



Engineering News

January-February 2011

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Aerospace Students Make News

Oscar DeLeon Selected as SDSU's Aztec Warrior
 Aerospace engineering Senior Oscar DeLeon beat out 19 other hopefuls to become one of two new Aztec Warriors
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Katelyn Weddle Named to MWC Team
 Aerospace engineering sophomore Katelyn Weddle is one of 11 swimmers named to the All-Mountain West Team.
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Important Dates

4/5 - All Faculty Meeting
5/11 - Faculty Business Meeting
5/20 - Commencement

Tracking the Dean

March 13-15	Dean Hayhurst will travel to Washington DC to make a presentation to the Directors of NSF on Troops to Engineers
March 18	Hayhurst will attend the ARCS Scientist of the Year Dinner
March 23	Dean Hayhurst will participate in the CONNECT Board of Directors Meeting
March 31	Dean Hayhurst will attend CONNECT's Hall of Fame Luncheon honoring systems technology mastermind Gene Ray.
April 9	Dean Hayhurst will attend the Farewell Gala for President Weber
April 10-13	Dean Hayhurst will travel to the Engineering Dean's Institute in Palm Springs
April 14	Dean Hayhurst will participate in the UCSD Research Expo
April 16	Dean Hayhurst will attend the Farewell Soire for Pres. and Ms. Weber hosted by Associated Students
April 26	Dean Hayhurst will attend the Red & Black Society's annual donor recognition event
April 28	Dean Hayhurst will participate in the The Joan & Art Barron Veterans Center Dedication

ME Faculty Expertise Highlighted at TMS Conference

Minerals, Metals & Materials Society



TMS 2011 Conference logo SDSU was well-represented at the 140th annual meeting and exhibition of the Minerals, Metals & Materials Society (TMS) at the San Diego Convention Center, February 27-March 3, 2011. The conference, one of the top materials science conferences in the world, provided the opportunity for materials science and engineering professionals from over 68 countries to network, present research, share industrial applications and introduce innovation.

Leading SDSU's participation in the conference for SDSU here Drs. Rand German, Khaled Morsi and Eugene Olevsky, along with several graduate students engaged in SDSU research.

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College Welcomes Patricia Reily Veterans' Internship Coordinator



E-209 has been transformed to a welcoming office with magazines, cookies and a welcome sign on the door. Dr. Patricia Reily, the room's new occupant, is the College of Engineering's new Veterans' Internship Coordinator, a position funded through the National Science Foundation (NSF) SERVICE grant. The SERVICE Program's goal is to place engineering veteran students into internships with industry partners. Dr. Reily's focus will be to develop solid relationships with companies who can benefit from the employment of veterans. She will then connect with engineering students who are military veterans to place them in internships that are right for them. "It's a win-win," Dr. Reily said of the benefits to both students and industry. "I feel like a Hollywood talent agent!"

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SDSU's Baja SAE Team

Completing a senior design project in Mechanical Engineering is not easy. This year, a group of five ME seniors has chosen to take on a particularly difficult task-to design and build a single-seat off-road vehicle to compete in the 2010-2011 Baja SAE Competition. To fare well in the competition, the vehicle must be built to survive the severe punishment of rough terrain-that includes mud, large rocks and water.



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NBC News Interviews Drs. fred harris and Madhu Gupta

Have you ever wondered why airline passengers are required to turn off cell phones during flight? Electrical and Computer Engineering's Dr. fred harris and Dr. Madhu Gupta appeared on the NBC nightly news Monday, Feb. 21, 2011 to discuss just that. According to them, expert consensus is that everyone on a flight could leave their cell phone on with no adverse effects. Below 10,000 ft, the airline requirement that phones be turned off is a courtesy to cell-phone service providers on the ground who don't want to deal with the rapid handoff of phones between cell boundaries. Above 10,000 feet is a precautionary measure only.

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Engineers Without Borders - Project Honduras

In 2007, the SDSU Chapter for the nationwide humanitarian organization Engineers Without Borders was established on campus with a mission to support community-driven development projects worldwide. Since its establishment, the SDSU student chapter has been doing just that. Having started by contributing to water treatment projects in



Tijuana, EWB-SDSU worked last semester to create and spin-off a sister organization called HandS (Humanitarians and Sustainability) which continues to lead a clean water project in the Dominican Republic.

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Hands - Project Dominican Republic



Humanitarians and Sustainability, or HandS, is a nonprofit SDSU student organization partnering with Engineers Without Borders, the SDSU Sports MBA program and the Padre Foundation to implement community development projects in the Dominican

Republic.

While many major league baseball franchises operate talent development facilities in the Dominican Republic, large disparities exist between their facilities and the surrounding communities.

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Alumni in the Spotlight

Peggy Johnson



It was while Peggy Johnson was delivering mail on campus and talking to administrative staff in Electrical Engineering that she decided to change her major to engineering, veering off the path to a degree in business. Considering how successful she is today, earning a bachelor's degree in electrical engineering from SDSU may have been one of the best decisions she's ever made.

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Dr. Yusuf Ozturk Recognized in Turkish Press

Electronic monitoring of offenders may not be the first thing most people associate with electronic and computer engineering, but it was a hot topic of discussion in Turkish newspapers and television reports this past winter break, thanks to the College's Dr. Yusuf Ozturk.

Dr. Ozturk was invited by the Turkish Ministry of Justice to travel to Turkey in January and deliver a presentation to Turkish judges and prosecutors on the electronic monitoring of offenders in the United States. The group was particularly interested in the potential use of this technology to keep the population in Turkish prisons under control.



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Dr. fred harris Lectures

Dr. fred harris gave several lectures recently that highlight his research and the expertise of College of Engineering.

Invited to speak as part of the UCSD graduate studies Invited Speaker Program on Feb. 4th, he discussed synchronization techniques for digital receivers and new ways of solving old problems related to communication systems. "Originally, if you wanted to receive 400 channels, you needed 400 receivers. Now it all fits into one," said Dr. harris. He recently worked on a project that compacted an entire room of radio receivers into one 4" x 9" x 12" box.

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Research Corner

Research Corner - Projects Submitted & Awards Granted in January				
Name	Department	Title of Project	FA	Status
Dr. Sudek Kumar	ECE	Multimedia-based Integration of Cross-layer Techniques	DOO-AFRL	Awarded
Dr. David Hayward, Cop/RII Theresa Garcia	DNS	MESA-MEP	UCOP	Awarded
Dr. Asha Beyerle	ME	Industrial Assessment Centers	US Department of Energy	Awarded
Dr. Karen May-Hewman	ME	Design of a Flow-Compatible Prosthetic for Aortic Valve Closure in VAD Patients	American Heart Association Western States Affiliate	Submitted
Dr. Satish Sharma	ECE	Metamaterials SBR Topic N11-113	Space Micro Inc	Submitted
Dr. Lu' Tunmala, Cop/RII Sudhar Senapati	ECE	ARRA: A Nationwide Consortium of Universities to Revitalize Electric Power Engineering Education by State-of-the-Art Laboratories	University of Minnesota	Awarded
Dr. David Hayward	DNS	Math. Engineering, Science Achievement (MESA)	UCOP	Awarded
Dr. Khalid Morsi, Cop/RII Dr. Samuel Kasaghe, Sergei Gertman, Alex Mizer	ME	Development of a Current-activated Testbed for Fundamental Multi-scale Sintering Research and Manufacturing	NSF	Submitted
Dr. Kenneth Walsh	COEE	An Integrated Framework for Creation and Assessment of Sustainable Construction Processes	Arizona State University	Submitted
Dr. Svetlana Kostic, Cop/RII Richard Gombosi	COEE	Sediment & Pyroclastic Transport Demonstration Project for Sorensen Creek & Palisades Watersheds	Environmental Protection Agency	Submitted
Research Corner - Projects Submitted & Awards Granted in February				
Dr. Art Dogan	ECE	Millimeter-Wave Dielectric Constant and Loss Tangent Characterization of LTCC Materials using OF-GIC	Ferro	Submitted
Dr. Temesgen Garuma	COEE	Investigation of the Potential of Algal Methane Gas as a Carbon-Neutral Energy Source	SCF	Submitted
Dr. Temesgen Garuma	COEE	Formation and Precursors of Heterocyclic Aromatics During Oxidation of Drinking Water	SCF	Submitted
Dr. Samuel Kasaghe	ME	Testing of Electrical Transduction at Electro/DNA Interface of DNA-Molecular Wires in Carbon-Based Bio-Nanoelectronics Platforms	NSF	Submitted
Gustaf Jacobs	AESM	Control of Lagrangian Mixing in Fuel Injector Flows into Supersonic Cross-Stream	California Space Grant Consortium	Awarded
Eugene Chevaly	ME	Spark Plasma Sintering Technologies for Reductive Monocarbides	General Atomics Corporation	Submitted
Gustaf Jacobs	AESM	STEM Outreach Focused on Research in Control of Lagrangian Mixing Fuel Injector Flows into Supersonic Cross-Stream	California Space Grant Consortium	Awarded
Thak-Rhee	COEE	Study of Office Activities in Architecture, Engineering, and Construction (AEC) Companies and Projects	NSF	Submitted
Eugene Chevaly	ME	Materials in Extreme Dynamic Environments (MEDE)	Columbia University	Submitted

[Click here for Sizeable Chart](#)