Dr. Peter Herczfeld Named Microwave Pioneer

Dr. Peter Herczfeld, Lester A. Kraus Professor of Electrical and Computer Engineering, received the 2006 Microwave Pioneer Award from the IEEE Microwave Theory and Techniques Society (MTT-S). The award recognizes a major, lasting contribution, through publication in an archival journal, to the Society’s field of interest, at least 20 years prior to the year of the award. Dr. Herczfeld’s citation reads, “For pioneering work in microwave photonics.” The award, which includes a plaque and a $2,500 honorarium, was conferred at a banquet during the International Microwave Symposium in San Francisco in June.

Dr. Eli Fromm Leads NSF GK-12 Grant Team

The National Science Foundation awarded $615,523 to Drexel University for fiscal year 2006, with a total of $1,847,998 expected by the end of fiscal year 2008, for an innovative project under the direction of Dr. Eli Fromm and Dr. Adam Fontecchio of the ECE Department, Dr. Mary Jo Grdina and Dr. William F. Lynch of the School of Education and Dr. Mun Young Choi of Mechanical Engineering and Mechanics. Titled “Track 1, GK-12: Engineering as a Contextual Vehicle for Science and Mathematics Education,” the program will provide fellowships for outstanding graduate students interested in broadening their educational experiences while pursuing their engineering degrees at Drexel. Beginning this year, fellows will be partnered with local middle school teachers. These teams will come to Drexel for an intensive four-week summer program to develop curriculum modules featuring unique classroom lessons and experiments, which the fellows will help the teachers implement during the academic year. The program links the cutting-edge knowledge of graduate students to the educational expertise of schoolteachers to invigorate and update the science and mathematics tracks in partner schools while affording the fellows valuable experience in communication, leadership and curriculum development.

Beloved Professor Passes: Dr. Stanislav Kesler

Dr. Stanislav Kesler died on June 15 at age 63 of a heart attack. He had battled cancer for 18 months. Born in Vlajevo, Yugoslavia, and reared in Belgrade, Dr. Kesler emigrated to Canada, where he received his Ph.D. in 1977 from McMaster University and worked with world-renowned communications expert Dr. Simon Haykin. He came to the United States and joined the faculty of Drexel’s ECE Department in 1982.

Dr. Kesler was respected across the University for his teaching and scholarship. He taught more than three dozen courses, supervised eight doctoral and 12 master’s students and pursued research in communications and signal processing that was frequently cited around the world.
Outreach Programs Going Strong The College of Engineering is engaged in a number of outreach programs to connect with local students and teachers and stimulate interest in science and engineering. Outreach efforts extend year-round but a number of structured programs take place during the summer, and as the academic year ended ECE Department faculty members began welcoming teachers and students into their labs.

The Office of the Dean of the College sponsors and runs the Summer Mentorship Program and the Summer Engineering Experience at Drexel (SEED). The Mentorship Program pairs motivated students from across the country with faculty members throughout the college for a two-week, in-depth research experience. SEED is a one-week program that exposes interested students to overviews of each discipline in engineering, hands-on laboratory work and industry visits.

Two NSF-funded programs focusing on teacher development—RET-Nano (run by the materials science engineering departments at Drexel and the University of Pennsylvania) and RETAIN (run by Drexel’s Mechanical Engineering and Mechanics Department)—bring middle school and high school teachers to Drexel and Penn for five weeks during the summer. The teachers are paired with faculty members and graduate students to take part in cutting-edge research projects, workshops in lesson planning, practice in grant writing and seminars in bioethics.

Ukrainian Exchange Program Last summer, students Victoria Yaremko, Olga Farina and Ruslan Akulenko and instructor Andrew Gusynin from Kiev Polytechnic University were the first visitors to Drexel under a new exchange program initiated by Dr. Oleh Tretiak, Robert C. Disque Professor of Electrical and Computer Engineering. Dr. Tretiak conceived of the program while teaching in Ukraine during a 2004-05 Fulbright Fellowship, and solicited support from the College of Engineering and Kiev Polytechnic’s Inter-University Medical Engineering Faculty that paved the way for a letter of understanding between the universities. Dr. Tretiak was joined by Dean Selçuk Guçeri and Associate Dean for Special Programs Bahram Nabet in developing the program on the Drexel side.

Celebrating National Engineers Week The College of Engineering observed National Engineers Week in February with a range of exciting events. Highlights included the 12th annual Egg Drop Competition, High School Day for more than 500 Philadelphia-area students, an “Engineering Jeopardy” trivia night sponsored by the Society for Women Engineers, a display of “Engineering Marvels,” the College’s Honors Day Ceremony and a career fair. Capping the week were the Engineer of the Year festivities honoring Dr. Robert M. Koerner ’56, ’63, emeritus professor of civil, architectural, and environmental Engineering and director of Drexel’s Geosynthetic Research Institute. Dr. Koerner gave a lecture titled “Geosynthetics and their Major Applications” and was honored along with the 2006 Alumni Circle of Distinction inductees and faculty and staff award winners at a banquet at the Union League.

Award recipients from the ECE Department included Dr. Moshe Kam (Outstanding Research Award), Dr. Oleh Tretiak (Outstanding Service Award), Dr. Kevin Sooles (Students First Award), Scott Currie (Outstanding Technical Staff Award) and Wayne Hill (Outstanding Service Award).

ECE Awards Ceremony The annual ECE Awards Ceremony was held in the Anthony J. Drexel Picture Gallery in the Main Building on June 30, recognizing outstanding students, faculty, alumni and staff for service to the department and for excellence in their area of expertise. Dr. Al Houshmand, former dean of the Goodwin College of Professional Studies, was also recognized for his strong support of the ECE Department during his tenure as interim provost. Dr. Peter Herzfeld was recognized for receiving the 2006 IEEE Microwave Pioneer Award.

Drexel Hosts Bower Symposium In April, Drexel played host to a symposium, “Advancing the Application of Power Electronics to the Electric Power Infrastructure,” in honor of Dr. Narain G. Hingorani of Los Altos, Calif., the recipient of the 2006 Bower Award and Prize for Achievement in Science from the Franklin Institute. The event was sponsored by the University, the College of Engineering and the ECE Department along with the Franklin Institute and the IEEE Philadelphia Section, and organized by Dr. Dagmar Niebur of the ECE Department, Dr. Harshad Mehta of Silicon Power Corporation and Barnett Adler of PECO Energy.

Additions to Advisory Council In the past two years several outstanding individuals have joined the ECE Advisory Council, including Ray Celona of Comcast National IP Services, William Coyle of Exelon Nuclear and Dr. Thomas Green of BBN Technologies. The ECE Department welcomes and thanks them for the valuable feedback they provide.

FACULTY HEADLINERS

Eisenstein: Delaware Valley Electrical Engineer of the Year At the 2006 IEEE Philadelphia Section Awards and Recognition Dinner, Dr. Bruce Eisenstein was named Delaware Valley Electrical Engineer of the Year for his “dedicated leadership and significant contributions in advancing the state of the art in the electrical/electronic fields in the Delaware Valley.” This is the most prestigious individual award sponsored by the Section, recognizing an outstanding career of contributions at the highest level by an individual of stature and visibility who represents the profession well and projects a strong positive image.

Fontecchio: Outstanding Faculty Mentor Dr. Adam Fontecchio was the inaugural recipient of the Graduate Student Association Outstanding Mentor Award. Forty-four nominations were received from graduate students for 21 faculty members across the University’s colleges and schools. Dr. Tim Kurzweg and Dr. Bahram Nabet of the ECE Department also were nominated, and Dr. Nabet received honorable mention.
Dr. Karen Miu received the 2005Eta Kappa Nu Outstanding Young Electrical and Computer Engineer Award at a ceremony at Drexel held in conjunction with the IEEE Region 2 Student Activities Conference Awards Banquet in April. She was cited for “her outstanding contributions in electric power distribution systems and for her involvement in student and professional activities.” Dr. Miu joined the ECE Department in 1998 and is now an associate professor. She has received Drexel’s Lindback Foundation Minority Junior Faculty Award, an Office of Naval Research Young Investigator Award and a 2000 NSF Career Award. She is an active member of IEEE, ASE, the Power Engineering Society and the Circuits and System Society. At Drexel, she has developed new courses in power, energy and control systems, advised the Society of Women Engineers Student Chapter, helped develop the Reconfigurable Distribution and Automation Control Laboratory and participated in many College of Engineering outreach programs.

Dr. Prawat Nagvajara

Dr. Prawat Nagvajara competed in the 2006 Winter Olympics in Torino, Italy, in the 15-km classical men’s cross-country skiing event. At age 47, he was the oldest Olympian competing in an endurance sport, and the sole representative of his native Thailand. He carried the Thai flag in the opening ceremonies and shared the Olympic experience with his wife, Gina, and their two sons, Nathan and Ty. Dr. Nagvajara received extensive local and international news media coverage. In 2002 he competed in the Winter Olympics in Salt Lake City.

Dr. P. Mohana Shankar

Dr. P. Mohana Shankar, Allen Rothwarf Professor of Electrical and Computer Engineering, received the Christian R. and Mary F. Lindback Foundation Award for Teaching Excellence, the most prestigious teaching award presented to University faculty.

Emeritus Professor Dr. Richard Coren is the author of a new book, God and Science Among the Infinities: Their Common History and Their Infinite Natures, that uses system theory to explore the relationship among God, science and technology. The book can be purchased through Amazon.com or BookSurge.com.

Dr. Bruce Eisenstein was chosen as an IEEE representative on the Accreditation Board for Engineering and Technology (ABET) Board of Directors. IEEE is a founding member of ABET, which is a federation of 28 professional societies engaged in the accreditation of college and university programs in applied science, computing, engineering and technology.

Dr. Eli Fromm was invited to serve on the advisory board of the National Academy of Engineering’s Center of the Advancement of Scholarship on Engineering Education.

Dr. Moshe Kam was re-elected IEEE Vice President for Educational Activities and Chair of the Educational Activities Board. The Board develops educational programs to help ensure the technological literacy of pre-university students, provides accreditation services to colleges and universities, develops continuing-education products and services for technology professionals worldwide and helps to educate the public about the engineering profession. Dr. Kam was also an official guest of the City of Guangzhou in China in April, and was recognized by the South China University of Technology with the title of Honorary Professor.

Da Vinci Engineering Press published Digital Design From Gates to Intelligent Machines by Dr. Bruce Katz. The book is a comprehensive introduction to the science and art of designing digital circuits.

Dr. Timothy Kurkowski was named associate editor of JMM3: Journal of Micro/Nanolithography, MEMS, and MOEMS, published by SPIE (The International Society for Optical Engineering).


Dr. Athina Petropulu and Dr. Xueshi Yang ‘02 (with co-authors) won the 2005 Signal Processing Magazine Best Paper Award from the IEEE Signal Processing Society for “Long-Range Dependence and Heavy-Tail Modeling for Teletraffic Data.” The paper was largely based on Dr. Yang’s Ph.D. thesis work advised by Dr. Petropulu, and appeared in the May 2002 special issue of Signal Processing Magazine on Signal Processing for...
Dr. Kapil Dandekar and Dr. Timothy Kurzweg received $240,000 from the National Science Foundation for their project “Multiple-Input Multiple-Output Diffuse Optical Local Area Networks.”

Dr. Gary Friedman (PI) and Dr. Alexander Gutsol and Dr. Alexander Fridman of the Mechanical Engineering and Mechanics Department and Dr. Manjula Balasubramanian of the Department of Pathology in the Drexel University College of Medicine received $292,000 from the Army through its Medical Research Acquisition program for the project “Non-Thermal Open Air Plasma Discharge for Fast Blood Coagulation and Wound Treatment.”

Dr. Adam Fontecchio, Dr. Eli Fromm, Dr. Caroline L. Schauer of the Materials Science Engineering Department, Dr. Elisabeth S. Papazoglou of the School of Biomedical Engineering, Science, and Health Systems and Dr. N. John DiNardo of the Department of Physics received $200,000 from the National Science Foundation to support “NUE: Nano-Enlightenment.” The goal of the project is to integrate short modules about nanotechnology into existing freshman and sophomore courses.

Dr. Peter Herczfeld received $416,000 of supplemental funding from the Office of Naval Research for his research project titled “Hybrid Fiber-Optic/Wireless System for High Capacity Military Communication.”

Dr. Moshe Kam and affiliated faculty member Dr. Spiros Mancoridis of the Computer Science Department were awarded $464,000 from Lockheed Martin as a subcontract to a Defense Advanced Research Projects Agency project under the SAPIENT (Situation-Aware Protocols in Edge Network Technologies) program. This is a spin-off activity from Drexel’s Applied Communications in Networking project.

Dr. Moshe Kam, Dr. Mun Choi of the Mechanical Engineering and Mechanics Department and Stephen Cox of the Office of the Provost have been awarded an Information Assurance Fellowship grant by the National Security Agency. The one-year, renewable grant of $209,000 will support undergraduate and graduate student work.

Dr. Chika Nwankpa, Dr. Karen Miu, Dr. Prawat Nagvajara and Dr. Jeremy Johnson of the Computer Science Department were awarded an NSF grant for “Computation of Power System Dynamics Through Mixed-Signal VLSI Emulation.” This project involves the development of computing techniques for large-scale power-system dynamics based on current mixed-signal VLSI emulation technology. With a budget of $240,000, this 3-year project will enhance ongoing work for the Department of Education started by this investigation team.

Dr. Warren Rosen received $149,000 from Biologics, Inc. for his project titled “Multi-level Security in Real-Time Shared Memory Computer Networks.”

Dr. Eric Gallo and Michael Ermold

Two exceptional ECE graduate students were among the seven recipients of Koerner Family Fellowships, which are awarded to graduate students in the College of Engineering for academic merit. Michael Ermold is advised by Dr. Adam Fontecchio, and Eric Gallo is advised by Dr. Bahram Nabet.

Joshua Freedman was part of a research team that received the Dean’s Award for College of Engineering graduate students at the University’s Research Day in April for “Terahertz Source for Testing Nano Plasmonic Sensors.” This is Gallo’s second external grant, remarkable for a graduate student. He was also an NSF Fellow.

Bora Garipcan, a Ph.D. student at Hacettepe University in Ankara, Turkey, is spending a year-long residency in the ECE Department as recipient of a NATO International Scholarship. He is working with Dr. Bahram Nabet and Dr. Jonathan Spanier (Material Science Engineering Department) on nanowire sensors.


At Commencement 2005, Lit-Hsin Lee, a Ph.D. student advised by Dr. Moshe Kam and Dr. Leonid Hrebien, was the inaugural recipient of the University’s cash prize for the doctoral student deemed to have shown the most promise in enhancing Drexel’s reputation in engineering and science. Dr. Lee is now a postdoctoral fellow at Harvard.

Nico Segal, a B.S./M.S. student advised by Dr. Karen Miu, won the ACT 101 Student Achievement Award for 2005-06 based on her outstanding academic performance and participation in the ACT 101 program funded by the Pennsylvania Department of Education.

Christian Schegen, an undergraduate electrical engineering student, was among 62 undergraduates to win scholarships from the German Academic Exchange Service for study in Germany during the 2006-07 academic year. Schegen will be attending the Technical University of Dresden, where he will spend six months studying and six months doing research.

Hemang Shah, a Ph.D. student advised by Dr. Adam Fontecchio, was selected as a 2006 Hill Fellow. The Hill Fellowships are designated for Ph.D. students in the College of Engineering who have demonstrated excellence in their undergraduate and graduate careers and exhibit the potential to achieve academic distinction at the Ph.D. level.
George N. Alexy ’71 was named president and CEO of FyreStorm, a fabless semiconductor company that develops power management chips for use in wireless electronics gear. Prior to joining FyreStorm, Mr. Alexy served as president and CEO of BRECIS Communications, which he led from its founding in mid-1999 until its acquisition by a combination of Cavium Networks and PMC-Sierra in mid-2004.

Salvatore Anastasi, Esq. ’90 was named one of the “Pennsylvania Super Lawyer Rising Stars” by Law & Politics, the publisher of Super Lawyers magazines in 16 states. Mr. Anastasi is a patent attorney who focuses his practice on domestic and international patent preparation and prosecution and intellectual property litigation at the law firm Barley Snyder. He is also chair of the firm’s Intellectual Property and Technology Law Group.

Manik Kumar Arora ’92 was included in the group of business leaders named “40 Under 40” by the Philadelphia Business Journal. He is president and CEO of Arora Engineers, an engineering and construction management firm.

Brian P. Burns ’85 was appointed chief technology officer for infrastructure in the U.S. Department of the Interior. He is responsible for the strategic direction of the Department’s IT infrastructure, including identifying short- and long-term goals of infrastructure initiatives.

Moiz M. Carim, M.D. ’73 has been named chief of ophthalmology at Reading Hospital in Reading, Pa., providing clinical leadership to 19 ophthalmologists. He has been in private practice at Carim Eye and Retina Center in Reading since 1991.

Stephen P. Cloak, Jr. ’83 was designated a Naval Air Systems Command (NAVAIR) AIRSpeed Lean Six Sigma Black Belt after completing the George Group training program, which spanned five months and involved both classroom study and hands-on project work. He will now take on an 18- to 24-month assignment as a full-time black belt. He previously was chief engineer on a major program within NAVAIR’s Air Combat Electronics Program Office at Patuxent River, Md. Mr. Cloak completed the College of Command and Staff program at the United States Naval War College in 1992 and earned his MBA from Salve Regina University in 2003. He is a member of IEEE and a commander, aerospace engineering duty, in the Navy Reserve.

Kevin Fallon ’79 was appointed president and CEO of Pelion Systems, a leader in supply chain optimization solutions. Mr. Fallon was previously president of Denver-based internet security firm MX Logic, where he led an increase in sales of more than 900 percent in one year.

Charles (Chuck) Gershman ’86 was named one of five finalists for the 2006 EE Times Annual Creativity in Electronics Executive of the Year Award. Mr. Gershman is president and CEO of Bay Microsystems, a communications technology company delivering programmable packet and transport processors and network elements for the world’s most demanding broadband networks.

Ray Martino, Jr. ’84 was named vice president and chief technology officer of Symbol Technologies, which provides companies with real-time data at the point of activity and enables the deployment of IT upgrades over a secure wireless network. Mr. Martino will guide Symbol’s strategy in the development of new technologies and next-generation products and services.

Dr. Xiang Wang ’87, ’91 was named one of the 30 hottest lawyers in Asia for 2005 by Asian Legal Business. A 2002 ECE Distinguished Alumni Award Recipient, Dr. Wang is with Jones Day, one of the largest law firms in the world with nearly 2,500 lawyers in 33 countries.

Nishant Dhawan is an electrical engineering major with a concentration in electronics who finished B.S. and M.S. coursework this year after just four years. He is completing his thesis based on research he has done with Dr. Moshe Kam over the past two years. Nishant is a member of IEEE andEta Kappa Nu and was the ECE undergraduate student department head. “ECE’s curriculum has a broad scope,” he says, “and with the lab-intensive courses and co-ops I feel that I can make practical applications of the information I’ve learned in my classes.” This knowledge will serve him well as he makes the transition from an academic setting to industry this summer.

Elaine Garbarine is a 2006 electrical engineering graduate. She plans to pursue a Ph.D. in electrical engineering under the advisement of Dr. Athina Petropulu. Garbarine is a member of Tau Beta Pi, Eta Kappa Nu, the Golden Key Honors Society and the National Society of Collegiate Scholars. Her co-op assignments have included AT&T Research and Development Laboratories and Cliffcon, Weiss & Associates, Inc. The co-op program was one of the main reasons Elaine considered Drexel: “I felt that it would give me career options and help me decide what I wanted to do.” A highlight of her undergraduate experience was the relationships she built with ECE Department faculty, so she is looking forward to a few more years here.

Mark LeVan is a computer engineering and electrical engineering double-major who graduated this June. Mark was drawn to Drexel because of the urban location, the co-op program and the variety of activities Philadelphia had to offer. He has been awarded a prestigious Department of Defense Information Assurance Scholarship to pursue his Drexel master’s degree. He feels strongly that the rigor of an engineering curriculum is important to adequately prepare future engineers for their profession. For Mark, the College of Engineering’s freshmen and sophomore program (tDEC) played an important role in his academic experience: “tDEC made me know I wanted to be an engineer because I liked the challenge of it.” Mark has been a member of IEEE and the Golden Key Honor Society and is planning to go into industry.
We Need You!

The ECE department relies on the generous support of alumni and friends to sustain our excellence in programs and facilities. All it takes is a couple of hours of your time. You will be able to meet and encourage our new students and motivate them to succeed in academics as well as in life. Such interactions are welcomed by our students and faculty. If you can volunteer your time and efforts, please let us know by returning this form to: Department Head, Department of Electrical and Computer Engineering, Drexel University, 3141 Chestnut Street, Philadelphia, PA 19104.

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