



# THE FINAL DRAFT

VILLANOVA UNIVERSITY

COLLEGE OF ENGINEERING

SPRING 2002 ~ NEWSLETTER

VOLUME 23 ISSUE 1

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## NEW DEAN NAMED TO THE COLLEGE OF ENGINEERING

University President **Rev. Edmund Dobbin** has announced the appointment of **Dr. Barry C. Johnson** as the fifth Dean of Villanova



University's College of Engineering. Dr. Johnson is a 1970 Villanova Mechanical Engineering graduate. Prior to joining the faculty of engineering, he was

Senior Vice President and Chief Technology Officer for Honeywell International, Inc. During his interview process, Dr. Johnson expressed his deep appreciation for the impact Villanova has had on his life. He also identified a vision for the future of the College which impressed the faculty and administration.

Following his graduation from Villanova, Dr. Johnson earned an MS (1973) and Ph.D. (1983) in Metallurgical Engineering and Material Science from Carnegie-Mellon University.

He has had an illustrious career in industry. From 1991 to 2000, he was a member of the technical staff of the Motorola Semiconductor Products Section rising to the position of Corporate Vice President and Chief Technology Officer. He also served as Senior Research Fellow and Research Director at E.I. du Pont de Nemours & Company in Wilmington, DE. Dr. Johnson holds seven United States

patents and has published 55 technical papers. From 1984 to 1988, he was Professor of Electrical and Computer Engineering at the University of Arizona in Tucson, AZ.

In 1986, Dr. Johnson received the Anderson Prize for Engineering Education from the University of Arizona. In 1994, he was selected as the National Black Engineer of the Year. He has also served as a member of a number of advisory boards including the National Research Council, Sematech, Carnegie-Mellon Research Institute, National Nanofabrication Users Network, and the Institute of Materials Research and Engineering (Singapore). In 2000, Dr. Johnson was the first U.S. citizen to be elected to Germany's premier applied research organization, the Fraunhofer Society.

Villanova's College of Engineering honored him with its Professional Achievement Award in 1987, and in 2000, he received the prestigious J. Stanley Morehouse Award. In 2001, Dr. Johnson was elected to the National Academy of Engineering (NAE). The NAE citation recognizes his international reputation in the field of electronic packaging.

Dr. Johnson is a native of Philadelphia where he attended Roman Catholic High School. Upon graduation from Roman, he received a St. Martin de Porres Scholarship to attend Villanova University. Family obligations required that he complete his Villanova studies as an evening student in the University College program. Dr. Johnson and his wife, Katherine, will reside in Bryn Mawr.

## COMMENCEMENT 2001

On Sunday, May 20, 2001, **Dr. John L. Hennessy III, EE '73**, President of Stanford University, returned to Villanova to address the graduating class of 2001 and to receive an Honorary Degree of Doctor of Humane Letters. The Commencement Oration was given by magna cum laude, **Matthew Reiter, CE '01**. Matt was also a 4-year member of the football

*(See Commencement, page 4)*

## VILLANOVA'S FIRST GATES CAMBRIDGE SCHOLARSHIP WINNER

**David Quinn, ME '02**, has been awarded a Gates Cambridge Scholarship commencing October 2002. He will pursue graduate studies at the University of Cambridge in England under the tutelage of Dr. Norman Fleck, Professor of Mechanics and Materials and Director of the Cambridge Centre for Micromechanics.

The Gates Cambridge Scholarship, endowed by the Bill and Melinda Gates Foundation, was established for scholars of outstanding academic merit and leadership potential to pursue postgraduate study at Cambridge. Although only in its second year of existence, it has become one of the most prestigious and sought-after scholarships, along with the Rhodes and Marshall.

Quinn, a Delaware native, is also pursuing minors in computer and mathematical sciences. He participated in many Honors Seminar classes and also has been active in several Villanova Theater productions, both as a performer and as a technical director.

*(See GATES CAMBRIDGE, page 3)*

## CENTER FOR ADVANCED COMMUNICATIONS

The Center for Advanced Communications was founded in 1990 under the leadership of the late **Joseph DiGiacomo**. The University established the Center to fulfill its Mission Statement Goal of providing research experience for its students and faculty. During his twelve years as the Director, Mr. DiGiacomo was able to establish Villanova's technology leadership role in the Delaware Valley. By establishing partnerships with industry, state and federal governments, the Center has been involved in projects in the areas of sensor technology, robotics, and broadband communications. In addition, the Center has provided technical assistance and research to small firms through its association with the Ben Franklin Technology Partners of South-eastern Pennsylvania. Under this program, the Center provides short-term services using funded grants. Recently, a three-year, \$3.5 million program on sensor and small robot research was completed for DARPA.

*(See CAC, page 4)*

### NEWSLETTER STAFF

Lynda A. Capuzzi, CE '71  
Dr. Edward V. McAssey  
Janice J. Moughan

### CONTRIBUTORS:

Department Chairs  
Dr. Moeness G. Amin  
Dr. David W. Dinehart  
Joseph Driscoll, ME '59  
Maureen McKew  
Enrique Mendoza, CE '00  
Peter Michel, CPE '02  
Sean O'Donnell, CPE '00  
Rachel Schaller  
Dan Tantino '02  
Blueprints  
Villanova Magazine



**Rev. Edmund J. Dobbin, University President, and Joseph DiGiacomo**

## IN MEMORIAM

**Joseph DiGiacomo, BEE '58**, Founder and Director of the Center for Advanced Communications passed away on January 18, 2002.

Joseph began a very successful industrial career with RCA in New Jersey. In 1973 he joined the Sperry Corporation as a manager of advanced technology. He was appointed an adjunct faculty member in Electrical Engineering at Villanova University in 1985. His tremendous contribution to the scholarly research at the University and the College of Engineering came from his role as founding director of the Center for Advanced Communications. Through his leadership and vision, he established Villanova as a major player in the field of advanced communications.

Joseph was always an upbeat person who felt that if an idea had merit, it should be pursued. His main mission statement for the Center was, "To establish a nurturing and creative environment in a communications research program that will help, serve, and guide students by linking them to the industrial community". As Executive Director of the Center, Joseph believed that his primary role was to develop the research skills of our students.

## HI-TECH APPROACH TO EDUCATION

Distance Learning (DL) in the College of Engineering was started in January 1999. Using strategic planning grants, a task force was assembled to

*(See DL, page 3)*

## COLLEGE APPOINTMENTS

In August, **Dr. John R. Johannes**, Vice President for Academic Affairs, announced that **Dr. Edward V. McAssey**, the James R. Birle Professor of Energy Technology and Associate Dean of the College of Engineering, had agreed to serve as Acting Dean of the College for the Academic Year 2001-2002. The new Dean will assume the position on August 1, 2002.

**Dr. Chui "Carl" Liu** joined the faculty as an Assistant Professor in Civil and Environmental Engineering, this fall, from the California Department of Transportation where he was a project engineer involved with all aspects of highway design. He studied at the University of Texas and obtained two Ph.D. degrees, one in Physics in 1993 and one in Civil Engineering in 1997. He is a registered Professional Engineer in California and New Mexico.

**Dr. Gerard F. Jones** was appointed Chairman of the Mechanical Engineering Department on August 1<sup>st</sup>. Dr. Jones, who has been a full-time faculty member at Villanova since 1987, replaced **Dr. Alan M. Whitman**, who served as Chairman since 1988.

**Dr. Moeness G. Amin** was appointed Interim Director for The Center for Advanced Communications by **Dr. Edward V. McAssey**. Dr. Amin is a professor in the Electrical and Computer Engineering Department. He began teaching at Villanova after receiving his Ph.D. in 1984 from the University of Colorado.

**Dr. Ronald A. Chadderton** was appointed Chairman of the Civil and Environmental Engineering Department, effective fall 2001. Dr. Chadderton has been a full-time faculty member at Villanova since 1981. His predecessor, **Dr. Lewis J. Mathers**, served as Chairman since 1986.

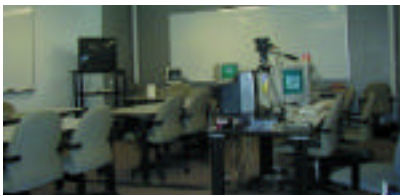
**DL** (cont'd. from page 2)

explore avenues of technology that would provide the Engineering College with a state-of-the-art DL system. Headed by faculty from the Electrical and Computer Engineering Department and dedicated undergraduate students, the group researched and purchased the necessary technology to provide Distance Learning. They called the system "Web-ed".

The theory of the system is to use streaming audio and video capabilities of the web to deliver course material to those who cannot attend the classroom. The college currently has 4 servers available and dedicated to delivery of the material.

To date, over 20 full courses have been taught using the system, with more being offered each semester. Used primarily for graduate course offerings, there are some undergraduate courses offered as well. It has also been used to provide supplemental course material for other courses. With the new portable cart, any classroom can be used and any course can be delivered through the Web-ed program.

You can go online at [www.engineering.villanova.edu/web-ed/](http://www.engineering.villanova.edu/web-ed/) or contact Sean O'Donnell at [sean.odonnell@villanova.edu](mailto:sean.odonnell@villanova.edu) for more information.



**CEER Distance Learning Room**

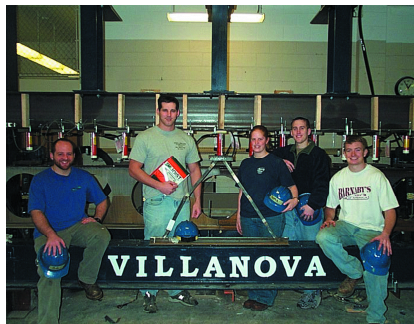
## STRUCTURAL STEEL RESEARCH

In the fall of 2001, SMI Joist, Inc. and SMI Steel Products, Inc. of Hope, Arkansas awarded Villanova University a five-year research contract to investigate the behavior of open web steel joists, castellated beams, and cellular beams. SMI joists can be found in the roofs of Wal-Marts and Home Depots across the country. The principal inves-

tigators of the project are **Drs. David W. Dinehart, Shawn P. Gross, and Joseph R. Yost.**

Villanova has been conducting experiments on the above products in its on-campus structural testing laboratory in John Barry Hall. Several research assistantships have been awarded to Villanova undergraduates to continue their education as full-time graduate students.

Currently there are four graduate students and one undergraduate student working on SMI projects.



Pictured above in front of a cellular beam (from left to right) are **Brian Gargan, MCE '02, James Deeney, MCE '03, Nicole Aloï, MCE '02, Jason Hennessey, CE '02, and Matthew Reiter, MCE '02.**

## GATES CAMBRIDGE (cont'd. from page 1)

As a mechanical engineer, the young scholar hopes to do research in small scale sciences: nanotechnology and microtechnology. "It appears that the project on which I will be working at Cambridge will involve micro electromechanical systems, designing materials and actuating structures for motors, etc.," Quinn said. "Many such mechanical devices are being used in the biotech industry for surgery or for creating things like tiny robots that can get inside veins and arteries to clean out cholesterol. I think this is all very fascinating and will have a direct influence on people's lives. That's something I am very interested in doing."

## FIFTEENTH ANNUAL ECE DAY TECHNOLOGY IN SPORTS

The fifteenth annual Electrical and Computer Engineering (ECE) Day was held on November 1, 2001, in the

Villanova Room of the Connelly Center. This year's topic was Technology in Sports.

After the introductions by **Dr. S. S. Rao, Chair of ECE, and Edmund Dougherty, EE '69, MSCS '86,** ECE Day coordinator, attendees heard about technological wonders such as high tech camera systems used in sporting events, virtual first down markers for NFL broadcasts, software to manage sports facilities such as the First Union Center, and the exciting "Sports Challenge" exhibit at the Franklin Institute.

Villanova Basketball, NBA star, and current director of basketball operations for the NBA, **Rory Sparrow, EE '80,** spoke after dinner about how technology and electrical engineering have affected him.

## CIVIL ENGINEERS WORK FOR ORPHANAGE IN HONDURAS



The College of Engineering and Campus Ministry, once again, sponsored a service-learning experience for Civil Engineering students to the small community of Posa Verdes, Honduras, during Spring Break. The purpose of the trip was to continue construction of a chapel at Los Amigos de Jesus orphanage. During the 2001 Spring Break a group of Civil Engineering students broke ground and completed most of the foundation for the structure. At Villanova the students worked on the design of the building. They began construction with the help of Honduran laborers who work at the orphanage.

**Anthony Granese, CE '90,** with his wife, Christine, Sister Teresita, and

(See *Honduras*, page 4)

**HONDURAS** (cont'd. from page 3)

Father Dennis O'Donnell from the Archdiocese of Philadelphia founded Los Amigos de Jesus in 1996.

The work of the mission includes housing, educating and socializing street children. Agricultural education for local farmers and a carpentry workshop for adults in the community are also provided. Please check the progress of the students at [www.engineering.villanova.edu/honduras](http://www.engineering.villanova.edu/honduras).

## DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING HOSTS STORMWATER SYMPOSIUM

The 2001 Pennsylvania Stormwater Management Symposium was held Oct. 17-18 in the Connelly Center.

The symposium was co-sponsored by the College of Engineering's Civil and Environmental Engineering Department and the Institute for Environmental Engineering Research (IEER).

The purpose of this year's proceedings titled, "Re-Thinking Comprehensive Stormwater Management—Integrating Quality, Volume and Peak Controls", was to advance the knowledge and understanding of stormwater management for those dealing in all aspects of land development, planning, design and implementation.

The event began with an introduction given by **Frank Falcone, CE '70, MCE '73**, Director of IEER, and **Dr. Robert G. Traver, MCE '82**, Associate Professor, Civil and Environmental Engineering Department.

## ANNUAL DEAN'S AWARDS DINNER

The Annual Dean's Awards Dinner was initiated in 1976 in order to recognize senior engineering students for their academic achievement and to thank them for significant service provided to the College of Engineering. This year's event will be held at the Overbrook Country Club on Friday, April 26<sup>th</sup>. Those students who are

invited to be guests at this annual dinner include all awardees and other undergraduate engineering students who have been active in assisting the College during the past year.

## DELAWARE VALLEY 2002 ENGINEERS WEEK

Delaware Valley Engineers Week was held from February 16<sup>th</sup> to February 23<sup>rd</sup>, to educate the community about engineering contributions, to inform young people of the opportunities in engineering and science, and to recognize the achievements of engineers and teachers. The week began with a luncheon that included the presentation of achievement awards including Engineer of the Year. This year's Engineer of the Year is Edward D'Alba. Mr. D'Alba, the President and Chief Executive Officer of Urban Engineers, Inc., has over 28 years of experience in the Civil Engineering field, and has been very active in community and civic programs.

The week culminated with an Engineers Week Banquet at the Villanova University Conference Center where Brig. Gen. Daniel J. Kaufman, Ph.D. spoke to a very attentive audience. Brig. Gen. Kaufman is the Dean of the Academic Board at the U.S. Military Academy at West Point.

## ABET

The Accreditation Board for Engineering and Technology (ABET) will visit the College of Engineering in the fall to evaluate the five programs in Chemical, Civil, Computer, Electrical, and Mechanical Engineering. ABET visits engineering colleges every six years to insure that the standards for engineering education are maintained. This year's visit will be based upon the new EC2000 accreditation process which emphasizes student learning rather than curriculum content. The procedure requires the development of program objectives, course outcomes, and assessment methods.

The faculty and administration of the College have been working for almost five years to meet the EC2000 criteria. The process involved the identification of constituencies which include faculty, students, alumni, and employers. The faculty committees then developed program objectives which were sent to the constituents for evaluation and comments. As part of the effort, each department created advisory boards which meet one to two times per year. These advisory boards represent a cross section of industry, government, and academia. In many cases the industrial members are alumni. The program objectives reflect the mission of the University and College. The Mission statements of the University and the College of Engineering as well as the various program objectives can be found on our website [www.engineering.villanova.edu](http://www.engineering.villanova.edu).

**CAC** (cont'd. from page 2)

In 1991, the Center was designated a Center of Excellence for Advanced Communications by the National Science Foundation (NSF). This placed the Center in the unique position of being the only NSF research center at a non-Ph.D. granting institution.

**Dr. Moeness Amin** of the Department of Electrical and Computer Engineering has been recently appointed Interim Director. Starting from a very small base, the annual research budget of the Center has reached the level of \$2 million.

**COMMENCEMENT** (cont'd. from page 1)

team and was chosen 2001 Male Student-Athlete of the Year.

Congratulations to Engineering Commencement Medallion Award winners: **Christopher M. Ott ChE**, **Kate D. McGowan CE**, **Alanna C. Piazza CE**, **Kevin J. Hughes CPE**, **Elizabeth M. Moyer EE**, and **Kerry Dunfey ME**.

## CIVIL AND ENVIRONMENTAL ENGINEERING

### GRANTS/AWARDS

**Frank Falcone**, *IEER Services Network: Ben Franklin Technologies Partners*, Ben Franklin, \$25,000. Continued support of the Institute of Environmental Engineering Research in the Center of Excellence Service Network.

**Dr. Rominder Suri**, has received a grant from the Claineil Foundation to study *Pharmacy Active Compounds in Surface Water, Chester County, PA*.

### NOTEWORTHY

Over the last three years, the Water Resources group has received numerous grants to study how to better manage stormwater runoff in urban and suburban settings. Best Management Practices (BMPs) are being advocated across the country to treat the large pollutant loads and increased runoff from developing areas. The first project spearheaded by **Dr. Robert Traver** was to convert the old detention pond behind the Law School into a Stormwater Wetland. Not only does it clean the stormwater before it leaves campus, it attracts a variety of wildlife to a formerly lifeless area. The second project, just completed, is a Bioinfiltration Traffic Island, on the West Campus. It is a parking divider area which absorbs runoff rather than diverting it to the street.

## ELECTRICAL AND COMPUTER ENGINEERING

### FACULTY

**Dr. Moeness Amin** received the Institute of Electrical and Electronic Engineering's (IEEE) Third Millennium Medal and became an IEEE Fellow in January 2001.

In August 2001, Dr. Amin traveled to Singapore and Malaysia where he

served on committees at two consecutive IEEE conferences. In Singapore, he presented four papers at the conference and gave an all day short course to the Singapore Defense Science Organization. In Malaysia, Dr. Amin presented four papers and chaired one technical session. He also addressed a large number of high school students about the Electrical Engineering major in the U.S. and opportunities in science and technologies.

**Dr. Robert Caverly** was one of eight featured speakers at an all-day Web-based workshop held at the 2001 IEEE International Microwave Symposium in Phoenix. His talk was titled "Web-based RF and Microwave Education" and was based on educational experiences that **Dr. Kevin Buckley** and he have encountered doing web-based distance learning at the graduate level.

Dr. Caverly is a member of the Steering Committee for the 2003 IEEE International Microwave Symposium to be held in June 2003 in Philadelphia.

### GRANTS/AWARDS

**Joseph DiGiacomo** and **Drs. Ahmad Hoofar** and **Moeness Amin**, *V-22 Aircraft Scale Model Study*, Boeing, \$70,000. Study will include a literature survey for measuring antenna parameters using an aircraft scale model.

**Dr. Moeness Amin**, *Classification and Discrimination of Sources with Time-Varying Frequency and Spatial Spectra*, ONR, \$360,000. This research focuses on multi-sensor array receivers of source signals with both time-varying spectral and spatial characteristics.

**Dr. Pritpal Singh**, SBIR Phase II TACOM/Army *Fuzzy Logic-Based Smart Battery Controller*, Nanosorp/DOD, \$25,000. This project

will enable Dr. Singh and select graduate students to work on the design of a fuzzy logic-based smart battery controller.

**Dr. Kevin Buckley**, *Space-Time Array Processing for Radar and Communications*, ONR, \$73,431. Phase II of this project entitled *Algorithms for Distributed/Robust Detection, Parameter Estimation and Tracking*.

**Dr. Moeness Amin**, *Signal Processing Techniques for Anti-jamming GPS Receivers*, AF Research Lab/IFB, \$240,000. This research project focuses on exploring new anti-jamming techniques for GPS receivers.

**Dr. Robert Caverly**, *CAD and Modeling of High Power High Frequency Devices* awarded by NSF in 1998, and still in progress, \$205,301.

**Dr. Bijan G. Mobasseri**, received a 3-year \$150,000 grant from the Air Force Office of Scientific Research to investigate *Smart Digital Video Watermarking for Cooperating Content*.

### NOTEWORTHY

u The Harry F. Ortlip Foundation provided \$300,000 to upgrade the Electronics, Control Systems, and Microcontrollers Laboratories. These laboratories will be equipped with state-of-the-art measurement equipment and computer workstations. **Mr. Alfred B. Pentony, EE '48** was instrumental in getting this support to enhance the ECE laboratories.

u The ECE department now offers graduate courses at four off-campus locations. The sites are BAE Systems in Lansdale, InterDigital Communications in King of Prussia, the Philadelphia Navy Yard and Lockheed Martin/Holy Family in Newtown, Bucks County.

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*Room 014  
Soils Testing Lab  
The Scopetta  
Family*



*Room 015  
Energy Conversion Lab  
William J. Midon, Esq., ME '75 & Family  
In honor of his Father, Alexander P. Midon  
and Grandfather, Alexander Midon*



# **GRATEFULLY ACKNOWLEDGING OUR GENEROUS LABORATORY DONORS**



*Room 017  
Student Projects Lab  
The O'Mara Family  
In honor of  
Mr. William E. O'Mara, CE '53,  
PE, LS*

*Room 110  
Control Systems Lab  
In Honor of  
Mr. Harry F. Ortlip*



*Room 112  
Solid State Devices Lab  
Daniel V. Wylde, EE '48  
and his wife, Anne*



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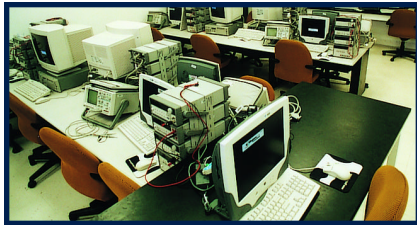
*Room 116  
Dynamic Systems Lab*

**Casimir Skrzypczak, ME '62 and his wife Grace  
In Memory of Charles & Helen Skrzypczak**



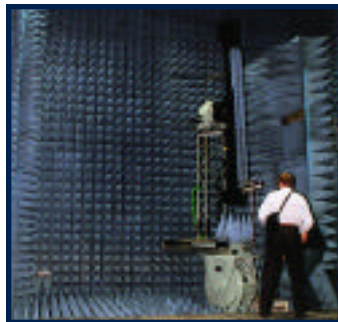
*Room 117  
Computer Aided Engineering Lab*

**Denny Family  
In Memory of Joseph G. Denny, III, ChE '37**

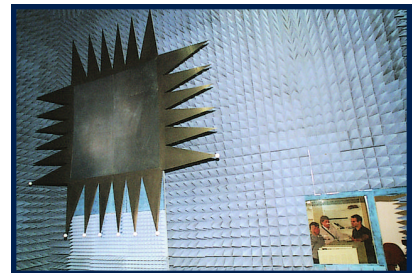


*Room 211  
Microcontrollers Lab  
In Honor of  
Mr. Harry F. Ortlip*

*Room 212  
Electronics Lab  
In Honor of  
Mr. Harry F. Ortlip*



*Room 220  
Antenna Anechoic Chamber  
Orbit/FR Advanced  
Electromagnetics, Inc.*



*Room 318  
Communication & Signal Processing Lab  
The Lockheed Martin Corporation*



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Undergraduate students can obtain a combined Bachelor/Master degree in Computer Engineering and Electrical Engineering. This new program, offered by the ECE Department, began in the fall 2001. These fields of study have rapidly changing technologies. Top corporations express the need for advanced education beyond the Bachelor Degree level.

A new graduate certificate, Digital and Wireless Communications, was introduced this year.

## MECHANICAL ENGINEERING

### FACULTY

**Dr. Gerard F. Jones** has been elected Chairman of the Philadelphia Section of the American Society of Mechanical Engineers (ASME) for the year beginning June 2001.

**Dr. Kenneth Kroos** was installed as Vice President of the MidAtlantic Region III of ASME at its Summer Annual Meeting in June 2001.

### GRANTS/AWARDS

**Dr. Gerard F. Jones** was awarded a contract to model and test a high-performance, air-cooled, composite heat exchanger for electronics cooling. The project is funded by the U.S. Air Force (BMDO).

**Dr. Edward V. McAssey**, the James R. Birle Professor of Energy Technology, received a grant from the Princeton Scientific Instrument Company to develop a thermal design for a telescope package on the Space Shuttle. He worked with **Matt Gallen, ME '02**.

## CHEMICAL ENGINEERING

### NOTEWORTHY

The fall semester marked the opening of a new Biochemical Engineering Lab at Villanova's White Hall. **Dr. William J. Kelly**, professor in

Chemical Engineering, **Dr. C. Michael Kelly**, chair of the Chemical Engineering Department, and **Dr. Edward V. McAssey**, Acting Dean of Engineering, were present at the laboratory opening.

The new facility contains state-of-the-art bioprocessing equipment, all of which has been donated by local pharmaceutical companies. Included is a set of three 20-liter steam-in-place NBS fermentors donated by Merck. Mark Baranouski, a Merck representative, said, "Because Merck operates with a much higher volume, larger machines are used. We're happy that instead of being wasted in storage, these smaller units can be put to good use at Villanova."



Biochemical Engineering Lab

## STUDENT NEWS

Students took several honors at the Annual ASME Regional Student Conference (RSC) held at Union College in Schenectady, NY, in April 2001. Villanova was one of 43 engineering colleges in the Mid-Atlantic region, invited to participate in the oral presentation, design, and poster competitions at the conference. Among the schools competing were Cornell University, the U.S. Naval Academy, Syracuse University, and the University of Maryland.

The senior design team of **Dan Vicario, ME '01**, **Vince Keenan, ME '01**, **Doug Lord, ME '01**, and **Mike Vinciguerra, ME '01** took second place in the oral competition and also took the "Best Technical Presentation" award. The title of their design was a "Shape Memory Alloy Activator".

Dan Vicario took first place in the annual ASME "Old Guard" Oral

Competition held at the Annual ASME International Exposition and Congress in New York City on November 13, 2001.

Five ECE undergraduate students received Lockheed-Martin's Edward Reese Scholarships. They were **Danielle M. DeCristoforo, CPE '03**, **Anthony J. Dina, EE '03**, **Frances M. Gevarter, CS '03**, **Joseph Girellini, CPE '03**, and **Lauren A. Sanford, CPE '03**. In addition to the monetary award, each recipient will receive a summer internship at the Lockheed-Martin Management and Data Systems facility in King of Prussia, PA.

**Jason Hennessey, CE '02**, **Aimee Deck, CE '03** and **Maeve McCarthy, CE '03** were awarded research fellowships for the summer with SMI Joist, Inc.

**Elizabeth Gaynor, CE '03**, was awarded an academic scholarship by the Leopold Shepp Foundation. She was also the recipient of the William Reeves Memorial Scholarship presented by the southern New Jersey section of the American Society of Highway Engineers.

This was another active year for the student chapter of AIChE at VU. The chapter sponsored a talk by Sunoco, and alum **Rita Tomassetti, ChE '00**, was one of the main presenters. Four students made the trip to Reno, NV, for the Annual National AIChE meeting.

The Robert E. White Award was presented to the following students: **Shanna Guevin, ChE '02**, **Jeffrey Fearnside, ChE '03** and **Nicholas Falco, ChE '04**. This award was established by alumni to recognize current students, with financial need, for their academic achievement and their personal character, in the memory of the long-time Chair of the Chemical Engineering Department.



### WHO'S WHO

The College of Engineering is pleased to announce that the following students were named to *Who's Who Among Students in American Universities and Colleges, 2001-2002*:

Kathleen F. Cole, EE  
 Kieran P. Cornely, ChE  
 Ryan J. Lester, ME  
 Christopher M. O'Neill, ChE  
 Nicholas E. Ozog, ME  
 David J. Quinn, ME  
 John F. Surry, EE

### VILLANOVA UNIVERSITY MINI-BAJA CLUB

Every year the Society of Automotive Engineers (SAE) organizes the Mini-Baja competition among engineering schools. Each team is responsible for designing, testing, and building an all-terrain vehicle. The competition involves events such as a hill climb, load towing, acceleration, braking, and an endurance race. In addition, there is an event that requires the vehicle to be amphibious, which involves maneuvering through a course across a lake. The competition is intended to give students the opportunity to utilize the skills they learn in the classroom and carry out the design process from start to finish. Under the direction of Mechanical Engineering Professor **Dr. John Majerus**, the VU Mini-Baja Club completed their first car just in time for the 2001 Mini-Baja East Competition. It was a great learning experience and we are looking forward to future competitions and encourage anyone interested to join in this great project.

### ME 2001 ROBOT COMPETITION

The Mechanical Engineering sophomore class competed in the Annual ME 2500 Robot competition on December 10, 2001. The theme of this year's competition, designed by **Dr. Amy Fleischer**, was "Get the Students to Class on Time". The student teams were required to build

robots which gathered 14 wooden dowels representing "students" and a "professor" from various locations on a mock Villanova campus, and deposit them in the classroom in under two minutes. Teams received points based on how many dowels they got to the classroom, and whether they were standing up (awake) or lying down (asleep).

The winning team received a \$100 prize. The winning robot "Hurricane" was designed by **Ryan Schippert, Adam Agalloco, Jennifer Etter, Joseph DeGrazio** and **Michael Murphy**. Taking second place was "Dazed and Confused", designed by **Anthony Reindl, Gregory Wilson, Monica Stoka** and **Michael Sidlo**. In third place was "The Beast" designed by **Daniel Ballister, Andrew Tatarenko, Keith Dougherty,** and **Mark Trostel**.

### ENGINEERING ALUMNI SOCIETY (EAS)

An EAS pamphlet was sent out earlier this year with information about the Society, the programs it is involved in, and membership sign up. If you missed this information, log on to [www.alumni.villanova.edu/chapters](http://www.alumni.villanova.edu/chapters) or call James E. Zaleski at 610-519-7988.

**51 James R. Gallagher, EE**, celebrated 50 years of marriage in August 2001. He and his wife, Jeanne, were guests of honor at the celebration hosted by their daughter in Delaware.

**59 Robert J. Merkert, Sr., EE**, and his wife, Margaret, established the **Professor Joseph J. Hicks Scholarship** to provide a partial tuition award to a current or incoming student majoring in Electrical Engineering.

**61 Ronald M. Bullotta, ME**, is Vice President of American Label Tag, Inc. in Canton, MI. He and his wife, Barbara, are the parents of three

children. Their son, **R. Michael Bullotta Jr. '89**, majored in political science at Villanova.

**62 James M. McMonagle, ME**, was named Corporate Vice-President at PSC Info Group, a worldwide provider of leading edge document and information management services, located in Valley Forge, PA.

**64 Robert J. Bettacchi, ChE**, was selected to lead the new performance chemicals unit at W. R. Grace & Co. in Cambridge, MA. Bettacchi is a 30-year veteran of Grace and Company and President of Grace Construction.

**65 Albert M. Tantala, MCE**, President of Tantala Assoc. in Philadelphia and Margate, NJ, was elected President of the Pennsylvania State Registration Board for Professional Engineers, Land Surveyors and Geologists.

**The Hon. William C. Vaughn III, EE**, has been appointed Administrative Law Judge in the Indianapolis Office of Hearings and Appeals.

**66 Robert J. Jones, ME**, is Vice President, Operations for Bethlehem Steel's Burns Harbor Indiana Division.

**67 Gregory S. Kuzniewski, CE**, was promoted to Director of Marine Corps programs at the Raytheon Company in Arlington, VA. He and his wife, Lori, reside in Springfield. **Lester Lyon, ME**, was honored as Aerospace Professional of the Year 2000 by the American Institute of Aeronautics and Astronautics (AIAA) for his efforts in support of Air Force missile systems. He is Manager of Re-entry Systems Programs for Lockheed Martin, in Valley Forge, PA. He is the father of **Mathew, EE '98**, and **Mark, '03**, who is majoring in Computer Engineering at Villanova.

**John Zoubek, ME**, General Manager of Zoubek Associates Inc., a division of A. H. Harris & Sons in Parlin, NJ, was named President of the American Equipment Distributors Association.

**68 Pasquale A. Dougherty, PE, CE, MCE '75**, was elected Delaware Valley Engineer of the Year by the Engineering Technical Societies in the Philadelphia area in 2001. He has more than 34 years experience in both the public and private sector of civil/transportation engineering in the Delaware Valley. He is an active member of the American Society of Highway Engineers, the American Society of Civil Engineers and the Institute of Transportation Engineers.

**69 Stephen M. Frommick, EE**, is Chief Executive Officer/President of Primaxx, Inc. in Allentown, PA. The firm is a supplier of high-tech manufacturing tools for the semiconductor industry. For the past six years, Frommick served as Vice President of Phoenix Management Services and President/Owner of Eagles' View Associates, Inc. He and his wife, Nancy, reside in West Chester and are the parents of two daughters, Meredith and Alexis.

**71 Thomas M. Gresko, ME**, was appointed Program Manager for Environmental Projects at Mid-Atlantic Associates in North Wales, PA. He is responsible for managing projects and directing all sales and marketing in the Philadelphia area.

**72 Vito A. Genua, CE**, a 28 year veteran of the Pennsylvania Department of Transportation, was given the department's Star of Excellence Award for his management of major Philadelphia area transportation improvement projects.

**73 Donald P. Fusilli Jr., Esq., CE**, is President and Chief Operating Officer of Michael Baker Corp., an international engineering management firm. He is responsible for the company's day-to-day operations worldwide, headquartered in the firm's Houston office.

**David I. Oles, CE**, of Downingtown, PA, is President of Nason and Cullen,

Inc., building and construction managers headquartered in King of Prussia. He is a licensed Professional Engineer in Pennsylvania and West Virginia.

**Robert C. Grubic, CE**, President of Herbert, Rowland & Grubic, Inc., an engineering, surveying and related services firm, headquartered in Harrisburg, has been appointed a member of the Pennsylvania State Registration Board for Professional Engineers, Land Surveyors and Geologists.

**80 Chris Dantos, ME**, was awarded NASA's Public Service Medal, the Space Agency's highest honor given to a non-federal employee. The ceremony took place at the Johnson Space Center in Houston. Dantos is a Program Manager at the headquarters of Hamilton Sundstrand in Windsor Locks, CT. The firm is the primary contractor for the design and building of the life support system for the NASA space suit. Dantos headed a team of experts working tirelessly for three months to resolve a critical contamination problem in the space suit's secondary oxygen pack. Until the problem was resolved, space shuttle flights were impossible.

**Merrell Cole Cashion, Jr., Esq., ChE**, is Program and Resource Administrator for the Board of Patent Appeals and Interference of the U.S. Patent and Trademark Office in Washington, D.C. He has been selected to participate in the U.S. Department of Commerce's Science and Technology Fellowship program for 2001-02.

**84 Peter Gentle, PE, MCE**, joined STV, Inc., a national engineering, planning, architectural and construction management firm headquartered in Philadelphia. He is serving as STV's Senior Project Manager on the Girard Avenue light rail project for the Southeastern Pennsylvania Transportation Authority (SEPTA).

**John Abruzzo, PE, CE**, was promoted to Associate in the New York

office of LZA Technology, a multidisciplinary building investigation and restoration division of the Thornton-Tomasetti Group. He holds a MCE from Stevens Institute of Technology.

**85 Navy Lt. Cmdr. Donald E. Neubert, CE**, is the Executive Officer on board the nuclear-powered attack submarine USS Chicago, based in Pearl Harbor, Hawaii. A 15-year navy veteran, he is second in command of the submarine and has overall responsibility for day-to-day operations.

**Scott L. Robik, EE**, for the past three years has been in Tokyo, where he is a senior member of the credit team of Credit Suisse First Boston. His role is to expand credit trading both in yen and dollars.

**87 John C. Dillon, EE**, is Managing Director of Nordson Corporation's ultraviolet curing business worldwide. The company, headquartered in Westlake, Ohio, produces precision dispensing equipment. Dillon holds an MBA degree from John Carroll University.

**James P. Dimmerling, PE, CE**, was named Associate Vice President, Transportation Technology, in the Lehigh Valley office of the Philadelphia engineering firm of Pennoni Associates, Inc.

**88 John R. McCarthy, ChE**, received a Circle of Excellence Award from Cytec Industries, Inc., a Paterson, NJ, firm. He was honored for his outstanding results as Sales Manager for the company's water treating chemical business.

**Susan McCann Mercurio, ME**, is a Senior Engineer with Carolina Power & Light. She works on deregulation efforts in the electric industry and serves as an Engineer Officer in the U.S. Coast Guard Reserve.

**89 Navy Lt. Cmdr. Michael P. Donnelly, ME**, is stationed at the Naval War College in Newport, RI.

**90 Michael Niedzielski, ChE**, who holds an MBA from Lehigh University, was promoted to Director of Sales at Broadband Communications Sector in Horsham, PA.

**Peter Quintal, ME**, is an Engineer Test Pilot for Northrop Grumman in Long Island, NY.

**Joseph Wartman, CE**, received a Ph.D. from the University of California, Berkley and is now an Assistant Professor of Civil Engineering at Drexel University. He was formerly a Project Manager for Golder Assoc. in Oakland, CA.

**91 Scott Allen Strang, EE**, was promoted to National Sales Manager for Ober-Read & Assoc. in Branford, CT.

**Joseph Key, Esq., EE**, has joined the law firm of Rich & Richardson P.C., in Washington D.C. As a member of the patent group, he provides patent prosecution advice and patent infringement and validity studies for clients in the electrical field.

**93 Andrew J. Kese, CE**, earned an MBA at the College of William and Mary Graduate School of Business.

**94 Kristin M. Cunningham Norwood, MCE**, is a Project Engineer with KCI Technologies, Inc. in Bensalem, PA. She and her husband, **John M. Norwood, CE '94**, reside in Collegetown.

**97 Amy Kleist Holovaty, ChE**, lead Project Development Engineer for Emulsions, has been chosen as "Young Engineer of the Year" for 2002 for the Lehigh Valley by the Pennsylvania Society of Professional Engineers (PSPE). Amy was chosen for her project development work at Air Products, her high level of involvement in the Society of Women Engineers, Lehigh Valley section, service to the Salvation Army Foster Care Division, and various other volunteer groups.

**Jeremy Kampp, ChE**, spent a year as a Maryknoll Volunteer, and is now a medical student at Loyola University in Chicago.

**99 Jennifer Dallari, EE**, earned a Master's Degree in Mathematics from Teachers College, Columbia University. She is a teacher at Valley Stream (NY) Central High School.

**01 Matthew Reiter, CE**, had the distinct honor of being selected the 2001 Laureate of the Tau Beta Pi Association. He is one of a select group of 51 Laureates chosen since 1982. He was presented the Laureate Award on Saturday, October 20th.

**Elizabeth Moyer, ECE**, was awarded a five-year National Science Foundation Fellowship to continue her education in graduate school.

**ENGINEERING ALUMNI AWARDS**

Every year, 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 are presented each June at the EAS Awards Banquet.

The 2001 J. Stanley Morehouse Memorial Award was presented to **John Paul Jones, III, ChE '72**. This award was instituted in 1972 in honor of J. Stanley Morehouse, Dean of the College of Engineering from 1938 to 1961.

The 2001 John J. Gallen Memorial Award was given to **Colleen M. Burke, ME '90**. This award was instituted in 1977 in honor of John J. Gallen, Dean of the College of Engineering from 1961 to 1975.

The 2001 Carl T. Humphrey Memorial Award recipient was **William M. Goble, MEE '88**. This 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 Masters Degree from Villanova's College of Engineering.

The recipients of the 2001 Alumni Awards for Professional Achievement were **Stephen R. Fitzgerald, ChE '72**, **Stephen G. Sawyer, Ph.D., CE '65**, **Peter J. Sevcik, EE '69** and **Alberto J. Sanchez, ME '65**.

The 2001 Alumni Awards for Meritorious Service were given to **Jeremy T. Kampp, ChE '97**, **John M. Robins, CE '71**, **Samuel V. Brattini, EE '63**, and **William G. DiMaio, ME '80**.

**BAND OF BROTHERS**

A group of Civil, Chemical, Electrical and Mechanical Engineers from the class of '59 who roomed together on the 3<sup>rd</sup> floor of Sullivan, were brothers in Phi Kappa Pi, members of the spirit committee, avid competitors on intramural teams, and have reunited at least every 5 years since graduation are the ingredients for a bond of brotherhood as loyal sons of Villanova. We call ourselves the Third Floor Sullivanites and come from communities throughout the USA.

The reunions were such a great time that we voted not to wait for 5 years for the next one. Join us at the reunion this year in activities ranging from softball, shooting hoops, playing tennis and horseshoes to walking around campus with your buddies wearing a shirt commemorating Phi Kappa Pi. The lobby of Moulden Hall, traditionally reserved for '59ers during the weekend, is festooned with memorabilia such as: frat pledge paddles, yearbooks, photo albums, pictures of past reunions, and slide shows of campus life in the mid to late '50s.

We urge all '59 engineers to come for the Engineering Alumni Society Dinner and then gather with us in the lobby of Moulden Hall on the weekend of June 7<sup>th</sup> to 9<sup>th</sup>, 2002. Let me know if you plan on joining this merry band of brothers for this interim reunion weekend.

Joe Driscoll, '59 ME  
jadmonkton@erols.com  
(adapted from a letter by Joseph Driscoll)



VILLANOVA UNIVERSITY  
College of Engineering  
Villanova, PA 19085-1681

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## ENGINEERING ALUMNI AWARDS BANQUET



Friday, June 7, 2002

Villanova Room, Connelly Center  
\$40 per person  
6 PM - 7 PM Cocktails

7 PM - 10 PM Dinner and Awards Ceremony

**\*\*Open Seating\*\***

**There is a limited amount of seating for this affair.**

### ***Are you a Top Cat?***

Did you graduate in 1951 or before? If so, the Engineering Alumni Society will pay for your ticket. When you register, simply mark the number attending the dinner and pay for all but your ticket.

For banquet details and registration, visit our Web Site at [www.engineering.villanova.edu/banquet](http://www.engineering.villanova.edu/banquet) or call 1-800-Villanova to receive all Reunion Weekend information. Add "/straycats" to the above web address to view classmates and retired faculty contact information. Please be sure to give your name and complete mailing address as well as your graduating year and major.