

Generous Pledge Launches Dominick A. Pagano Scholarship

Alumnus Dominick Pagano has committed to establish a generous endowment of \$100,000 that will be used to fund an



undergraduate scholarship in Engineering. The scholarship, to be known as the Dominick A. Pagano Endowed Scholarship in Computer Science

& Engineering, will target economically disadvantaged continuing students enrolled in Computer Science or Electrical Engineering who demonstrate consistently high academic achievement. The endowment will be built over the course of four years and be fully funded in 2007.

Marty Wood, Assistant Dean for Undergraduate Education, commented "It is so pleasing to see the sense of allegiance our alumni have for the School of Engineering. This generous contribution will provide at least two academic merit scholarships annually for continuing students."

Mr. Pagano earned his B.S. degree in Electrical Engineering in 1968. He is President and CEO of Dapco Industries, Inc., Ridgefield, CT. Mr. Pagano was inducted into the University of Connecticut Academy of Distinguished Engineers in April (see page 18), and he is a previous recipient of the Distinguished Engineering Alumni Award.

In addition to his generous support of undergraduate education, Mr. Pagano has been and continues to be an active supporter of research initiatives within the School. In his capacity at the helm of a high-tech company with a significant interest in non-destructive testing using ultrasound, Mr. Pagano has supported an ongoing research project involving several faculty in the Department of Computer Science & Engineering (currently including Drs. Reda Ammar, Ian Greenshields and Howard Sholl) in the area of real-time ultrasound systems.

The project has supported a number of M.S. and Ph.D. students and produced numerous theses and scholarly papers.

This new contribution by Mr. Pagano is the latest in a long list of contributions he has made to the University and the School, in particular.

Cantor Establishes Endowed Scholarship in Engineering

School of Engineering alumnus Michael Cantor, a partner in the law firm Cantor Colburn LLP, a leading national firm specializing in intellectual property law, recently



donated \$25,000 to establish an undergraduate scholarship in engineering. The Cantor Colburn LLP Endowed Scholarship will target students

who are members of traditionally under-represented populations, including minority and female students.

Mr. Cantor earned his B.S. in Chemical Engineering/Materials Engineering in 1980 and completed his J.D. at the University of Connecticut Law School in 1983. He is a member of the Connecticut Bar Association, Connecticut Patent Law Association, American Bar Association, American Intellectual Property Law Association, International Trademark Association, and Tau Beta Pi. He is registered to practice before the U.S. Patent & Trademark Office. He also teaches patent law and procedure as an Adjunct Professor in Patent Law at the University of Connecticut School of Law.

Mr. Cantor has been actively involved in educational outreach geared to introduce school-age children to engineering and the world of invention. In 2003, he was inducted as a Founding Fellow of the University of Connecticut Academy of Distinguished Engineers.

Ewing Establishes Undergraduate Scholarship

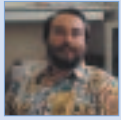
Mr. Samuel D. Ewing, Jr., President of Ewing Capital, Inc., made a generous \$25,000 gift to the School of Engineering to establish an undergraduate



scholarship, to be called the "Ewing Scholars Scholarship Fund." The scholarship will target academically gifted students who demonstrate outstanding scholastic performance, who contribute toward to the diversity of the School of Engineering and who attended a public high school in an urban district.

Mr. Ewing, who earned his M.S. in Electrical Engineering from the University of Connecticut in 1964, founded the investment firm of Ewing Capital, Inc. in 1981. The company has grown to become one of the largest and most prestigious minority-owned brokerage and research firms in the nation. He has more than 30 years' professional experience in investment and financial management, security analysis, investment banking, venture capital and computerized investment techniques. In addition to Ewing Capital, Mr. Ewing is the founding principal of two other successful organizations, Broadcast Capital Fund Inc. and Bankers Trust Company Private Placement Department. He earned his MBA at Harvard University. Mr. Ewing serves on the Engineering Dean's Advisory Board. In 2001, he received the Distinguished Engineering Alumni Award, and in 2003, he was inducted as a Founding Fellow of the University of Connecticut Academy of Distinguished Engineers.

FacultyNews



Amvrossios C. Bagtzoglou, associate professor of Civil & Environmental Engineering, was appointed Editor for the journal *Water, Air, and Soil Pollution: Advances in Remediation Technology*. He also was elected a standing member of the Science & Technical Advisory Committee of the U.S. EPA Long Island Sound Study.



Rajeev Bansal, professor of Electrical & Computer Engineering, has been named to the Editorial Board of the *International Journal of RF & Microwave Computer-Aided Engineering*, published by Wiley InterScience.



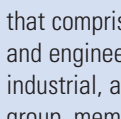
Douglas Cooper, University Teaching Fellow and professor of Chemical Engineering; **John DeWolf**, professor of Civil & Environmental Engineering;



Joseph Helble, professor and Department Head of Chemical Engineering and **Bahram Javidi**, Board of Trustees professor of Electrical & Computer Engineering, were elected to membership in the Connecticut Academy of Science & Engineering (CASE). CASE is a private, nonprofit, public-service institution patterned after the National Academy of Sciences



that comprises 200 distinguished scientists and engineers from Connecticut's academic, industrial, and institutional communities. As a group, members identify and study issues and technological advances of importance to Connecticut's citizenry and economy, and they provide objective, expert advice on science- and technology-related issues to state government and other Connecticut institutions.

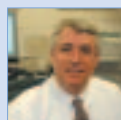


Professor of Computer Science & Engineering **Steve Demurjian** was quoted in a January 17, 2004 *Hartford Courant* article entitled "Screening System Stirs Concerns of Misuse." It described federal plans to develop a controversial nationwide airline passenger tracking system, known as Computer Assisted Passenger Prescreening System (CAPPS II) to



enhance air safety and national security. Dr. Demurjian stated that—short of the government's amassing a database containing social security numbers, bank account numbers, names and birthdates—the risk of a breach of personal and identity security can be controlled.

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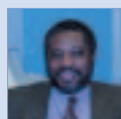


John Enderle, professor of Electrical & Computer Engineering and director of the Biomedical Engineering Program, was recently named a member of the Engineering Accreditation Commission of ABET (Accreditation Board for Engineering & Technology).

One of Dr. Enderle's M.S. students in biomedical engineering, **Umair Siddiqui**, was awarded the American College of Clinical Engineering Best Student Paper Competition Award for 2004 for his thesis paper on the design of the "Universal Remote Alarm System by using Virtual Instrumentation and LabView Graphical Programming."



Gerald Engel, professor of Computer Science & Engineering at the UConn Stamford campus, was elected 2005 president of the IEEE Computer Society. IEEE is the oldest and largest association for computing professionals. He will serve as president-elect during 2004. Dr. Engel also was presented the Meritorious Achievement Award in Accreditation Activities by the IEEE Educational Activities Board.

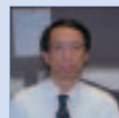


Associate professor of Civil & Environmental Engineering **Norman Garrick** was awarded a Fulbright Scholarship to teach and conduct research in urban planning at the University of the West Indies in Jamaica. His scope of interest will include subjects related to public transportation in Kingston, successful strategies for sustainable and environmentally friendly transportation, and land use planning.



A paper entitled "Real-time Three-dimensional Display of Micro-objects" authored by **Bahram Javidi**, Board of Trustees professor of Electrical & Computer Engineering, and Ju-Seog Jang appears in the

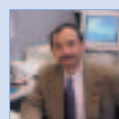
Frontiers of Engineering newsletter, volume 5, Issue 1. *Frontiers of Engineering* is a meeting series sponsored by the National Academy of Engineering (NAE) and provides a forum for scientists (aged 30-45) deemed by NAE to be working at the leading edge of technology and possessed of the qualities that define a future engineering leader at the national level.



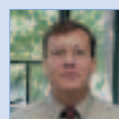
Peter Luh, SNET Professor of Communications & Information Technologies in the Computer Science & Engineering Department, was awarded the 2003 Distinguished Service Award, presented by the IEEE Robotics and Automation Society, and the Kayamori Best Automation Paper Award (2003), presented by the IEEE International Conference on Robotics and Automation.



In January 2004, **Robert Magnusson**, professor and Department Head of Electrical & Computer Engineering, was named Associate Editor and member of the Board of Editors for *Optical Engineering*, a publication of SPIE, the International Society for Optical Engineering.



Associate professor of Civil & Environmental Engineering **Ramesh Malla** received an official citation from the State of Connecticut General Assembly for his volunteer support to the Connecticut Invention Convention. Dr. Malla also served as the Conference General Chair of the highly successful 9th ASCE Aerospace Division International Conference on Engineering, Construction and Operations in Challenging Environments (Earth & Space 2004) held in Houston, TX in March.



Associate professor of Civil & Environmental Engineering **Fred Ogden** and two graduate students, doctoral candidate **Justin Niedzialek** and master's student **Jon Zahner**, traveled to Panama in April to install field instrumentation to observe streamflow in the upper Rio Chagres watershed. The team is studying tropical hydrology in the basin with the objective of better understanding why standard hydrology models

School Welcomes New Administrators

perform poorly in the basin. They installed stream water level data recorders, surveyed channel cross-sections, and performed soil infiltration tests.



Dani Or, Northeast Utilities Foundation Chair Professor of Environmental Engineering, has been elected a Fellow of the Soil Science Society of America.



UTC Chair Professor of Fuel Cell Technology **Nigel Sammes** has been elected a Fellow of the Institute of Materials, Minerals and Mining, UK (IOM3). Dr. Sammes also was recently named to the Editorial Board of *Fuel Cells—From Fundamentals to Systems*, published by Elsevier, and is Editor-in-Chief and Founding Editor of the *Journal of Fuel Cell Science and Technology*, published by ASME.

The joint student chapter of **The American Society for Materials/The Minerals, Metals & Materials Society (ASM/TMS)** at UConn—which has an exceptionally active outreach program with area schools and participates in all of the School of Engineering outreach events—won two national awards during the year. The group won a Chapters of Excellence award for Promotion of the Field in 2003; this award confers a \$500 cash gift and significant recognition. In September, the chapter learned it captured first place in the highly competitive 2003 TMS World Materials Outreach Contest, an honor that conferred a \$1,000 award. The chapter is advised by professor and Interim Department Head of Metallurgy & Materials Engineering, **Leon Shaw**.

Swetha Sridharan, a graduate student in the Department of Metallurgy & Materials Engineering, was awarded first prize in an International Graduate Student Paper Contest sponsored by Bodycote Corporation. Ms. Sridharan is advised by Mechanical Engineering professor **Eric Jordan** and professor-in-residence of Metallurgy & Materials Engineering, **Maury Gell**. Her paper was entitled “The Potential of Photoluminescence Piesospectroscopy as a Non-Destructive Inspection Technique for Electron Beam

Physical Vapor Deposition Thermal Barrier Coatings.”



Assistant professor of Chemical Engineering, **Ranjan Srivastava**, was presented the coveted Rogers Teaching Award for excellence in teaching. The award recipient is selected by a vote of the senior class. In presenting the award, the students commended Dr. Srivastava on his enthusiasm, concern for students, creative instructional methods and professionalism.



Emeritus professor **T.C. Ting** (formerly Computer Science & Engineering) delivered keynote addresses during the Annual Conference of Association for Taiwanese Engineers in North America, Taipei; and the Information Security South Africa Annual information and Computer Security Conference, Johannesburg.



Celal Tufekci, assistant department head for the Mechanical Engineering Department, and Gary Jacobson were awarded a U.S. Patent for their novel process entitled “Transport Method and System for Controlling Timing of Mail Pieces Being Processed by a Mailing System.” The patent (# 6,685,184) was awarded February 3, 2004.



Assistant professor of Metallurgy & Materials Engineering **Mei Wei** was awarded the K.C. Wong Fellowship by the Chinese Academy of Sciences for the year 2004.



Thomas Wood, professor of Chemical Engineering and Molecular & Cell Biology, filed a patent disclosure for an anthrax vaccine in April 2004. The work—which Dr. Wood conducted with his former student, Dr. Dacheng Ren, and professor Martin Blaser and Marcus Jones at New York University—involves the use of furanone to inhibit the growth of *B. anthracis* and the bacteria’s toxin production, and to prevent or treat *B. anthracis* infection. The invention also provides methods to enhance an immune response to *B. anthracis* infection.

In the spring, the School of Engineering hailed five new leaders in administrative roles as the previous incumbents completed their terms and returned to regular faculty duties.



Dr. Theodore Bergman, Department Head of Mechanical Engineering from 1998-04, donned a new hat on July 1, when he was named Associate Dean for Research & Outreach. Dr. Bergman is responsible for planning and executing a range of activities intended to leverage and enhance the School’s success in terms of research productivity, fundraising and alumni activities.



Dr. Kenneth Reifsnider, Pratt & Whitney Chair Professor of Design & Reliability in the Mechanical Engineering Department, was chosen to direct the School’s three-year-old Connecticut Global Fuel Cell Center. Dr. Reifsnider assumed his new role in early May. Please see a related story on page 5.



Dr. Doug Cooper, University Teaching Fellow and professor of Chemical Engineering, was appointed to a three-year term as Department Head effective July 15. Dr. Cooper assumed the reins from former Head Joseph Helble, who is serving a one-year Revelle Fellowship in Washington, DC and will resume his regular faculty duties upon his return.



Dr. Ranga Pitchumani, Distinguished Professor of Engineering, assumed the Department Head position in Mechanical Engineering for a three-year term effective July 1, taking the reins from former Head Dr. Bergman.



The Metallurgy & Materials Engineering Department has a new interim leader in **Dr. Leon Shaw**. He takes the baton from Dr. Nitin Padture, who completed his term as Interim Head in May.

Stephen Austin (Ph.D. Mechanical Engineering, '95) was recently promoted to Hardware Research and Development Manager at Gerber Technology in Tolland, CT.

Barry Altman (B.S. Mechanical Engineering, '67) is Director of Operations at Germane Systems, Chantilly, VA. Prior to joining Germane, he served as President and Chief Operating Officer of a contract manufacturing division of Tru-Circle Corporation building high-end servers, medical device components, and telecommunication equipment.

Richard Ballantyne (B.S. Mechanical Engineering, '65) is Vice President-General Counsel of Harris Corporation. He previously was Vice President-General Counsel and Corporate Secretary of Prime Computer, Inc.

Kenneth Berg, P.E. (B.S. Civil Engineering, '73) is vice president, engineering and project sales, for American Grating, LLC in City of Industry, CA. A registered P.E. in 22 states and British Columbia, Canada, he is a member of the board of directors of the American Composites Manufacturers Assn.

M. David Burghardt (M.S., Ph.D. Mechanical Engineering, '68, '71) is Chair of Computer Sciences at Hofstra University, former Chair of Engineering, and the author of 10 texts in thermodynamics, diesel engines and engineering fundamentals.

David Caldeira (B.S. Mechanical Engineering, '79) is Vice President and General Manager of Filenet, Inc. and resides in Irvine, CA.

John Connolly (M.S. Mechanical Engineering, '82) is Vice President of ABB Energy Capital.

Robert Cotton (B.S. Electrical Engineering, '79) was promoted to director of application engineering for Honeywell's aerospace electronics business in Phoenix, AZ.

Kevin Doyle, J.D. (B.S. Mechanical Engineering and Materials Engineering, '76) was appointed Vice President, Environmental Health & Safety (EHS) for Pratt & Whitney, East Hartford, CT. In this position, he is responsible for all aspects of EHS at the company.

Salvatore Fazzino (B.S., M.S. Civil Engineering, '62, '70) retired after serving as director of public works in Middletown, CT for 22 years.

Forrest Fleming (B.S. Mechanical Engineering, '64) retired after more than 38 years of federal service in the Department of Defense and Central Intelligence Agency.

Anthony Gazikas (B.S. Mechanical Engineering, '81) is Executive Director and World Wide Head of Development Informatics for Pfizer Global Research & Development, New London. He is responsible for global delivery of clinical and regulatory applications and oversees an annual budget of \$100 million.

Edward Hill, Jr. (B.S., M.S. Civil Engineering, '92, '94) is a post-doctoral fellow in MIT's MITgcm project, which is designed to simulate flow and transport phenomena in the atmosphere and oceans.

William Hover (B.S. Civil Engineering, '79) is district office manager of the flagship office of GZA GeoEnvironmental, Inc., Norwood, MA. The company is among the largest environmental and geotechnical consulting firms in New England.

Juthamas Jitcharoen (Ph.D. Metallurgy & Materials Engineering, '00) is a faculty member in the Department of Chemistry, Ubon Ratchathani University, Thailand.

Young-Won Kim (Ph.D. Metallurgy & Materials Engineering '76) was honored by the Metallurgy & Materials Engineering Department with receive do the 2003 Outstanding Alumnus Award in recognition of his pioneering contributions to intermetallic alloys. He is a senior scientist with UES Inc. of Dayton, OH.

Andrew Kuether (B.S. Civil & Environmental Engineering, '01) received his M.S. in civil and environmental engineering from the University of Wisconsin – Madison. He is employed by Opus Architects and Engineers, Minneapolis.

Kevin Kulak (B.S. Mechanical Engineering, '85) is Vice President of JPMorgan Chase and resides in Darien, CT.

Glen Larnerd (B.S. Chemical Engineering, '68) joined Hitachi, San Jose, CA in August 2003 after retiring from IBM in 2001.

David Marnicki (B.S. Civil Engineering, '73) was elected to the Vestal, NY town council. He has an engineering and land surveying business located in Vestal.

Raymond Nuzzo (B.S. Electrical Engineering, '83) founded his own law firm specializing in patent, trademark and copyright law.

Sam Pierre-Louis (B.S. Mechanical Engineering, '97) is a data security officer for University of Alabama at Birmingham Health System.

Robert Pohlmann (B.S. Electrical Engineering, '92) joined Raytheon Intelligence and Information Systems, Falls Church, VA, as a systems engineer.

David Schuler (B.S. Mechanical Engineering, '92) is an attorney at Fish & Richardson in Boston. He also serves as Associate Editor of the Connecticut Law Review.

Paul Yost (M.S. Mechanical Engineering, '59) is President of the James Madison Foundation. This position is by appointment of the President of the United States. From 1986 to 1990, Admiral Yost was the 18th Commandant of the U.S. Coast Guard. He has received two Distinguished Service Medals, the Silver Star, the Legion of Merit Medal, the United Nations Service Medal, and many other awards.



Larry Brown ('57)

Gifts Augment Engineering

The School of Engineering is deeply grateful to our generous friends and alumni, whose support during the year has allowed us to strengthen our recruitment and retention of outstanding undergraduate and graduate students and to expand our educational outreach. In addition to the gifts (*page 23*) from Michael Cantor, Samuel Ewing, Jr., and Dominick Pagano, the School was honored to receive:

A donation of ExxonMobil stock valued at \$20,000 from Robert and Beatrice Mastracchio. The gift will augment the Robert and Beatrice Mastracchio Endowed Scholarship for academically gifted graduate students. Mr. Mastracchio is a School of Engineering alumnus (B.S.E. '64 and M.S. '66, Chemical Engineering) and a Founding Fellow of the University of Connecticut Academy of Distinguished Engineers (2003). Mr. Mastracchio was profiled in the 2003 issue of the Chemical Engineering magazine, *Principles*. This profile (*page 15*), may be found on the Chemical Engineering Department website at www.engr.uconn.edu/cheg/pdf/principles2003.pdf.

A donation of IBM stock valued at \$26,000 from Walter Rose, which was used to enrich the Walter M. Rose Endowed Scholarship. Mr. Rose is a 1949 graduate who earned his bachelor's degree in Mechanical Engineering. He is a Founding Fellow of the University of Connecticut Academy of Distinguished Engineers (2003). A brief profile for Mr. Rose appeared in our last issue of *Frontiers* and also appears on our website at www.engr.uconn.edu/SoE/soe_adehof.htm.

A donation of \$5,079 from Isabelle Farrington to augment the Harold P. Farrington Engineering Scholarship for deserving undergraduate students.

Outreach Activities Inspire Middle School Students

Under the guidance of Director Kevin McLaughlin, the Engineering Diversity Program carried out a variety of outreach activities throughout the spring intended to introduce engineering to a diverse pool of students.

Mr. McLaughlin, (B.S. Chemical Engineering, '83) a former science teacher at E.O. Smith High School in Storrs, accompanied by 11 undergraduate and graduate students from under-represented populations, taught seven afternoon sessions throughout the spring at Hartford's Maria Sanchez Elementary School. Students in the fifth and sixth grades participated in hands-on exercises in which they constructed a solar/alternative energy house from a kit and completed related experiments. The fun afternoons also allowed children from an inner-city community to meet and spend time with college-age role models, including three who grew up in Hartford.


In January, fourth and fifth graders from Plainfield Middle School enjoyed two special classes in engineering taught by Mr. McLaughlin, in which they built small electric motors and saw electricity and magnetism demonstrations that helped them understand the basic principles of motor design.

The Pre-Engineering Program (PEP), now in its 16th year, brought students in grades seven through nine to campus each of seven Saturdays, where they were instructed and mentored by 17 undergraduate and graduate engineering students from underrepresented populations. Working in teams, the participating eighth graders built and programmed robots incorporating Lego's Mind Storm bricks. In April, the EDP staff also hosted the School of Engineering's ninth Multiply Your Options convention, during which more than 200 8th grade girls participated in roughly 44 workshops held in the UConn Student Union.

In addition, Mr. McLaughlin invited 15 top seventh grade science and math students from New Britain's Roosevelt Middle School to visit Storrs for a unique hands-on learning experience involving pennies. They chemically removed oxide films from the surface of pennies using salt (sodium chloride) and vinegar (acetic acid); mechanically polished pennies using sodium bicarbonate; and chemically deposited zinc onto the surface of a "shiny" penny after which one of the "silver" pennies was warmed on a hot plate until it turns gold (brass) from the thermal diffusion of the zinc into the copper layer below. Mr. McLaughlin remarked, "The kids really like making 'gold' and 'silver' pennies even after you have explained what really happened."



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