories that focus on current technologies or innovations in your field.

You may also want to note business or economic trends, or make predictions for your customers or clients.

If the newsletter is distributed internally, you might comment upon new procedures or improvements to the

business. Sales figures or earnings will show how your business is growing.

Some newsletters include a column that is updated every issue, for instance, an advice column, a book review, a letter from the president, or an editorial. You can also profile new employees or top customers or vendors.

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This story can fit 75-125 words.

Selecting pictures or graphics is an important part of adding content to your newsletter.

Think about your article and ask yourself if the picture supports or enhances the message you're trying to convey. Avoid selecting images that appear to be out of context.

Microsoft Publisher includes thousands of clip art images from which you can choose and import into your newsletter. There are also several

tools you can use to draw shapes and symbols.

Once you have chosen an image, place it close to the article. Be sure to place the caption of the image near the image.

*"To catch the reader's attention, place an interesting sentence or quote from the story here."*



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# Organization

NOVEMBER 2008

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Your business tag line here.

This would be a good place to insert a short paragraph about your organization. It might include the purpose of the organization, its mission, founding date, and a brief history. You could also include a brief list of the types of products, services, or programs your organization offers, the geographic area covered (for example, western U.S. or European markets), and a profile of the types of customers or members served.

It would also be useful to include a contact name for readers who want more information about the organization.

We're on the Web!  
example.microsoft.com



**Caption describing picture or graphic.**

## Back Page Story Headline

This story can fit 175-225 words.

If your newsletter is folded and mailed, this story will appear on the back. So, it's a good idea to make it easy to read at a glance.

A question and answer session is a good way to quickly capture the attention of readers. You can either compile questions that you've received since the last edition or you can summarize some generic questions that are frequently asked about your organization.

A listing of names and titles of managers in your organization is a good way to give your newsletter a personal touch. If your organization is small, you may want to list the names of all employees.

If you have any prices of standard

products or services, you can include a listing of those here. You may want to refer your readers to any other forms of communication that you've created for your organization.

You can also use this space to remind readers to mark their calendars for a regular event, such as a breakfast meeting for vendors every third Tuesday of the month, or a biannual charity auction.

If space is available, this is a good place to insert a clip art image or some other graphic.

