ESE Senior Design Demo Day 2009 Judges

- Mr. Steven Battle; Penn BSE in EE ’03; Senior Systems Engineer at Motorola, Inc.
- Prof. Joseph Bordogna; Penn Alfred Fitler Moore Professor of Engineering
- Mr. Paul Chow; Penn BSE in EE ’99; Lockheed Martin Corp.
- Mr. Daniel Cocks; Senior Fellow and Senior Principal Member of the Engineering Staff,
- Lockheed Martin Corp.
- Dr. Willem Ebersöhn; Program Director Engineering Systems, Amtrak Engineering
- Mr. Leon Hermans; Penn Expected Graduation BSE in EE '09 and MSE in EE '09
- Prof. Andrew Huemmler; Penn BAS, PhD Social Systems Sciences, Lecturer, Master of Environmental Studies Program
- Dr. David Kaslow; Director, Product Data Management Analytical Graphics, Inc.
- Mr. Alex Kushleyev; Penn PhD student and a research staff member
- Mr. Jerry Lomurno; President, Eastern Instrumentation of Philadelphia
- Dr. Phil Lopresti; Retired AT&T Bell Laboratories ’96; Adjunct ESE faculty, 97-06
- Dr. Thomas Martin; Penn PhD EE; Prof and MIS Dept. Chair, Holy Family U. and Co-founder Forensics Inc.
- Mr. Bill Murray; Duane Morris LLP
- Mr. John Sheldahl; Penn MSE in EE '61; Retired RCA/GE/Lockheed Martin Corp.
- Prof. Vukan Vuchic; Penn UPS Foundation Professor of Transportation
- Dr. Raymond Watrous; Chief Scientist and Founder, Zargis Medical

Mr. Steven Battle;
Steve is a senior systems engineer at Motorola in the video access group at their Horsham, PA campus. At Motorola, he designs edge QAM encryptor modulator devices and has worked with industry standards groups creating Modular Headend Architecture specifications and protocols to standardize support for switched digital video. Prior to this, Steve received his MSEE in microelectronic circuits from Columbia University in 2005. He worked in IBM's microelectronics division performing the transistor-level implementation of the floating point and fixed point units for the z10 mainframe CPU.

Prof. Joseph Bordogna;
Joseph Bordogna is Alfred Fitler Moore Professor of Engineering at the University of Pennsylvania where he served also as Director of The Moore School of Electrical Engineering, Dean of the School of Engineering and Applied Science, and resident Faculty Master of Stouffer College House. His career includes experience as a line officer in the U.S. Navy, an engineer in industry at RCA Corporation, a public servant in the federal government, and President of the Institute of Electrical and Electronics Engineers (IEEE). He is a Fellow of IEEE and received the IEEE Mulligan Education Gold Medal for creative contributions to engineering education through leadership in integrating research and education.

From 1991 to 2005, he served at the National Science Foundation, first as head of the Directorate for Engineering, then appointed by the President as Deputy Director and Chief Operating Officer of the Foundation. Complementary to these tasks he was a member of the

President's Management Council and chaired committees on Manufacturing, Environmental Technologies, and Automotive Technologies in the President's National Science and Technology Council (NSTC).

He has made contributions to the engineering profession in a variety of areas including optical and radio communications, electro-optic recording materials, holographic video playback systems, educational innovation, and management of technological innovation; was a member of the team that created the Commonwealth of Pennsylvania's Ben Franklin Technology Partners (BFTP) investment in stimulating entrepreneurial potential; was awarded a commendation as Operations Officer of the Flagship of the naval unit which achieved the world's first space capsule recovery; and a plateau in Antarctica is named *Bordogna Plateau* in recognition of his NSF Antarctic activities.

Professor Bordogna graduated from John Bartram Public High School in Philadelphia, PA and holds B.S.E.E. and Ph.D. degrees from the University of Pennsylvania, the S.M. degree from the Massachusetts Institute of Technology, and six honorary doctorate degrees in engineering, science, and humanities.

Mr. Paul Chow;
Paul has worked at Lockheed Martin in King of Prussia, PA since graduating from Penn in 1999. He has worked as a software developer, software test engineer, and systems engineer on different programs. He has performed site installations of computer equipment in different parts of the country, developed test plans, worked with sub-contractors and the customer, resolved problems reported in the field, managed a development computer lab, and written software.

Mr. Daniel Cocks;
Dan Cocks is a Senior Fellow of Lockheed Martin Corporation and a Senior Principal Member of the Engineering Staff at Lockheed Martin - MS2 in Moorestown, NJ, where he is currently the Chief Architect of the U.S. Coast Guard Deepwater Modernization Program. Prior to this assignment, he served for eight years on the staff of the Director of Combat Systems Development. Dan has over 20 years of experience in systems engineering and software development using both functional and object-oriented methods. In addition to his work on a variety of projects in naval surface warfare system development, Dan has served for three years as the Chair of the Tools & Technology Working Group of the Lockheed Martin Systems Engineering Subcouncil.

Dr. Willem Ebersöhn;

Willem Ebersöhn is the Program Director Engineering Systems, with Amtrak Engineering, responsible for the establishment of the Amtrak Infrastructure Management System. Currently he is the Subject Matter Expert representing Amtrak Infrastructure Department on the development of its Enterprise Strategic Asset Management Project.

Prior to joining Amtrak at the end of 2000 he worked at the University of Pretoria for 14 years as Professor in the Faculty of Engineering, and established the Chair in Railway Engineering, which is a graduate Railway Engineering program sponsored by Spoornet and the South

African Railway Industry. Prior to joining the University of Pretoria he worked for Spoornet for 8 years (South African Railways) as Assistant Engineer and District Engineer.

Willem Ebersöhn worked extensively on heavy haul problems as well as developed and implemented an Infrastructure Maintenance Management System with Spoornet in South Africa. In the past 8 years he worked on high-speed railway infrastructure management problems on Amtrak. He specializes in Infrastructure Maintenance Management, Railway Geotechnology, and Rail/Wheel interaction and has worked on various national and international railroad development projects.

Willem Ebersöhn has published 13 accredited papers in professional journals and 19 conference papers, Invited to present Wheel-Rail Interaction and Maintenance management Courses – in Rio Brazil, Frankfurt Germany, Cambridge and Nottingham England, Kiruna Sweden and Pretoria South Africa. He was invited by the International Heavy Haul Association to participate as one of the team of 4 internationally recognized specialists to compile and published the manual, "*Guidelines to Best Practice for Heavy Haul Railway Operations: Wheel and Rail Interface Issues* ", in May 2001.

Mr. Leon Hermans;
I entered Penn in 2005 and sub-matriculated in 2008 to the EE Masters program. I am working on completing both my degrees this year . I completed EE Senior Design in the 2007-2008 school year and did a project on Adaptive Voice Filtering with Dr. Kassam as my adviser. One of my favorite academic experiences at Penn has been TA'ing ESE 112, 319, and 570 during my time here. Also, I was active in the IEEE Student Branch (VP '06-'07, President '07-'08). My interests are primarily in VLSI circuit design and I am currently working on my thesis under Dr. Laker and Dr. Van der Spiegel to design an FPTA Lab on a Chip. I hope that this project can be carried on and fabricated by a future senior design group.

I did a Program Manager internship at Microsoft in my sophomore year. My plans after Penn are to work in California at a business which designs and manufactures energy conservation and emergency equipment.

Prof. Andrew Huemmler;
http://www.sas.upenn.edu/lps/graduate/mes/profile/andrew_huemmler

Dr. David (Dave) Kaslow;
Dave Kaslow works for Analytical Graphics, Inc., a provider of commercial off-the-shelf software to national security and space professionals for integrated analysis of land, sea, air, and space assets. As Director, Product Data Management, his responsibilities include data accessibility and data ease of use, integration of Sensor Web Enablement technologies, and the development of spacecraft software-object catalogs.

He retired from Lockheed Martin after thirty-five years of experience in both the technical and management aspects of developing a ground mission element. He is also editor of Spacecraft Digest at www.stk.com/scdigest, which tracks current and future spacecraft and spacecraft missions.

He is co-author of “Defining and Developing the Mission Operations System”, “Activity Planning”, “FireSat” and “Spacecraft Failures and Anomalies” in Cost-Effective Space Mission Operations. He is also author and co-author of papers for the International Council on Systems Engineering (INCOSE) Annual International Symposiums and for the IEEE Aerospace Conference.

Mr. Alex Kushleyev;
http://fling.seas.upenn.edu/~akushley/cgi-bin/pmwiki/

Mr. Jerry Lomurno
Jerry is president of Eastern Instrumentation of Philadelphia, a leading manufacturer's representative in the Philadelphia area for not only electronic test equipment but also RF, Microwave and Lightwave (including high speed digital) components. Some of his clients are: Watkins Johnson, K&L Microwave, Avantek, E-Tek Dynamics, Sumitomo, EEsof, Wavetek, Anritsu, Hitachi, and Signetics. He has extensive experience in the fields of microwave measurements and precision equipment calibration.

Dr. Phil Lopresti;
Phil was with AT&T at its Princeton, NJ, Engineering Research Center from 1970 until 1996. While at AT&T, he performed and directed research and development studies in computer process control and electronics test. He retired from AT&T Bell Laboratories, and formerly Lucent Technologies Bell Laboratories, in 1996. He was adjunct ESE faculty at Penn from 1997-2006, after spending a year working on a consulting assignment in telecommunications systems test. Before joining AT&T, he taught a wide variety of electrical engineering courses at The Illinois Institute of Technology and at Notre Dame, Purdue, and Northwestern Universities. Phil is a co-founder of DFT Microsystems, Inc. in Montreal Canada.

Dr. Thomas Martin;
Thomas B. Martin received his B.S. in Electrical Engineering from the University of Notre Dame, and the M.S. and Ph.D. in Electrical Engineering from the University of Pennsylvania. Dr. Martin founded the first successful automatic speech recognition company, and was cited by President Ronald Reagan for his contributions to this field. His contributions to the field of automatic speech recognition were considered a national asset by USA intelligence agencies, providing information that modified historical events in the Mid-East, and other areas of the world. He holds 19 patents in this field, has published widely, and has been the CEO/President of five high-technology companies. In 1998 he received the College of Engineering Honor Award from the University of Notre Dame for Significant Contributions to the Advancement of Engineering. He joined Holy Family University in 2002 where he is a Professor of Computer Science and the Chair of the MIS Department. Recently he was a co-founder of Forensics Inc.

Mr. William (Bill) Murray;
http://www.duanemorris.com/attorneys/williamhmurray.html

Mr. John Sheldahl;
John received BSEE '57 from Oregon State University and MSEE '61 from Penn. He was employed as a radio communications hardware design engineer by RCA and in succeeding companies GE and Martin Marietta. John retired from the Lockheed Martin design facility at Camden, NJ. His design experience was followed by the management of a team of radio hardware design engineers together with engineers responsible for software design integration. During his career John worked on several radio design applications that included: army voice-com man-pack, navy anti-sub aircraft voice/data, NASA shuttle space suit voice-com, shuttle orbiter voice-com, navy GPS signal translation for Trident test missiles, and army remote battlefield sensing data.

Prof. Vukan Vuchic;
http://www.seas.upenn.edu/%7Evuchic/

Dr. Raymond Watrous;
Ray is the Chief Scientist of Zargis Medical Corp., a medical device company in Princeton, NJ, which he founded in 2001. He was formerly a Distinguished Member of Technical Staff at Siemens Corporate Research where he was engaged in signal and information processing research. While at Siemens, he was instrumental in developing the computer-aided auscultation technology that led to the creation of Zargis. Ray's research interests include speech recognition, biomedical signal processing, cardiovascular physiology and modeling, and clinical decision support.