



College of
ENGINEERING
VILLANOVA
UNIVERSITY

THE FINAL DRAFT

VILLANOVA UNIVERSITY

COLLEGE OF ENGINEERING

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EXCELLENCE

INNOVATION

INTEGRITY

MESSAGE FROM THE DEAN - DR. BARRY JOHNSON

We have made tremendous progress in the College of Engineering since our last Newsletter in the spring of 2003. Evidence of continuous improvement is all about us, from the introduction of new undergraduate courses and graduate programs to the 242 first year students who joined us this fall.



Our new strategic plan has been the driving force for much of the change. Some of the key accomplishments in the past several months include the introduction of a new wireless laptop program for undergraduates. Each incoming

first year student received a laptop last August that is equipped with a wireless 802.11a/b module that permits un-tethered, high-speed access to the internet in most engineering buildings. Over the next three years, all undergraduates will receive laptop models that will be upgraded every two years. This is the first phase of an effort to continu-

ally integrate advanced information technology tools and techniques into the classroom, better preparing our graduates to be successful in this ever-changing digital age.

Another notable accomplishment is the inauguration of the College's first Ph.D. program. The new doctoral offering is unique with respect to traditional engineering Ph.D. programs, in that it is designed to be highly interdisciplinary in nature. This approach is consistent with the mission of the University and more reflective of the future of the engineering profession. Further, we have significantly expanded our graduate curriculum through the introduction of integrated five-year bachelor/master degree programs as well as the first master degree offered entirely on-line. The integrated programs are available to qualified students in all five majors, whereas the Civil Engineering degree is the first of five masters that will be provided over the internet within the next few years.

Two new interdisciplinary research centers, the Center for Nonlinear Dynamics and Control and the Villanova Center for the Environment, have been established as well. Combined with our existing and nationally recognized Center for Advanced

Communications, we have significantly increased our research efforts in these critical engineering areas. Stimulated by the centers, our output in competitive research proposals to governmental agencies and corporations has increased almost 50% over last year, and the dollars awarded in research grants has more than doubled. Both metrics are a tribute to the scholarly competence and entrepreneurial spirit of our faculty. Emphasis on research will continue as an integral part of the educational process because of the growing need to expose our undergraduate and graduate students to leading edge knowledge. We are off to a good start, but there is still much to do relative to improving our curricula, expanding research opportunities, enhancing student services and upgrading facilities. For the moment, however, it's worth taking a brief pause, celebrating and ending my message by announcing that this year the College of Engineering completed its best ABET accreditation in 24 years and is currently ranked 9th in the nation among schools of engineering offering a bachelor or master as the highest degree (U.S. News and World Report). With our new Ph.D. program, the latter category may change but the opportunities will definitely increase.

NEW INTERDISCIPLINARY ENGINEERING DOCTORAL PROGRAM

The College of Engineering took a major step this year in the expansion of its graduate programs. For several years, the faculty has discussed the advisability of moving the College into the engineering doctoral arena. In the fall of 2002, Dr. Johnson charged a faculty task force to examine the feasibility of an interdisciplinary engineering doctoral program. The task force was composed of two faculty representatives from each department and was chaired by Dr. Edward McAssey, Associate Dean of Engineering.

An interdisciplinary approach rather than the traditional single discipline was selected because of the needs of the engineering profession. Today, the engineering professional works in an environment where solutions to real world problems involve more than one discipline. For example, the packaging of electronic components and systems requires knowledge of electronics (devices, power and circuit/system design), mechanical engineering (heat transfer, vibrations and system dynamics), materials (composites and fracture mechanics) and manufacturing. Even though such problems are usually addressed by teams composed of members from each engineering discipline, it is preferable that every member of the team be familiar with more than his/her own field of study in order to insure effective collaboration and timely

solutions. In addition, an interdisciplinary program would allow the College to pool the talents of all faculty members to address identified topic areas.

The first step taken by the task force was to determine the engineering faculty's interest in doctoral programs. The results of a survey indicated strong support by over seventy percent of the faculty. Follow-on discussions with the faculty identified a number of interdisciplinary areas such as electronic packaging, robotic and electromechanical systems, innovative structures, signal processing and communications, biotechnology, and environmental studies to name a few. Over a period of six months, the task force established a proposed organization for the program, degree requirements, and admission requirements. Detailed degree and admission requirements are available in the Engineering Graduate Catalog on our website (<http://engineering.villanova.edu>).

Dean Johnson presented the proposed doctoral program to the University Board of Trustees at their June meeting. The program was approved, and the College started to accept applications in the fall of 2003. Additional information about the program can be obtained by addressing inquiries to deanegr@villanova.edu.

FIVE-YEAR COMBINED BACHELORS/MASTER'S PROGRAM

In many engineering fields, the Master's degree is rapidly becoming the entry level requirement for graduates seeking employment. For several years, the ECE and ME departments have offered their students the opportunity to remain an extra year at Villanova and earn a master's degree. This spring, all four departments approved a new program called a Combined Bachelors/Masters Program.

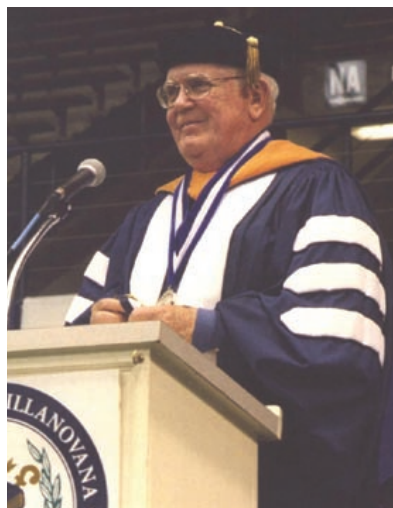
The Combined Bachelors/Master's Program permits qualified students, who enter the program in their senior year, to take graduate credits which will be counted toward their mas-

ter's degrees. The baccalaureate is awarded upon completion of the undergraduate requirements. This program is academically demanding and requires the recommendation from the student's undergraduate program advisor. Students apply to the Combined Bachelors/Master's program early in the second semester of their junior year. The standard department graduate admission process is used.

Last spring, seven students entered the program and were provided tuition remission as tuition scholars. A tuition scholar carries a full graduate course load of 9 to 12 credits per semes-

ter and provides ten hours a week of service to the department. The College of Engineering will provide approximately eight tuition scholars each year to the combined program. Typically, the service provided would be as assistants in undergraduate laboratories. Since the students have just completed these laboratories, they provide an ideal resource to the lab instructor. Their presence also shows the undergraduate students the opportunities afforded by full time graduate study. The College of Engineering feels that it is important to make our students aware of the graduate school career path.

ASSOCIATE DEAN EDWARD V. MCASSEY RETIRES



Dr. Edward V. McAssey, Jr.

Dr. Edward V. McAssey, Jr. retired this summer after an illustrious career at Villanova that spanned 36 years. Dr. McAssey arrived in the Department of Mechanical Engineering in 1967 after completing his PhD studies at the University of Pennsylvania. In 1975 he won the Lindback Award for excellence in teaching, and in 1979 he was awarded the Farrell Award by the College of Engineering Student Council.

In 1983, he became Chairman of the Mechanical Engineering Department and held that position until 1988. In

1992, the American Society of Mechanical Engineers honored him by promoting him to the rank of Fellow. This honor was accorded to him to acknowledge both his research in the fields of heat transfer and two phase flow, and his service to the society. In 1995 he was installed as the first James R. Birlle Chair of Energy Technology, an honor Villanova University bestowed on him to acknowledge his outstanding scholarship.

In 2001, upon the retirement of Dean Robert D. Lynch, he was appointed Acting Dean of Engineering, and in 2002 he became the Associate Dean for Academic Affairs, a post he held until his retirement.

Dr. McAssey has given selflessly of his time and knowledge to the entire University community through his many years of teaching, leadership, research, advising and mentoring of both graduate and undergraduate students, social action, and committee involvement.

He plans to continue his activities in his retirement albeit at a lower level of intensity. This will allow him to spend more time with his wife Anne, children, and grandchildren.

At a retirement dinner given in Dr. McAssey's honor at the Overbrook Country Club on May 29, 2003, Dean Barry C. Johnson voiced the feelings of those present when he paraphrased a quote from William Shakespeare's Julius Caesar: Ed is one of the noblest of them all ... his life is gentle and the elements so mixed in him that nature might stand up and say to all the world, 'this is a good man'.

NEWSLETTER STAFF

Dr. Edward V. McAssey, Jr.
Dr. John Molyneux
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DISTANCE EDUCATION

Distance Education (DE) has grown by leaps and bounds within the College of Engineering. We now offer a fully **Online Master's Degree** from the Civil and Environmental Engineering Department as well as Undergraduate Summer courses. These, in addition to our Online FEE Review course, produce one of the most complete distance education programs in the area.

Distance Education in the College was started in 1999 by a small group of dedicated faculty and students. It has grown into a fully self sufficient program with its own facilities and staff. Seán O'Donnell has directed the college's DE effort since December of 2000. The DE program also provides many on campus jobs for students, giving them valuable work experience.

The goal of DE at Villanova Engineering is to offer quality graduate programs online to students who cannot come to campus but wish to share in the Villanova Experience. These courses look, feel, act, and cost the same as an on-campus course. This is achieved by creative use of advanced communication technologies.

Over the next few years, every Master's degree offered by the college will be available online. This will offer new students, alumni, corporate partners, and many others the chance to get the Villanova Master's degree, even if they can't physically be here. For more information, please contact Seán O'Donnell at 610-519-5054. You can email him at: sean@villanova.edu



Distance Education Room in Tolentine Hall

NEW ASSOCIATE DEAN OF ACADEMIC AFFAIRS IN THE COLLEGE



John Molyneux, Ph.D., P.E.

The College of Engineering welcomes Dr. John Molyneux, the new Associate Dean of Academic Affairs. Dr. Molyneux brings with him a wealth of learning and experience. He attended the University of Pennsylvania from 1953 to 1957 and graduated as a Mechanical Engineer. After serving for two years as Assistant Public Works Officer at Floyd Bennett Field in New York, he returned to the University of Pennsylvania and earned MSME and Ph.D. degrees. He concluded

his formal education with a year of postdoctoral study at New York University's Courant Institute of Mathematical Sciences.

Dr. Molyneux began his professional career on the faculty of Mechanical Engineering at the University of Rochester in 1965 and remained there for nearly 20 years. He left Rochester in 1984 to become Chairman of the Department of Mechanical Engineering at Widener University in Chester, PA. Sabbatical leaves have taken him to Tel Aviv University in 1972, to the Oak Ridge National Laboratory in 1980 and 1991, and have provided an opportunity for consulting in the area of tomographic software design in 1988. He retired from Widener in the Spring of 2003.

Applications of mathematics to problems in engineering form the bulk of Dr. Molyneux's research interests. He is the author of more than thirty papers and a registered Professional Engineer. He is currently investigating finite element methods based on the least-squares principal as applied to the solution of wave propagation problems. He

hopes to use these methods in the numerical solution of inverse scattering problems with particular emphasis on radar and broad band magnetic tomography. The practical applications of this form of tomography include location of buried utilities and other near surface applications.

John and his wife Carol live in Swarthmore, PA. They are the parents of two sons and proud grandparents of one granddaughter.

ALUMNI PARTICIPATE IN SAN DIEGO FAIR

Villanova University participated for the sixth year in conferring an Award at the 49th Annual Greater San Diego Science and Engineering Fair held in Balboa Park on March 26-30, 2003. This year's fair had about 927 entries from students in 113 schools located in both San Diego and Imperial Counties. The exhibit demonstrated a commendable level of technical competence and scientific excellence.

Rossano Rosano, a Junior at Chula Vista High School, received Villanova's Certificate of Recognition for his outstanding engineering project Blueberry and Raspberry Juice As Antioxidants. In addition to the certificate, Rossano was presented with a Villanova executive padfolio provided by the Admissions Office, a Villanova sweatshirt provided by the Alumni Office, and a Villanova engineering shirt from the College of Engineering.

The many excellent exhibits provided a challenge and an inspiration for our dedicated judges: **Dick Schleicher ME '57, Jim Murray, EE '61, Erica Horst, CE '01, Bridget Schmitz, MATH '93, Joe Martin, PHY '98, and Colleen Stratton, BIO '98.**

UNIVERSITY RECOGNIZES BENJAMIN FRANKLIN MEDAL LAUREATE IN ELECTRICAL ENGINEERING



Dr. Bisnu S. Atal

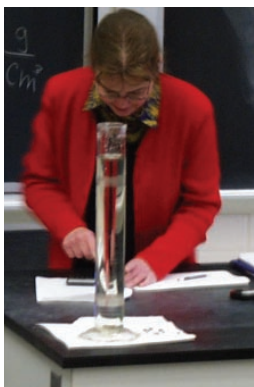
On April 22, the University held a voice coding workshop and symposium honoring Dr. Bishnu Atal, the 2003 recipient of the Benjamin Franklin Medal Laureate in Electrical Engineering. Dr. Atal was recognized for his advancements in the creation of digital cellular mobile communications technology. The event was sponsored by the Center for Advanced Communications, the College of Engineering and the Franklin Institute Awards Program.

The award was bestowed on Atal in recognition of his valuable work on voice coding, which includes such concepts as speech analysis-by-synthesis coding and the Code-excited linear predictive. These developments have improved the quality of digital speech and expanded the benefits of cellular phone technology.

Atal provided a detailed account of the history of speech coding work. His address focused on the work of Homer Dudley, whose philosophy on speech coding has guided this discipline.

The voice coding workshop included presentations by Dr. John Makhoul of BBN Technologies; Dr. Rich Cox of AT&T; and Gene Frantz of TI. The symposium was moderated by Roy Privett of Hitech Associates.

ENGINEERS HELPING TO MEET THE NEEDS OF THE 21ST CENTURY WORKFORCE



*Dr. Dorothy Skaf
preparing for the
viscosity experiment*

On April 24th, twenty-four high school students, members of the federally sponsored Math and Science Center Program located at Delaware Technical and Community College in Georgetown, DE, visited Villanova University's College of Engineering. Students selected for the Math and Science Center Program come from seven school districts within Sussex County, DE. Candidates recommended for this program, generally first generation college bound, exhibit strengths in math and science and are from low-income families. The goal of the program is to help these students "explore their college, career, and cultural opportunities and, upon high school graduation, enter a suitable form of post-secondary education."

The visiting students toured the campus and had lunch prior to the beginning of the engineering program. Students were then taken to the Mendel Science Center, where they were guided by Dr. Dorothy Skaf through a viscosity experiment. Professor Howard Fulmer followed with a presentation, 'All About Engineering', where he described the world of engineering and the benefits of an engineering degree. The students then headed to John Barry Hall, where Professor Frank Falcone demonstrated fluid properties using equipment in the CEE fluids laboratory.

Off to the Structures Lab! How many people ever get the chance to break a beam? The group was then given the opportunity to apply the load and to map the cracks of a high performance concrete beam, reinforced with fiber reinforced polymer bars. Dr. Shawn Gross and graduate student Matt DeAngelo wowed the students with this experiment. The afternoon was a success and the Math and Science Center Program students not only got the opportunity to visit Villanova University and learn about engineering, but also had a lot of fun! To quote Barbara Johnson, Math and Science Center Program Director, "The... tour... was an overwhelming success! Such enthusiasm from... students and faculty was infectious – they definitely conveyed the enjoyment engineering brings to them."

PSPE NAMES 2003 ENGINEER OF THE YEAR



*Dr. Rodney P. Plourde, PSPE
2003 Engineer of the Year*

Rodney P. Plourde, Ph.D., P.E., CE, '66, MCE, '68, has been selected as Engineer of the Year for 2003 by the Pennsylvania Society of Professional Engineers (PSPE). He was honored at an awards ceremony held during PSPE's Installation Banquet on Saturday, June 14, 2003, at the Courtyard by Marriott in Erie, PA, in conjunction with the PSPE Annual State Engineers Conference.

Dr. Plourde, President, Principal, and Chief Operations Officer of McMahon Associates, Inc., has 35 years of experience in transportation engineering, planning, and design. From the time he graduated with a Master's degree from Villanova in 1968, and then doctoral degree in Transportation Engineering from Massachusetts Institute of Technology in 1971, his career has encompassed professional service to clients in the Mid-Atlantic region, New England region, and Florida; voluntary service to several engineering societies; and voluntary service and leadership roles to his community. He holds a Professional Engineering license in 10 states.

Since joining McMahon Associates in 1991, he has proven to be an invaluable asset to the firm. Recognized for his business knowledge, technical expertise, and commitment to McMahon Associates, Dr. Plourde was promoted to the corporate position of President in 2002 and entrusted with the responsibility of managing the business of this high-growth traffic engineering firm. He oversees major company projects, including contractual administration, top-level management and technical assistance, and coordination with clients and the public.

SCHOLARSHIP FUNDING FROM THE CLARE BOOTHE LUCE PROGRAM FOR EDUCATION OF WOMEN

The Henry Luce Foundation, Inc. has informed Villanova University that the Clare Boothe Luce Program has awarded \$145,000 to the University in support of two four-year scholarships for women students who are pursuing studies in engineering. Villanova will match the funds to ensure full tuition for four years for the two recipients.

Dr. Barry C. Johnson, Dean of the College of Engineering, said that the college was honored to be the recipient of a Clare Boothe Luce Award. "This prestigious grant, which supports highly qualified young women throughout their undergraduate education, endorses our commitment to significantly increase the numbers of women and minorities within

the college in particular, and the engineering discipline in general," Johnson stated.

At Villanova University, female students currently represent about 23 percent of the engineering student body. This is higher than the national average of about 20 percent. In addition, women comprise 32 percent of the members of Tau Beta Pi, the prestigious engineering honor society. Female engineers make up 42 percent of the offices in the engineering student organizations and 45 percent of the presidents of these organizations are women. The college chapter of the Society of Women Engineers is one of the most active organizations on the University Campus.

MENTORING - GOES BEYOND THE ORDINARY

PEERS (Providing Engineering Educational Resources for Students), a new, peer mentoring initiative for engineering undergraduate students, rolled out this fall. PEERS was developed through the College's Office for Student Affairs. Associate Dean for Student Affairs, Lynda Capuzzi, staff member Patricia Burdo, and student co-chairs Liza Dhamer, '04 CE, and Taylor Henderson, '05 ME, took this idea, in true engineering fashion, from concept to reality.

The program offers an ever-present group of committed and formally trained students to act, as one student quipped, 'as the College's official tour guides'. Except for the area of academic advising, which is still done under the auspices of faculty advisors, the program's scope is designed to transcend traditional support and assist students in basically every facet of their Villanova University experience. Based upon a recent peer-institute benchmarking study, this student mentor initiative appears to be the first of its kind!

This past summer, thirty-three engineering students, sophomore through senior year, representing each of the five disciplines, applied



PEERS working together during one of the Villanova Ropes Course team building exercises



2003 PEERS

for the inaugural program. Selection was based upon leadership, academic and disciplinary good standing, and a genuine desire to help their peers achieve both a personally and academically rewarding college experience. Prior to freshman orientation, PEERS went through a comprehensive, three-day training program and were versed in programs and areas both within

the college and throughout the University. Training kicked off with a very special seminar on Spirituality and Leadership and ended on day three with workshops on Learning Style Assessment, Academic Integrity, and Student Activities. Other training included developing leadership skills and building community through the Villanova Ropes Course. PEERS are not assigned to specific students but are available to the entire engineering undergraduate population. Appointments are not necessary, and students with questions or concerns can just drop by the PEER Office in CEER.

CONGRATULATIONS AND BEST WISHES TO THE 2003 PEERS!

ASCE ENGINEERS OF THE YEAR

The Philadelphia Section of the American Society of Civil Engineers (ASCE) recognized two Villanova graduates at the section's annual Spring Social and Dinner Dance for their significant contributions to the civil engineering profession in the Philadelphia area.

Michael V. Griffin, CE '74, MCE '79, was awarded the section's highest honor, 2003 Philadelphia Civil Engineer of the Year. Griffin is a Senior Vice President of Hill International; he has managed Hill's center

city office for the past two years. He has been with Hill, a multidisciplinary consulting firm since 1981. He began his career with the City of Philadelphia, Department of Public Property in 1974.

Christopher W. Wright, CE '91, was named 2003 Young Civil Engineer of the Year. Wright is a Senior Civil Engineer at the center city Philadelphia office of DMJM & Harris, a position he has held since 1999.

ENGINEERING CENTERS

CENTER FOR NONLINEAR DYNAMICS AND CONTROL

The Center for Nonlinear Dynamics & Control (CENDAC) was established in June 2003 in the College of Engineering, and Dr. C. Nataraj, Associate Professor of Mechanical Engineering was appointed the Director. It is comprised of an interdisciplinary team of researchers from the four engineering departments.

The center aims to develop strong professional relationships with small and large companies, and governmental laboratories; to this end, CENDAC has so far initiated partnerships with Naval Ship Systems Engineering Station (NAVSSSES,) Ford Motor Company, AeroVironment and The Boeing Company.

CENDAC Grants/Awards

Current funded research projects at CENDAC include:

Dr. David Dinehart with Dr. Harry W. Shenton, III of the University of Delaware, for *Using Viscoelastic Material to Reduce the Dynamic Response of Woodframe Structures*, a three-year grant of \$225,000 from the National Science Foundation.

Drs. David Dinehart, Shawn Gross and Joseph Yost for *Structural Performance of Prefabricated Steel Joists and Castellated/Cellular Beams*, a five-year grant of \$548,407 from SMISTeel Products/SMI Joist Company.

Dr. Kenneth A. Kroos for *Development of a Personal Water Craft*, a six-month grant of \$25,000 from Ben Franklin Technology Partnership & H2O Sports, Inc.

Drs. Philip V. McLaughlin and Sridhar Santhanam for *Delamination Analysis Guidelines for Design and Testing of Graphite Composite Structures*, a one-year grant of \$61,980 from Materials Sciences Corporation.

VILLANOVA CENTER FOR THE ENVIRONMENT

The Villanova Center for the Environment (VCE) was established in the summer of 2003 between the College of Engineering and College of Arts and Sciences. Dr Rominder P.S. Suri, P.E. is currently the Director of the Center. Dr Suri is also an Associate Professor in the Department of Civil and Environmental Engineering. In establishing the VCE, the University affirmed its commitment to environmental stewardship, locally, regionally, nationally, and globally. The University acknowledges its responsibility to make available to the community beyond its physical borders the broad knowledge, experience and expertise of its faculty, staff and students to find new ways to minimize environmental degradation and to help solve environmental problems.

VCE Grants/Awards

The on-going projects in the Center include:

Drs. Robert Traver and Ronald Chadderton for *Villanova University Stormwater Partnership*, funded by PA Department of Environmental Protection, \$340,000.

Drs. Rominder Suri, Randall Maud and Metin Duran for *Presence and Fate of Pharmaceutically Active Compounds (Antibiotics and Hormones) in Farming*, funded by US Department of Agriculture, \$74,924.

Dr. Rominder Suri for *Fate and Analysis of Natural and Synthetic Estrogenic Hormones in Wastewater*, funded by Wyeth Pharmaceutical Co, \$70,000.

Drs. Rominder Suri and Randall Maud for *Presence of Antibiotics in S. Chester County Surface Water*, funded by PA Department of Environmental Protection, \$25,734.

Drs. Rominder Suri and Randall Maud for *Antibiotic Contamination in Surface Water*, additional second year funding of \$10,000 by Claneil Foundation.

For more information on how your organization could benefit from Center activities and on how to participate, contact Dr Rominder Suri at rominder.suri@villanova.edu.

CENTER FOR ADVANCED COMMUNICATIONS

The Center for Advanced Communications (CAC) has entered into a Memorandum of Understanding (MOU) with the Telecommunications Technological Center of Catalonia (Barcelona, Spain), with the Smart Antenna Research Team of Duisburg-Essen University (Duisburg, Germany), and with Ain Shams University (Cairo, Egypt). These MOUs will promote the development of academic exchanges, scientific research, professional internships, and technical cooperation through mutual collaborations and exchange of ideas and personnel.

On Thursday, October 9th the CAC hosted its 2003 Annual Meeting in the Cinema in the Connelly Center. The meeting included presentations given by Villanova University Faculty and Postdoctoral Fellows on the Center's current research projects in the areas of communications, signal processing, antennas, and microwaves.

As a 2003 Distinguished Lecturer of the IEEE Signal Processing Society, Dr. Moeness Amin has recently given technical presentations at Drexel University (Philadelphia) and Gerhard-Mercator University (Duisburg, Germany). Since Spring '03, he has co-authored three book chapters published by Springer Verlag, Elsevier, and CRC Press. He has published three articles which appeared in IEEE Transactions on Aerospace and Electronic Systems, IEEE Signal Processing Letters, and IEEE Transactions on Signal Processing. Dr. Amin also co-authored with his graduate students and postdoctoral fellows eleven conference papers.

CAC Grants/Awards

The Center for Advanced Communications was instrumental in obtaining funding for various research projects:

Dr. Moeness Amin received a grant of \$11,000 for *Technology Evaluation of the Bestshot System for SensorPad*, Inc. from SensorPad Systems, Inc/Ben Franklin Technology Partners. He also received \$60,000 from the Office of Naval Research for conducting research on *Classification and Discrimination of Sources with Time-Varying Frequency and Spatial Spectra*.

Dr. Ahmad Hoorfar received seed money, in the amount of \$10,000, from The Boeing Company to support the Blitzen Software. He has also received \$6,000 from Applied Microwave Technologies, \$2,500 from Paratek, and \$5,720 from DRS Technologies for conducting measurement studies in the Antenna Research Lab.

Dr. Ahmad Hoorfar also received a grant from The Boeing Company for \$144,451 titled *CV-22 Scale Model TCAS Antenna Measurement and Analysis*.

Dr. Stephen Konyk received a grant for *Modeling and Control of Miniature DC Motor Systems* from Intelligent Automation Design/Ben Franklin Technology Partners for \$12,500.

Dr. Frank Mercede received a grant for *Methods to Overcome Current Rating Limitation of SurgeX Series Mode Surge Suppression Product Line* from SurgeX Professional AC Power Products/Ben Franklin Technology Partners for \$19,000.

DEPARTMENT NEWS

CHEMICAL ENGINEERING

FACULTY

Dr. William Kelly has published the review paper "Perspectives on Plasmid-Based Gene Therapy – Challenges for the Product and the Process" in *Biotechnology and Applied Biochemistry*. He co-authored a paper with **Michael Clemson, ChE '02** on "Optimizing Alkaline Lysis for DNA Plasmid Recovery" published in *Biotechnology and Applied Biochemistry*. Dr. Kelly also presented a paper with **Emily Ricci, ChE '01, MChE '03**, at the 19th Biennial Conference of the North American Mixing Forum, in Lake Placid, NY, in June 2003. Dr. Kelly and **Madhava Ram Paranandi, MChE '03** presented the paper "Using CFD to Predict Particle Retention in Continuous Flow Centrifuges" at the Mid-Atlantic Biochemical Engineering Consortium at College Park, MD, in March 2003.

Dr. Donald D. Joye published the paper "Pressure Drop Correlation for Laminar, Mixed Convection, Aiding Flow Heat Transfer in a Vertical Tube" in the *International Journal of Heat and Fluid Flow*.

Dr. Randy W. Weinstein has had three papers accepted for publication. "Structure, Wettability, and Electrochemical Barrier Properties of Self-Assembled Monolayers Prepared from Partially Fluorinated Hexadecanethiols" was co-authored with **Jeffrey Moriarty, ChE '02**, and **Emily Cushnie, ChE '03**, and accepted by the *Journal of Physical Chemistry B*. His paper "End Point Prediction Modeling for Semi-Batch Hydroxide Precipitation," co-authored with **John Dawson, ChE '03**, was accepted by *Industrial Chemistry and Engineering Research*.

Dr. Weinstein co-authored the paper "Natural Convection and Passive Heat Rejection from Two Heat Sources Maintained at Different Temperatures on a Printed Circuit Board" with **Dr. Amy S. Fleischer, ME**, and **Kimberly A. Krug, ChE '02**. This paper was accepted by *Journal of Electronic Packaging*.

Dr. Edward R. Ritter attended the 3rd Joint Meeting of the U.S. Sections of The Combustion Institute in Chicago, IL, where he presented a paper titled "Computational Study of the Dissociation of 1,1,1,3,3,3-Hexafluoropropane". His co-author for this paper was **John Dawson, ChE '03**. Dr. Ritter will present a paper at the 2003 Fall Technical Meeting of the Eastern States Section of the Combustion Institute, on Chemical and Physical Processes in Combustion. His paper, titled "Experimental and Computational Study of Gas-Phase Oxidation of Hexafluoropropene with Molecular Oxygen" will also be published in the archival conference proceedings. Co-authors of this paper are **John Dawson, ChE '03** and **Michael Pingitore**, currently an MChE candidate. Dr. Ritter will also chair a technical session on Kinetics and Fundamentals of Reactions at this conference.

NOTEWORTHY

The Chemical Engineering Department is revising its curriculum to take effect with the Class of 2006. Highlights of the new curriculum include several new courses, a reordering of the sequence of chemistry courses, and more flexibility to select the technical electives. In the junior and senior years, students may concentrate on such specialized areas as chemical engineering materials, biotechnology and pharmaceuticals, or environmental systems engineering; or they may choose a variety of courses to give them a broad chemical engineering background. Several new courses are being developed in such areas as nanomaterials and biochemical engineering.

CIVIL AND ENVIRONMENTAL ENGINEERING

FACULTY

Dr. Metin Duran presented a paper at The Eighteenth International Conference on Solid Waste Technology and Management Conference in March 2003. The paper, coauthored with Dr. Goksel N. Demirer of Washington State University, was titled "Anaerobic Biotechnology for Agricultural and Industrial Waste Management: A Case Study," and is published in the conference proceedings. Dr. Duran presented a paper titled "Biomethanization of Solid Wastes" during the two-day workshop "Anaerobic Treatment of High-Strength Industrial and Agricultural Wastes" which was held in Milwaukee on September 22 and 23, 2003.

NOTEWORTHY

The Department of Civil and Environmental Engineering and the Villanova Urban Stormwater Partnership (VUSP) are teaming up! Over fall break close to 250 people attended the 2003 Pennsylvania Stormwater Management Symposium. The symposium included tours of storm water research sites on the campus, addresses by EPA and PaDEP personnel, and over 40 paper presentations. The VUSP also received funding from the state 319 nonpoint source pollution program to build an Infiltration Trench next to the SAC parking garage. This site and the others already under study have been added to the EPA National Monitoring Program.

A new course in Geoenvironmental Engineering is being offered in the Department of Civil and Environmental Engineering. The course covers topics on landfill design, applications of geomembranes, and case studies on geotechnical and environmental issues.

INAUGURAL CEE DAY A RESOUNDING SUCCESS



Ralph V. Locurcio

On April 25th, Villanova University hosted the first Civil and Environmental Engineering Day. This day was established by the department to showcase the high quality work that is ongoing throughout the undergraduate curriculum. CEE Day started with the third annual William B. Fergusson Memorial Lecture. This year's guest speaker was Ralph V. Locurcio, P.E., a Senior Vice-President and Director of Defense & Federal Programs for STV, Inc.

Following the Fergusson Lecture, seniors presented their capstone projects to faculty, students, advisory committee members, and parents. This year there were three different capstone projects. Five groups of structural engineers presented their results on the design and construction of a chapel/volunteers center for Amigos de Jesus, a boy's orphanage, in Honduras. Three groups of transportation students presented their designs and recommendations for the rehabilitation of SR 99 through Fresno, CA. Four groups of environmental engineers discussed their designs of an anaerobic digester for the treatment of wastes from concentrated animal operations.

DEPARTMENT NEWS

ELECTRICAL AND COMPUTER ENGINEERING

FACULTY

Dr. Robert Caverly's paper, "HF, VHF, UHF Systems and Technology" was published in the *IEEE Transactions on Microwave Theory and Techniques*.

Dr. Ahmad Hoorfar had two papers published in March 2003: "Electromagnetic Modeling and Analysis of Wireless Communication Antennas" in the *IEEE Microwave Magazine* and "Closed Form expressions for Green's functions of Microstrip Structures on a Uniaxially Anisotropic Substrate" in the *International Journal of RF and Microwave Computer-Aided Engineering*.

Dr. Bijan Mobasseri presented the results of his funded project at the annual Air Force Program Review meeting held at Princeton University in June. His paper "Synthesis of Discrete-Time Discrete-Frequency Wigner Distribution" co-authored with Dr. S. Nelatury, was published in August in the *IEEE Signal Processing Letters*.

Dr. James Peyton-Jones's paper "Automatic Computation of Polyharmonic Balance Equations for Nonlinear Differential Equations" was published in the *International Journal of Control*.

Dr. S.S. Rao has been selected as an IEEE Program Evaluator for ABET visits starting with the 2003-2004 academic year.

LOCKHEED MARTIN PRESENTS ECE DEPARTMENT WITH CHECK

Bob Slegelmilch, EE '84, and Rob Slattery, EE '92, MSEE '94, presented a Lockheed Martin Corporation/Management & Data Systems (LMC/M&DS) check to Dr. S.S. Rao, chairperson, Electrical and Computer Engineering (ECE). The ECE Department will use the donation for its 2003 Senior Design Project Awards and ECE Day on November 6. Slattery, who manages the Engineering Leadership Development Program and Technical Development Curriculum for LMC/M&DS, and Slegelmilch, who is deputy VP of M&DS Technical Operations, are both Villanova alumni ambassadors. Slattery is also on the ECE's Industry Advisory Board.



Mr. Bob Slegelmilch, Dr. S. S. Rao & Mr. Rob Slattery

NOTEWORTHY

In memory of **Adjunct Professor Richard Gatti**, who passed away recently, his sister Mrs. Dolores Antenucci has established the Richard M. Gatti Memorial Scholarship Fund which will award a scholarship of \$1000 to a current or incoming student majoring in electrical engineering.

MECHANICAL ENGINEERING

FACULTY

Professors Howard Fulmer and James O'Brien, CE '71, were co-winners of the Best Engineering Teacher of the Year for 2002-2003, as voted by the students in a contest sponsored by the Student Government Association. Plaques were awarded on Friday, April 11th, 2003, at the conclusion of Faculty and Staff Appreciation Week.

Dr. Hashem Ashrafiuon was awarded the National Academies/NRC Faculty Research Fellowship at AFRL/Space Vehicle Directorate, Kirtland AFB, NM, during the summer of 2003. His research topic was "Robust Nonlinear Control Algorithm for Underactuated Satellites." Dr. Ashrafiuon had two papers accepted for presentation at the ASME conferences in September in Chicago, and in November in Washington, DC.

Dr. Amy Fleischer, ME '91, MME '96, recently spent three months as a Visiting Research Scientist at the Fraunhofer Institute for applied research in Berlin, Germany. Dr. Fleischer worked in the Fraunhofer IZM division, home to world renowned experts on microelectronics and Microsystems packaging. Dr. Fleischer and **Dr. Randy Weinstein, ChE,** presented a paper, "An Experimental Investigation of the Thermal Interaction of Electro-Optical Components on a Printed Circuit Board in Natural and Forced Convection," at the ASME Summer Heat Transfer Conference. Dr. Fleischer has recently completed a project with Dr. Weinstein sponsored by the Naval Surface Warfare Center entitled "Investigation of Transient Recharge Effects of Phase Change Materials."

Dr. G.F. Jones, ME '72, presented the paper "A Carbon Fiber, Air-Cooled Heat Exchanger for High Performance Electronic Cooling," co-authored with Dr. Brian J. Sullivan, at the ASME-JSME Thermal Engineering Joint Conference in Hawaii in March. In September his paper, "Cold Junction Plate Optimization for the Nighttime Solar Cell," co-authored with Dr. R.J. Parise, was delivered at the 1st International Energy Conversion Engineering Conference in Portsmouth, VA.



Professors Howard Fulmer and James O'Brien

NOTEWORTHY

Beginning with the Fall 2003 semester, the Department of Mechanical Engineering and the Department of Electrical and Computer Engineering are offering a combined **Mechatronics Minor**. The minor is designed to give students background in intelligent electromechanical systems which integrate sensors, microprocessors, mechanical components, electrical components and programming; and to educate them in addressing system integration issues.

GRANTS/AWARDS

Dr. William Kelly, ChE, received a grant of research equipment from the pharmaceutical firm GlaxoSmithKline valued at approximately \$100,000. He also received a grant of \$7,500 from Centocor to support a research project: *Optimizing Filter Flow for Perfusion Culture of Mammalian Cells*.

Dr. Randy W. Weinstein, ChE, received an equipment grant of \$85,000 from GlaxoSmithKline for a Phase Equilibrium Analysis System, which can be used to explore solubilities of pharmaceutical products in liquid and supercritical carbon dioxide.

Dr. Metin Duran, CE, received a \$16,950 research grant from Aventis-Pasteur, Inc. The grant is being used to investigate the anaerobic treatability of wastes generated during influenza vaccine production and to develop methods for reduction of odor associated with such wastes.

Drs. Shawn Gross, David Dinehart and Joseph Yost, CE, received an NSF grant of \$248,742 for *Acquisition of a Closed-Loop Hydraulic Loading System and Data Acquisition System for Research and Teaching in Structural Engineering*. The system will provide the capability to conduct load-controlled or displacement-controlled tests on structural materials and structural members under static, cyclic, or dynamic loading conditions.

Dr. Emily Parkany, CE, received an FHWA research grant of \$14,450 for *Seasonality of Transportation Data in the American Community Survey*. This research will involve travel to Remote Census Data Centers in Boston, MA and Suitland, MD. Dr. Parkany received a research grant of \$17,545 from UConn to analyze individual travel route choices and estimate system efficiency from use of information technologies.

Dr. Andrea Welker, CE, received a grant from the National Science Foundation for \$25,515. Dr. Welker will use her expertise in Bayesian updating to aid in the design of the various laboratory experiments.

Dr. Robert Caverly, ECE, received continued funding from the National Science Foundation for a multi-faculty, multi-institution program entitled *Curriculum Development in Systems for Smart Communications* to develop a series of educational concept modules covering basic and advanced topics in smart communications technology that overlap not only the principal investigators' research, but also the 'best practices' in the field. The funding level for the entire grant is estimated to be \$429,992.

Dr. Frank Mercede, ECE, was awarded the College of Engineering Farrell Award presented each year to a full-time engineering faculty by the Engineering Student Council. Dr. Mercede and **Mr. Edward Char, ECE** received honorable mention for the Lindback Teaching Award.

Dr. Pritpal Singh, ECE, received funding totaling \$4,000 from U.S. Army/Battery Intelligence for his research developing a smart battery for tanks. This technology will allow accurate monitoring of the state-of-charge of tank batteries. He has also received funding totaling \$40,000 from Bipolar Technologies and Picatinny Arsenal for developing novel battery charging techniques using energy harvesters such as solar energy and piezoelectric energy sources for applications such as homeland security.

Dr. Amy Fleischer, ME, received a \$50,000 two-year grant from the National Science Foundation to support her work entitled *Thermal Management of Heat Generating Devices in Close Proximity on Printed Circuit Boards*.

BEETLEBOTS BRAWL

On April 12, 2003, ASME held a fighting robotics competition in CEER 001. Mechanical and electrical engineering students from Villanova University and Drexel University put their creative minds to work to participate in the competition. The ASME "BeetleBots" event is similar to the television's BattleBots, formerly on Comedy Central. The limitation that made this competition most challenging was that the "Bot" could not weigh more than two pounds. Seven robots competed (four from Villanova and three from Drexel). Drexel came out victorious, but the most hard-hitting and metal-flying engagement came from two Villanova teams; **Jim Iocca, ME '03** vs. **Jay Zola, EE '02, MSEE '04/Mike Hoyer, ME '05**.

The desire for more action is leading to the construction of a larger arena (the former being 4ft. x 4ft), a new weight limit (max. three pounds), and new hazards. All the teams that clashed in this competition are eager to compete next year, along with possible participation from other schools such as The College of New Jersey and University of Delaware.

ME SENIOR WINS PRESTIGIOUS SCHOLARSHIPS

Sarah Banas, ME '04, has been awarded the Danaher Corporation Scholarship. This scholarship was established by the Danaher Corporation of Simsbury, Connecticut, in memory of a Villanova alumnus and former employee, **Jack Watson, EE '66**. In addition to providing a full merit-based scholarship for the student's senior year, the Danaher Corporation gives the student a summer paid internship at one of the facilities in the United States. Ms. Banas was selected based upon a written essay and interview. Sarah has also been selected for a Barry Goldwater scholarship to assist with other senior year needs. This Scholarship Program honoring Senator Barry M. Goldwater was designed to foster and encourage outstanding students to pursue careers in the fields of mathematics, the natural sciences, and engineering.

NOTEWORTHY

Dr. James Peyton-Jones, ECE, and Dr. Ken Muske, ChE, have taken delivery of a new Ford 2.1 I4 engine donated by Ford Motor Company. The engine, installed in the CEER Engine Test Laboratory, is used in cross-departmental research aimed at minimizing automotive emissions. The facility will be used to enhance ME undergraduate engine training laboratory exercises as well.

- ◆ The Villanova ChemE car team placed 4th at the Mid Atlantic AIChE conference competition held at Villanova with its car "The Silver Bullet." The rules required that the car derive its power from a chemical reaction whose power expenditure could be calibrated to pull a specified weight over a specified distance. To make the competition more interesting, the exact weight and distance were not revealed until the moment of the race, so that teams would have to make last minute calculations of the amount of reactants needed to carry the weight over the assigned distance without overshooting the mark. The team of **Sally Miller, ChE '03, Monica Branco, Daniel Borginis, and Cheryl Zarzycki, ChE '04, and Christopher Tarsi, ChE '05**, distinguished itself against very stiff competition.
- ◆ **Jenny Papatolis, ChE '03, Monica Branco, ChE '04, and Christopher Harely, ChE '05**, were selected by the Delaware Valley Section of AIChE as the top chemical engineers of their class.

- ◆ The efforts of the Concrete Canoe Team of **Jonathan Crawford, CE '03, Elizabeth Gaynor, CE '03, Jim Troise, CE '05, Sean Pearson, EE '04,** and **Erin Vogel, ME '05,** were rewarded at the ASCE Regional Competitions in April with three individual competition awards out of a field of seven competitors as well as third in overall competition.
- ◆ **Elizabeth Gaynor, CE '03,** was awarded a national fellowship towards graduate study from the American Concrete Institute. Liz will be investigating the structural performance of light-weight high performance concrete at Villanova.
- ◆ The Fellowship Board of Tau Beta Pi, the Engineering Honor Society presented **Monica C. R. Branco, ChE '04,** a Tau Beta Pi Scholarship for 2003-04 academic year, in the amount of \$2,000.
- ◆ **Amy Cavanagh, ME '05,** was awarded the Air Products & Chemicals Engineering Scholarship of \$5,000 through the Association of Independent Colleges & Universities of Pennsylvania.
- ◆ **Kathleen Halcovage, CE '05,** won the Carpenter's Company of the City of Philadelphia Scholarship towards pursuit of an undergraduate education focusing on structural engineering. She also has been awarded the Michael Baker Engineering Scholarship worth \$2,000 through the Association of Independent Colleges & Universities of Pennsylvania.
- ◆ **Kathleen Halcovage, CE '05, Otto Clemente, CE '03,** and **Sandra Ross, CE '03** received awards at the first CEE Day for best presentations. **Tyler Ladd, CE '02, MCE '04,** and **Jason Mildenberg, MCE '03,** were recognized for best research posters.
- ◆ **Geoffrey Morrissey, CE '05,** and **Michael Illgas, CE '05,** are the 2003 recipients of the SMI Steel Products Undergraduate Research Fellowships. The students will be working closely with Drs. Dinehart, Gross, and Yost investigating the structural behavior of castellated and cellular beams.
- ◆ **Matthew Kennel, CPE '05,** was awarded the Joseph Hicks Scholarship, a partial tuition award for a current or incoming undergraduate student majoring in electrical engineering.
- ◆ **Michael Nadeau, EE '07,** received a \$10,000 scholarship from the Zareh Baghdasarian University Scholarship. This scholarship is given in increments of \$2,500 over four consecutive years.
- ◆ **Marie Catalano, ME '07,** received a \$2,000 scholarship from the American Society of Mechanical Engineers (ASME International) in recognition of her participation in FIRST (For Inspiration and Recognition of Science and Technology), a multinational robotics competition.

NOTEWORTHY

The 95th graduating class of the College of Engineering received their degrees on May 18, 2003. The recipients of the Medallions, recognized for their academic performance and meritorious service, are pictured left to right: **Michelle C. Dionisio, CE, John P. Dawson, ChE, Robert J. Weinschenk, EE, Christina M. Turka, ME, and Amy L. Brennan, CPE.**



2003 Medallion Recipients

- 50 Michael J. Nowlan, EE,** and his wife Mary, celebrated their 50th wedding anniversary on November 2, 2002 with friends and family in Cherry Hill, NJ.
- 53 Frank J. Ryan, ChE,** was awarded the 2003 St. Thomas of Villanova Alumni Medal at the Alumni Awards ceremony in June in recognition of his longstanding philanthropic support for the University.
- 58 Gerald J. Ratchford, ME,** who retired from IBM in 1992, is an engineering faculty member at the University of North Carolina, Charlotte and is a volunteer with SCORE, helping new businesses. He also travels with his wife and has visited over 28 countries.

Thomas H. Greco, Jr., ChE, in his book *Money: Understanding and Creating Alternatives to Legal Tender* (Chelsea Green, 2003) offers ways for individuals and communities to enhance their purchasing power and productivity.

- 63 John A. Mahoney, ChE,** retired after 31 years with BP Amoco and is now an adjunct professor at the University of Notre Dame.

James Bannon, EE, retired from Texas Instruments. He now lives in Clermont, FL, teaches mathematics and physics to high school students, and works at Walt Disney's Magic Kingdom.

Joseph A. Mollure, EE, of Upland, CA, has accepted a position as director of the Western region for Kinectrics North America, Toronto, Canada, an engineering consultant firm. He is responsible for business development in 12 Western States.

- 66 Henry F. "Butch" Acchione, CE, MCE '73,** has joined the Manalapan, NJ office of Schoor DePalma, an engineering/consulting firm, where he is vice president, business development. Acchione is a former president of the Villanova Alumni Association and currently serves on the Alumni Affairs Committee of the Villanova University Board of Trustees.

David T. Deal, Esq., CE, is senior counsel in the Washington, DC office of the international law firm of Fulbright & Jaworski LLP.

- 80 Merrell C. Cashion, Jr., Esq., ChE,** was recognized by the Alumni Association of National-Louis University with its 2003 Alumni Achievement Award. Cashion, who earned a master's degree in management sciences from NLU in 1995 and a J.D. from Columbus School of Law at Catholic University of America in 2000, is program and resource administrator in the U.S. Patent and Trademark Office in Washington, DC.

- 83 Peter K. Durkin, CE,** is the manager of the Mokolodi Nature Reserve near Gaborone, Botswana. Mokolodi, featuring wild animal orphanages, relocation for problem cheetahs, and an environmental program for school children, shelters more than a third of the country's white rhinos.

- 84 James D. Adams, CE,** has been named head engineer for the city of Newark, NJ. Most recently he was the senior engineer in charge of all Port Authority construction activities at Ports Newark and Elizabeth, the Newark Legal Center and the Hoboken Waterfront.

ALUMNI NEWS

87 Michael A. Morgan, P.E., P.P., ChE, who earned a master's degree in civil engineering from New Jersey Institute of Technology, is senior associate at Gannett Fleming in South Plainfield, NJ.

93 Ravikanth Pappu, MSEE, who received his Ph.D. from MIT in 2002 was recently listed among the World's Top 100 Young Innovators in Technology Review Magazine, MIT's magazine of innovation. Mr. Pappu, a principal at the company ThingMagic, devised an identifier that makes it extremely difficult to forge credit cards.

94 Steve Ruppert, CE, was honored by the Archdiocese of Chicago for his work at Thresholds, where he is a social worker for adults suffering from mental illness and substance abuse problems.

95 Michael L. Glynn, ME, MME '96, earned a Ph.D. in mechanical engineering from the Johns Hopkins University.

97 Gerald Timothy, ME, passed the PE Exam in Mechanical Engineering last October and received a promotion to a Project Manager with Naval Facilities Engineering Command. He is in charge of the design projects at Naval Shipyard Portsmouth, Kittery, ME, but will be working out of Philadelphia.

00 Ltjg Matthew J. Gaudet, USN, ME, graduated from the basic course at the Civil Engineers Corps Officer School in Port Hueneme, CA.

01 Erik Knudsen, ME, applied for a NASA grant which will enable him to continue his research at the Marshall Space Flight Center in Alabama. He plans on defending his master's thesis and taking the PhD qualifying exam in the fall.

02 Charulatha Kalluri, MSEE, is working as an Applications Support Engineering at The MathWorks, Inc. in Massachusetts.

03 The CEE capstone project team of **Patrick Markham, Brian Purcell**, and **Leah Shimko** was one of three finalists in the national Parsons Brinkerhoff Capstone Design Contest of Environmental and Water Resources Institute (EWRI) of ASCE. The group presented their anaerobic digester design during the 2003 World Water and Environmental Resources Congress in Philadelphia. The project received the 2nd Place Award.

Ami Badami, ChE, was selected by the American Institute of Chemists as an outstanding student in chemical engineering for 2002-2003.

Emily Cushnie, ChE, placed 2nd out of 23 entries in the paper competition at the Mid Atlantice AIChE Conference with her presentation entitled "Characterization of the Preparation and Properties of Self-Assembled Monolayers of n-Alkanethiols and Terminally Fluorinated Thiols on Gold" which is under the supervision of **Dr. Weinstein**.

Peter Klimas, CPE, a member of the Villanova Swim Team, was the 2003 Senior Male Student Athlete of the Year Award winner. He is presently pursuing his master's/doctorate studies in computer engineering at Stanford University on a three year fellowship.

Sally Miller, ChE, was selected for the Philadelphia Section of the American Chemical Society's Scholastic Achievement Award.

Leah Shimko, CE, was one of the five finalists in the national annual undergraduate student research paper competition of the American Society of Civil Engineers' Environmental and Water Resources Institute (EWRI). Shimko's work concerning the response of anaerobic microbial consortium to thiol-reactive xenobiotic compounds is part of an ongoing research activity under the direction of Dr. Metin Duran. Shimko is currently pursuing a graduate degree in environmental engineering at the University of Texas, Austin.

Sangeetha Somayajula, MSEE, is currently at the University of Southern California pursuing a Ph.D. degree.

Robert Weinschenk, EE, earned a full scholarship to George Washington University where he will study patent law.

ENGINEERING ALUMNI AWARDS

Every year, Villanova University, the College of Engineering, the Villanova Engineering Alumni Society (EAS), and the Villanova Alumni Association gather to honor outstanding Villanova Engineering Alumni. Following are the awards presented and a list of recent recipients. The awards were presented on June 5, 2003 at the EAS Awards Banquet.

The 2003 J. Stanley Morehouse Memorial Award was presented to **Donald P. Fusilli, CE '73**. This award was instituted in 1972 in honor of J. Stanley Morehouse, Dean of the College of Engineering from 1938 to 1961. The Morehouse Award recognizes outstanding leadership, as demonstrated in the planning or the administration of activities related to the engineering profession.

The 2003 John J. Gallen Memorial Award was given to **Matthew Stober, ChE '89**. The John J. Gallen Memorial Award was instituted in 1977 in honor of John J. Gallen, Dean of the College of Engineering from 1961 to 1975. The Gallen Award recognizes the achievement of those whose technical effort yields advances in the engineering profession.

The 2003 Carl T. Humphrey Memorial Award recipient was **Philip Morgan, MSEE '94**. The Carl T. Humphrey Memorial Award was instituted in 1990 in honor of Carl T. Humphrey, who served as the first Dean of the College of Engineering from 1920 to 1938. The Humphrey Award recognizes the professional achievements of an alumnus who holds a Master's Degree from Villanova's College of Engineering.

This year, the EAS established a new award to honor Dr. Robert D. Lynch who was the Dean of Engineering from 1975 to 2000. The Robert D. Lynch award recognizes the scholastic achievements of an outstanding new graduate of the College of Engineering. The first recipient of the award was **John Dawson, ChE '03**.

The recipients of the 2003 Alumni Awards for Professional Achievement were **Philippe A. Jacques, EE, '73, Michele Finn Itell, ChE '85, Patrick E. McLaughlin, ME '85, and Thomas Caramanico, MCE '71**.

The 2003 Alumni Awards for Meritorious Service were given to **Marie Maguire, EE '69, Peter Edwards, ChE '85, Amy Gauntner, ME '96, and John J. Stranix, CE '78**.



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College of Engineering
Villanova, PA 19085-1681

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A RECENT LETTER SENT TO THE ENGINEERING ALUMNI SOCIETY

August 25, 2003

Villanova Engineering Alumni Society
Villanova University
800 Lancaster Ave.
Villanova, PA 19085

Dear Mr. Lester, Sirs and Madams,

Thank you so much for the \$1,000 freshman grant. Since I come from a large family, the grant was very helpful in meeting my financial need. I am most grateful. I am thrilled to be at Villanova and looking forward to becoming a Chemical Engineer. Thank you for helping me make my dream a reality.

Respectfully,

Daniel Benson

Please join the EAS and help make more dreams a reality for Villanova Engineers. 100% of your tax deductible membership or donation goes towards current students in the form of grants, scholarships, support for the student projects, and the Junior-Senior Dance.

Join online today!

Visit the website at: <http://engineering.villanova.edu/eas/>