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SPECIAL DATES OF INTEREST:

- CoE Dean's Golf Outing at Huntingdon Valley Country Club: June 30
- A Taste of Drexel (Open House) in Grand Hall: July 9
- Summer Days at Drexel (Open House) in Grand Hall: August 8 & 18

DR. PETROPULU BECOMES IEEE FELLOW; APPOINTED EDITOR-IN-CHIEF, T-IEEE SIGNAL PROCESSING

In its meeting in Boston on Wednesday 14 November, the Board of Directors of IEEE conferred the grade of IEEE Fellow upon Dr. Athina Petropulu of the ECE department. The citation used by the Board is "for contributions to signal processing for communications, networking and ultrasound imaging."

The grade of IEEE Fellow recognizes unusual distinction in the profession and is conferred only by invitation of the Board of Directors upon a person of outstanding and extraordinary qualifications and experience in IEEE-designated fields and who has made important individual contributions to one or more of these fields. The number of the new Fellows in any one year cannot exceed one-tenth percent of the total voting IEEE membership.

Dr. Petropulu joins several members of the ECE faculty who are IEEE Fellows. They are: Nihat Bilgutay, Afshin Daryoush, Stephen Director, Bruce Eisenstein, Eli Fromm,

Peter Herczfeld, Moshe Kam and Arye Rosen.

In addition, at the IEEE Meeting Series held during the week of February 11, it was announced that Dr. Petropulu was appointed Editor-in-Chief of the IEEE Transactions on Signal Processing. She will replace Alle-Jan van der Veen from Delft University. Previous EICs include Ali Sayed (UCLA) and Jose Moura (Carnegie Mellon University).

The IEEE Transactions on Signal Processing is one of the most respected and cited publications in its field. It has the fourth highest impact factor in the group of publications in Systems and Control, and it is considered the premier journal in its field.

The ECE department is proud of Dr. Petropulu's achievements and wishes her great success in the responsible task of leading and expanding the IEEE Transactions in Signal Processing.



Athina Petropulu
Professor of Electrical and Computer Engineering

WORKSHOPS AND CONFERENCES

NASA Engineering and Safety Center (NESC) workshop

Dr. Leonid Hrebien, Professor, Graduate Advisor and Assistant Department Head for Graduate Affairs in the Department of ECE, was invited to participate as a subject matter expert in the NASA Engineering and Safety Center (NESC) workshop on the Assessment of Gravitational Inertial Loads and Environments (AGILE) held at the Center for Advanced Space Studies (CASS) adjacent to the Johnson Space Center in Houston, Texas.

The purpose of the workshop was to help NASA assess the available knowledge on the gravity and vibration environments expected to occur during launch, launch abort, reentry, and landing of the Constellation (the next generation of crewed spaceflight systems), specifically as it applies to human-system interface design and operational planning.

The objective of the workshop is to identify and

prioritize critical knowledge gaps that:

1. could hinder NASA's ability to perform objective validation and verification of program requirements and
2. could impede the development of design specifications to assure human-rated space systems operate safely and effectively under these adverse induced environments.

A report to be generated after the workshop will summarize the meeting's findings, cite the pertinent literature, and offer recommendations to help resolve those gaps that represent significant risks to program cost/schedule and mission success.

Radio Wireless Symposium

Afshin S. Daryoush, Professor of Electrical and Computer Engineering, and his students participated in the 2008 IEEE Radio Wireless Symposium in Orlando, Florida (January 22-24). Dr. Daryoush served as Chair of the technical program committee of this conference. He also chaired two invited paper sessions on

Wireless Communications and on Hardware Challenges in Wireless Communication.

Professor Daryoush and his graduate students presented several new papers in this symposium. Oleg Berzin, a PhD candidate in the ECE department, presented a paper on new methods that detect changes in the location of a mobile node in a network. The detection of new node locations facilitates the delivery of information to these nodes while the network is in motion. Pranav Iyengar presented a paper on components for an ultra-wideband communication device (paper co-authored with Karthik Srinivasan and Liming Zhou).

Professor Daryoush also delivered an invited paper titled "Digitally Beam Formed Multibeam Phased Array Antennas for Future Communication Satellites."



Dr. Leonid Hrebien
Professor, Graduate Advisor
and Assistant Department
Head for Graduate Affairs



Afshin S. Daryoush
Professor of Electrical
and Computer Engineering



What's New? On 3 April 2008, Dr. Leonid Hrebien was promoted to the rank of Full Professor of Electrical and Computer Engineering.

STUDENT PROFILE: DANIEL LOFARO

Daniel Lofaro is a 5th year BS/MS student at Drexel studying Control Systems. Daniel's interest in science and engineering began when he saw, while in the second grade, how a racket ball shatter after being dipped in liquid nitrogen.

When deciding where to study engineering, Daniel sought a university that could provide hands-on experience and real-world applications for the topics covered in the curriculum. He chose Drexel because it offered a 5-year plan to get a bachelor and master degree in engineering along with the benefit of being able to work at engineering firms as an undergraduate student while on co-op.

Along the way, Daniel became interested in supporting the efforts of Engineers Week. This year, Daniel's involvement

consisted of designing, making the rules for and organizing the construction of the new Egg Drop Competition. The objective was to make the competition more challenging and meaningful.

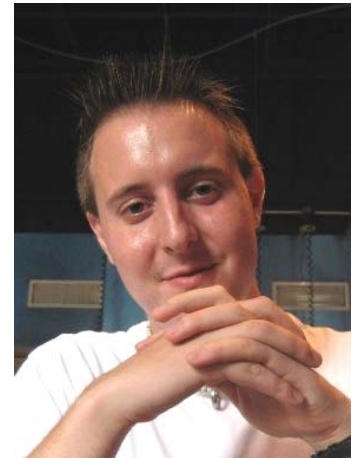
Daniel has recently completed and defended a thesis toward the MS degree on resonance in industrial control systems. In his thesis he analyzes the sources of unwanted resonance phenomena in physical plants and proposes methods that mitigate the effect of resonance on operation and stability

This past February Daniel was awarded the National Science Foundation's (NSF) East Asia and Pacific Summer Institute (EAPSI) Fellowship. He will be working this summer as an

NSF Fellow in Daejeon, South Korea at the Korean Advanced Institute of Science and Technology. Daniel will be working side by side with the robot researchers that make the HUBO humanoid robot. He is interested specifically in biped locomotion as it relates to animals that use tails as a method of balancing.

The HUBO is a 4.5 foot tall humanoid robot that can walk, run and even climb stairs. Daniel will learn how to assemble, disassemble and maintain the HUBO while incorporating his own communications and control system into the existing HUBO design.

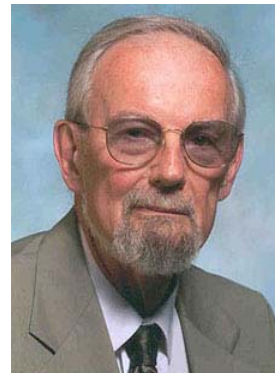
In fall 2008, the Drexel Autonomous Systems lab will be procuring a HUBO as part of an NSF biped robotic research grant.



2008 BENJAMIN FRANKLIN MEDAL IN ENGINEERING

On Thursday April 17, 2008 the ECE Department and the College of Engineering hosted a symposium featuring two winners of a 2008 Benjamin Franklin Medal in Engineering. The medal recipients are James Thorp and Arun Phadke. The all-day symposium, co-sponsored by the Drexel

College of Engineering, the Franklin Institute, PECO and the IEEE Philadelphia Section focused on computer relaying and phasor measurement techniques in electric power systems and attracted several hundred power engineering specialists from the greater Philadelphia Area.



James S. Thorp, Ph.D.



Arun G. Phadke, Ph.D.

NEW APPOINTMENTS**Dr. Kevin Scoles**

For the last twelve years Dr. Kevin Scoles served as the ECE Assistant Department Head for Undergraduate Affairs. In this position, Dr. Scoles provided the department with exemplary service and devoted to this assignment and to the department's students an untold number of hours in consultation, planning and advising. One of the most important projects led by Dr. Scoles was preparing the department for two ABET visits. Dr. Kevin Scoles was recently appointed Associate Dean for Undergraduate Studies in the College of Engineering. In this position he will be responsible for the administration of the first two years of the undergraduate curriculum.

**Adam Fontecchio**

Dr. Adam Fontecchio has assumed the position of ECE Assistant Department Head for Undergraduate Affairs. One of his first goals is to refine the duties of the Assistant Department Head, to fit the ECE Department intentions to restructure student advising duties and focus the Assistant DH role on planning and curriculum development. In this new capacity, Dr. Fontecchio will also serve as Chair of the Undergraduate Affairs Committee and will undertake the important task of restructuring and rejuvenating the ECE curriculum. The committee is also responsible for communication with prospective potential students in the Philadelphia-area high schools.

**Amy Ruymann**

Amy Ruymann, M.S., joined the ECE Department as the Principal ECE Student Advisor. Ms. Ruymann will provide advising to both graduate and undergraduate students including helping students to select courses and create plans of study. In addition, she will be involved in the planning and implementation of ECE outreach and recruitment activities.

Ms. Ruymann received her Master of Science in Computer Science from NJ Institute of Technology in 2005. She was a senior adjunct in the Science, Math and Technology Department at Burlington County College from 2005 to 2008.

**Dr. Bruce Eisenstein**

At the closing of the November 2007 meeting of ABET Inc. in Lake Tahoe, NV, Dr. Bruce Eisenstein, Arthur J. Rowland Professor of Electrical and Computer Engineering, has joined the Board of Directors of ABET as representative director of IEEE. The Board of Directors is the highest governing body of ABET, a non-governmental accrediting agency for the US college and university programs in applied science, computing, engineering, and technology. ABET is a federation of about 30 professional and technical societies representing these fields that had just celebrated its 75th anniversary. It currently accredits more than 2,500 programs at over 550 colleges and universities nationwide.



The ECE Department prepares men and women to become leaders working in a highly dynamic and global environment at the forefront of Engineering and pursues research to advance the state-of-the-art in Electrical and Computer Engineering and Engineering Education.

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AWARD SPOTLIGHT: FORENSIC DOCUMENTATION ANALYSIS

Dr. Moshe Kam (PI), ECE Department Head, and Thomas Hewett (Co-PI) of Drexel's Department of Psychology received an award from the US Army for a project entitled, "Forensic Documentation Analysis."

The two-year budget is \$388,000 and will support work focusing on documents that are produced in the

course of planning or executing certain illegal activities. It will quantify the ability of existing forensic identification methods to associate these documents with machines (such as scanners and fax machines) that were used in creating or transmitting the documents.

Methods of disguise, substitution, alteration and re-

routing will be examined against current forensic practices, and error rates of these practices would be quantified. The objective is to assist courts of law in assessing expert testimony about the origin of questioned documents and about the circumstances under which these documents were created and communicated.



Moshe Kam,
ECE Department Head

EDUCATIONAL SPOTLIGHT: ENGINEERING A GREENER WORLD CONFERENCE

On Thursday April 10, 2008 the Drexel University Student Branch of the IEEE hosted the "Engineering a Greener World" Conference. The conference served to inform the Drexel community about sustainable and engineering efforts and the obligations of engineers with respect to the environment.

Three high profile speakers addressed sustainable

engineering policy, renewable energy and the way industries are "going green." The presenters were David Rosner from the National Commission on Energy Policy; Paul Marcoux, Vice President of Green Engineering at Cisco Systems; and Dr. Douglas Arent, Director of the Strategic Energy Analysis and Applications Center with the National Renewable Energy Laboratory.



Douglas Jay Arent,
Director of the
Strategic Energy
Analysis and
Applications Center,
National Renewable
Energy Laboratory



Paul Marcoux
Vice President of
Green Engineering,
Cisco Systems



David Rosner,
Policy Analyst,
National Commission
on Energy Policy