

# ENGINEERING EDUCATION OUTSTANDING ALUMNI AWARDS



*February 18, 2009*

EAST-WEST FACULTY LOUNGE ■ PURDUE MEMORIAL UNION  
Purdue University



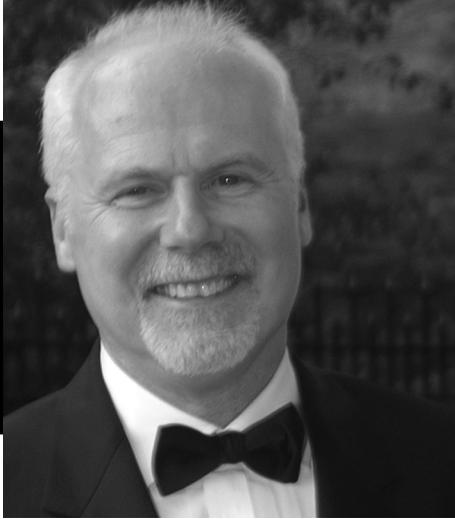
Purdue University took a pioneering step in creating the Department (now School) of Engineering Education in 2004. That step combined the Division of Interdisciplinary Engineering—itsself a pioneering academic program—with the Department of Freshman Engineering, the first such department of its kind in the country. The new academic unit went on to launch a doctoral program in engineering education, the world's first.

From this perspective of continuing innovation and accomplishment, I'm delighted to present the recipients of the 2009 Engineering Education Outstanding Alumni Awards, all graduates of the former Division of Interdisciplinary Engineering. A continuation of the Outstanding Interdisciplinary Engineering Award bestowed before 2004, the Engineering Education Outstanding Alumni Award is presented this year for the first time, 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, multidisciplinary engineering, or engineering education degrees.

I invite you to turn through these pages to learn what makes our 2009 honorees—Harold M. Aberman, Brian E. Farley, Gary C. Horlacher, Robert F. Sharpe, Jr., and Mary Spiess Smith—such an inspiration. They've distinguished themselves as engineers, entrepreneurs, and executives in fields of endeavor including healthcare, urban infrastructure, the food industry, and the space program. In doing so, they've displayed the ingenuity and pursuit of excellence that epitomize the Purdue engineer.

A handwritten signature in black ink that reads "K. Haghighi". The signature is fluid and cursive, with a large initial "K" and a long, sweeping underline.

Kamyar Haghighi, Head  
School of Engineering Education



## Harold M. Aberman

+ BSE IDE, BIOENGINEERING, 1985

*Global Scientific Program Director* ■ *Synthes, Inc.*  
*President and Founder* ■ *Applied Biological Concepts, Inc.*

+ **HAROLD ABERMAN SPENT 13 YEARS**—from 1974 through 1987—at Purdue University. During that time he earned a BS in biology, a DVM (doctorate of veterinary medicine), a BSE (in bioengineering, through IDE), and an MSE in mechanical engineering. He earned his BSE and MSE while completing a National Institutes of Health post-doctoral program designed to train veterinarians in bioengineering. This program was established by Dr. Les Geddes at Purdue's Hillenbrand Biomedical Engineering Center, and Dr. Aberman is the only person to complete the fellowship.

Following Purdue, Dr. Aberman joined Howmedica, a major orthopaedic device manufacturer (then a division of Pfizer), where he was promoted to Global Director of Scientific and Biological Affairs. Next, in 1994, Dr. Aberman co-founded Applied Biological Concepts, which develops and licenses patented and non-patented technology in the area of human sports medicine, and continues to provide preclinical and regulatory consultation for emerging and established medical device companies. He was also one of the founders of ChondroSite, LLC, which patented one of the first fully synthetic cartilage repair devices which will be entering

human clinical trials. (ChondroSite merged in 2003 with a larger orthopaedic manufacturer.)

In 2003, Dr. Aberman joined Synthes Spine as the Director of Non-fusion Product Development. He was promoted to Global Scientific Program Director in 2007. In this position he coordinates the Research Advisory Committees of Synthes' Business Units and Global Regions, ensuring the scientific integrity of the proposals received and that all externally funded research meets Synthes' Corporate Compliance guidelines, as well as providing scientific mentorship to young investigators in the areas of orthopaedics, neurology, toxicology, biomechanics and clinical research.

Dr. Aberman has co-authored numerous peer-reviewed articles and book chapters and has been an adjunct professor at North Carolina State University, Mississippi State University, and Purdue University.

Currently, he resides in Malvern, Pennsylvania, with his wife, Danielle, and newborn daughter, Harper.



## Brian E. Farley

+ BSE IDE, BIOMEDICAL ENGINEERING, 1979

*President and CEO  
VNUS Medical Technologies*

+ **BORN AND RAISED IN CHICAGO** as the third oldest of eight children, Brian Farley is a third-generation Purdue engineer. In 1976, as a freshman, he decided to become a biomedical engineer and entered the IDE program. He received a BSE with an emphasis in biomedical engineering in 1979 and an MS in electrical engineering (also from Purdue) in 1981.

Following Purdue, Mr. Farley joined Eli Lilly and Company in Indianapolis in cardiovascular research, then joined the business development group of Eli Lilly's medical device division, for which he was involved in acquiring companies and technologies. After the acquisition of Devices for Vascular Intervention, a medical device company, in 1989, he joined the company as Clinical Research Director and moved his family to Northern California, where they now live. Mr. Farley was also Vice President of Research and Development for Guidant Corporation, a large cardiovascular medical device company, and was part of the management team during Guidant's initial public offering in 1994.

Joining VNUS Medical Technologies, Inc., in 1995 as the company's first employee, Mr. Farley has led VNUS as President and CEO since 1996. VNUS develops medical

devices to treat venous reflux disease, the underlying cause of painful varicose veins. VNUS and Mr. Farley pioneered the field of minimally invasive treatment of venous reflux disease, employing catheter technology and controlled thermal ablation to seal diseased veins. The company, which went public via an IPO in 2004, generates annual revenues of approximately \$100 million, and its products have been used to treat more than 400,000 patients in 40 countries.

Mr. Farley serves on the Board of Directors of VNUS, as well as Entellus Medical, a Minneapolis-based private medical device company. He also is a Director of the American College of Phlebology Foundation and a past Director of a local Pony Baseball Chapter.

Mr. Farley has been joyfully married for 27 years to fellow Chicagoan and Purdue grad, Debbie Farley, BS, Speech Pathology, 1980. They have three children: Derek, 23, Kristen, 21, and Brandon, 17. Mr. Farley is an avid basketball player and loves snow skiing, sailing, and coaching baseball. His favorite quote is from Stacey Allison, the first American woman to summit Mount Everest: "I've always had those little goals that I've worked toward—they add up."



## Gary C. Horlacher

+ BSE IDE, SYSTEMS ENGINEERING, 1989

*Flight Director  
Johnson Space Center, NASA*

+ **ONE OF FOUR NEW FLIGHT DIRECTORS** announced by NASA this past May, Gary C. Horlacher is a member of a select group of individuals charged with leading human spaceflights from Mission Control at the Johnson Space Center in Houston.

With a bachelor's degree through IDE (systems engineering) from Purdue, Mr. Horlacher launched his career in 1989 with Rockwell Space Operations Company as a Space Shuttle Flight Controller in the Instrumentation and Communications (INCO) discipline. He earned a master's in space sciences from the University of Houston, Clear Lake, in 1995, then joined the Hughes Information Technology Systems Company as a System Engineer (1996-97) on the Tracking and Data Relay Satellite System HIJ Program.

Mr. Horlacher joined the United Space Alliance in 1997 and served as Group Lead for INCO from 2002 to 2003. He then joined the Space Shuttle Upgrades Program Office, providing senior technical leadership for the Vehicle Health Monitoring System Project proposed to replace an original shuttle system that was critical to confirming the root cause of the Columbia disaster. His professional contributions earned

him, in 2003, NASA's Silver Snoopy Award—an "astronaut's choice" award for NASA and contractor employees who greatly enhance flight safety and mission success for the space shuttle program. From 2004 to 2005, Mr. Horlacher worked for Lockheed Space Systems Company's Advanced Space Transportation Systems division, joining the Johnson Space Center the following year as a civil servant and the communications and tracking operations lead for NASA's Constellation Program.

Since 1989, Mr. Horlacher has supported 75 space shuttle missions from the Mission Control Center, and his appointment as flight director (he is currently in training) brings to 28 the number of active NASA flight directors. Leading a team of flight controllers, support personnel, and engineering experts, a flight director has the overall responsibility to manage and carry out shuttle flights and space station expeditions. Only 77 people have served as NASA flight directors, or are in training to do so, in the nearly 50 years of human spaceflight.

Mr. Horlacher lives in Clear Lake, Texas, with his wife, Eleanor, and son, Ryan.



## Robert F. Sharpe, Jr.

+ BSE IDE, PRE-LAW, 1974

*President, Commercial Foods, and Executive Vice President,  
External Affairs ■ ConAgra Foods, Inc.*

+ **ROB SHARPE GRADUATED FROM** Purdue in 1974 and was a member of Tau Beta Pi. He also received a degree from DePauw University under the 3-2 program. He subsequently received a law degree from Wake Forest University in 1978. He held a variety of attorney positions with RJR Nabisco until 1994, serving as its principal mergers lawyer and corporate secretary, and moved to New York in 1988 after representing the company in its \$25 billion takeover by KKR. After a short stint as head of mergers and acquisitions at Tyco International, Mr. Sharpe returned to RJR in 1996 as Senior Vice President and General Counsel, where he represented the company in the landmark \$450 billion settlement with State Attorney Generals. In 1998, he was named Senior Vice President and General Counsel for PepsiCo, where he also had responsibility for government and public affairs. He left PepsiCo in 2002 to become one of five U.S. partners for the Brunswick Group, a leading global financial public relations firm.

In 2005, Mr. Sharpe left Brunswick to join ConAgra Foods as Executive Vice President, Legal and External Affairs. A leading branded-foods company, ConAgra is the name

behind well-known household brands including Healthy Choice, Chef Boyardee, Egg Beaters, Hebrew National, Hunt's, Orville Redenbacher's, PAM, and Banquet.

In 2008, Mr. Sharpe was also named President, Commercial Foods, when he added management of ConAgra's \$4.5 billion commercial business to his responsibilities. The Commercial Foods business accounts for approximately 40 percent of the company's revenue and includes North America's largest potato processor, the third-largest flour miller, and the largest dehydrated vegetable producer. As leader of External Affairs, Mr. Sharpe also oversees mergers and acquisitions, government affairs, investor relations, and corporate communication.

Mr. Sharpe serves on the board of directors of Ameriprise Financial and is an executive advisor to StarVest Partners, a business-to-business Internet venture fund in New York. He lives in Mount Kisco, New York, with his wife, Maria. His son lives in North Carolina, and he has a daughter who is a senior at Dartmouth and another daughter who is a junior at DePauw.



## Mary Spiess Smith

+ BSE IDE, ARCHITECTURAL ENGINEERING, 1974

*Senior Vice President and Director of Parking Consulting  
Walker Parking Consultants*

+ **MARY SPIESS SMITH IS** Director of Parking Consulting for Walker Parking Consultants. Since joining Walker in 1975, she has been actively involved in all phases of parking planning and design for parking projects ranging up to 40,000 spaces (a project in Dubai). Among her particular areas of expertise are pedestrian and vehicular circulation, wayfinding and flow capacity in mega-parking complexes; impact of changing vehicle sizes on parking dimensions; accessible parking design; and integrating shared parking, parking management, operations, and functional design. She was elected a Vice President of Walker in 1988 and has served several terms on its Board of Directors. In 1996, she was named Senior Vice President.

Mrs. Smith is widely acknowledged as one of the leading parking planners and functional designers in the world. She is co-author of *PARKING STRUCTURES: Planning, Design, Construction, Maintenance, and Repair*. She has written multiple chapters for the ULI/NPA *Dimensions of Parking*, the parking section of the American Institute of Architects' *Architectural Graphics Standards (1998)*, the chapter on parking for the second edition (2000) of the Institute of Transportation Engineers' (ITE's) *Transportation*

*Planning Handbook* (currently being updated), and the parking section of the American Planning Association's *Planning and Urban Design Standards (2006)*. She is also the lead author for the second edition of *Shared Parking (2005)*, commissioned by the Urban Land Institute and the International Council of Shopping Centers.

Elected to the Parking Consultants Council (PCC) of the National Parking Association (NPA) in 1984, Mrs. Smith has led the development of multiple PCC publications. She also served as representative for ITE, the International Parking Institute and NPA to COST 342, a European Union technical organization project that studied the experience gained internationally with the effects of parking and parking policy. In 1992, she was presented with the prestigious Bernard Dutch Memorial Award. Mrs. Smith was the youngest person ever to receive what is considered the "lifetime achievement award" of the parking consulting profession. She also received a 1992 NPA Outstanding Service Award.

Mrs. Smith resides in Zionsville, Indiana, with her husband, R. Douglas Smith (BS Ag Econ, 1971). They have three children: Bradley, Geoff (BS Mgmt, 2007), and Emily, a junior at Purdue majoring in family and marriage therapy.



# OUTSTANDING INTERDISCIPLINARY ENGINEERING ALUMNI 1999 ■ 2003

1999

**Gregory M. Ayres**

+ 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

School of  
**ENGINEERING EDUCATION**  
LEARNING *to Make a* DIFFERENCE

**PURDUE**  
UNIVERSITY