

ENGINEERING EDUCATION OUTSTANDING ALUMNI AWARDS

February 23, 2011

EAST-WEST FACULTY LOUNGE ■ PURDUE MEMORIAL UNION
Purdue University





I'm delighted to present this year's recipients of the Engineering Education Outstanding Alumni Award: Debra S. Echt, Raymond Michael Klein, and Richard H. Le Sesne, all graduates of the former Division of Interdisciplinary Engineering (now part of the School of Engineering Education).

A continuation of the Outstanding Interdisciplinary Engineering Alumni Award bestowed before the School's founding in 2004, the Engineering Education Outstanding Alumni Award is presented to alumni who have achieved singular accomplishments in their fields,

whose successful careers are role models for our students, and whose achievements set an example for all the School's alumni. In future years, the award will recognize alumni who have interdisciplinary engineering degrees, multidisciplinary engineering degrees, or engineering education doctoral degrees, reflecting all academic degrees offered by the School.

I invite you to discover at tonight's award ceremony how our honorees have used the springboard of Purdue's Interdisciplinary Engineering program to make a difference in their chosen fields. They are shining examples of just what our students can accomplish when they combine an interdisciplinary outlook with a drive to improve and contribute to the world around them.

A handwritten signature in black ink, reading "D Radcliffe". The signature is stylized and cursive.

David Radcliffe
Kamyar Haghighi Head, School of Engineering Education
Epistemology Professor of Engineering Education



Debra S. Echt

+ BSE IDE, BIOMEDICAL ENGINEERING, 1973

Founder, Chief Medical Officer, and Vice President for Clinical and Regulatory Affairs ■ EBR Systems

+ **ENCOURAGED BY HER HIGH SCHOOL PHYSICS TEACHER** to look into engineering at Purdue, Debra Echt did just that, accepting a full-ride academic scholarship and choosing a biomedical engineering concentration through Interdisciplinary Engineering. A native of Cleveland, Ohio, Echt combined her Purdue education with American Heart Association-funded research experiences at Case Western in the summers, setting her sights on medical school and a clinical research career.

She finished at Purdue in three and a half years (the sole female student in her engineering classes), earned her MD from Case Western in 1977, and was awarded a cardiology fellowship from Stanford in 1980. Board-certified in internal medicine, cardiology, and cardiac electrophysiology, Echt has gained international recognition in clinical cardiac electrophysiology through a career that spans academia, clinical practice, and a number of medical-device startups.

Her professional academic involvement began with faculty positions in the cardiology division of Stanford's School of Medicine, where she had primary responsibility for the implant testing and management of patients with permanent pacemakers. (She remains a voluntary clinical faculty

member at Stanford.) She later served on the faculty of Vanderbilt's School of Medicine (1984-96), where she engaged in research, patient care, interventional cardiac electrophysiology procedures, teaching, and administration. She held the positions of Director of the Clinical Electrophysiology Laboratory, the Electrophysiology Training Program, and the Arrhythmia Service while at Vanderbilt. From 1991 to 1996 she served as a consultant and then member of the U.S. Food and Drug Administration's Circulatory System Devices Advisory Panel.

Echt's entrepreneurial career started in 1996 and continues through the present. She held VP-level positions at the cardiac-device companies Timi3 Systems Inc., Xoft MicroTube, and Cardiac Pathways Corporation before co-founding EBR Systems in 2003. EBR Systems is an early-stage company whose mission is to develop Echt's idea for an ultrasound-based cardiac stimulation, with a pacemaker that requires no lead wire for stimulating the heart. ■



Raymond Michael Klein

+ BSE IDE, BIOMEDICAL ENGINEERING, 1977

Rear Admiral ■ U.S. Navy (retired)

+ **GROWING UP IN INDIANAPOLIS**, Mike Klein developed an interest in engineering and science that landed him at Purdue. In his search for an academic program less restrictive than the traditional ones in engineering and science, he met with the head of Interdisciplinary Engineering, Prof. Dick Grace, and entered the biomedical engineering program.

A later visit with a roommate to Navy recruiters on campus launched him on his path into the military, and by the last semester of his senior year, Klein was on active duty through the NUPOC (Nuclear Propulsion Officer Candidate) Collegiate Program. His broad engineering background prepared him well for the Navy's rigorous nuclear power training program and submarine duty, where his superior performance led to an early assignment as engineer of a new-construction submarine, the *PCU NEVADA (SSBN 733)*.

Other shipboard assignments included *USS HENRY CLAY (SSBN 625)* as reactor controls and main propulsion assistant and *USS NEWPORT NEWS (SSN 750)* as executive officer. Aboard *NEWPORT NEWS*, Klein conducted an emergent deployment in support of Operation Desert Storm. He commanded the fast-attack submarine *USS ALEXANDRIA (SSN 757)* from 1995 through 1997, completing three deployments vital to national security interests.

Klein's shore assignments included the Bureau of Naval Personnel as the submarine junior officer shore detailer; the CINCPACFLT Nuclear Propulsion Examining Board as a junior member; the staff of the Supreme Allied Commander, Atlantic, as the submarine warfare officer; three tours on the staff of the Chief of Naval Operations; and Chief of Staff, US SECOND FLEET/Striking Fleet Atlantic. He holds a master's degree in National Resource Strategy from the Industrial College of the Armed Forces and was selected for promotion to Rear Admiral in 2004.

Klein concluded his naval career as President, Board of Inspection and Survey, from 2007 through 2009. He was 60th in a line of presidents starting with Admiral David Farragut in 1868. In that role, he led the acceptance trials for the Navy's new ships and the material inspections of more than 50 in-service ships each year.

Now retired from the Navy, Klein serves as director of Mid-Atlantic Operations for Global Services and Solutions, Inc., a startup defense contractor providing professional services in technical, program, and contract management. ■





Richard H. Le Sesne

+ BSE IDE, NUCLEAR ENGINEERING, 1975

*Co-Founder and Chief Strategy and Technology Officer ■
ActSense Corporation*

+ **RICH LE SESNE GREW UP IN PUERTO RICO AND** the U.S. Virgin Islands, making his first visit to the States—a trip to check out Purdue University—on the day Neil Armstrong stepped on the moon. Originally interested in chemistry, then electrical engineering, Le Sesne resisted academic plans of study that prescribed virtually every course selection. A conversation with Prof. Dick Grace, head of Interdisciplinary Engineering, revealed IDE’s more flexible nuclear engineering option, and Le Sesne’s academic course was set as a future “Renaissance Engineer.”

Adding minors in computer science, economics, history, and foreign languages (Spanish, French, and a bit of Russian), Le Sesne also served as treasurer, then secretary, and finally president of Purdue’s chapter of the American Nuclear Society. In addition, he worked as a co-op student at IBM, developing and supporting submarine detection software for the U.S. Navy.

After graduating from Purdue, Le Sesne embarked on what would become a 35-year career in software engineering, project management, telecommunications engineering, consulting services, and microelectronics development with IBM. He designed and built solutions ranging from hotel accounting systems to inventory tracking of nuclear

reactor fuel rods to flight dynamics systems for the U.S. shuttle Space Transportation System. Le Sesne has been granted four U.S. patents and published an additional four patent applications in such diverse areas as telecommunications, radio sensors, communications cabling, and retail store operations.

Having created a number of careers for himself within the corporation, Le Sesne served as executive IT architect and program manager for IBM in 2006-07, helping to design and build Washington DC’s new Unified Communications Center, which provides 911, 311, and other critical services to District residents. He concluded his Big Blue years as senior sales leader for server and storage services for state and local governments.

In 2008, Le Sesne co-founded ActSense Corporation, which develops software for real-time sensor and actuator applications for embedded systems and smart phones. In 2009 ActSense also led the design and building of two 911 facilities on the U.S. Virgin Islands—the most satisfying job that he’s ever done, he recalls, and one that fulfilled a life’s goal of making a difference for the people of Puerto Rico and the U.S. Virgin Islands. ■



OUTSTANDING INTERDISCIPLINARY ENGINEERING ALUMNI 1999 ■ 2003

1999

Gregory M. Ayers

+ BSE IDE, PRE-MED/PRE-LAW, 1985

2001

Paul C. Cloyd

+ BSE IDE, ARCHITECTURAL ENGINEERING, 1976

Sue Hudson-Abreu

+ BSE IDE, BIOMEDICAL ENGINEERING, 1978

2002

Michael J. Cave

+ BSE IDE, ENGINEERING MANAGEMENT, 1982

David R. Schwind

+ BSE IDE, INVENTIVE DESIGN, 1974

2003

Geoffrey T. Crowley

+ BSE IDE, TRANSPORTATION ENGINEERING, 1974

ENGINEERING EDUCATION OUTSTANDING ALUMNI

2009

Harold M. Aberman

+ BSE IDE, BIOENGINEERING, 1985

Brian E. Farley

+ BSE IDE, BIOMEDICAL ENGINEERING, 1979

Gary C. Horlacher

+ BSE IDE, SYSTEMS ENGINEERING, 1989

Robert F. Sharpe Jr.

+ BSE IDE, PRE-LAW, 1974

Mary Spiess Smith

+ BSE IDE, ARCHITECTURAL ENGINEERING, 1974

2010

Howard J. Gobstein

+ BS IDE, TECHNOLOGY AND PUBLIC POLICY, 1974

