

UB ENGINEERING

SPRING 2006

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DEAN MARK KARWAN LEAVING A LEGACY OF DEDICATION TO UB ENGINEERING



KARWAN

After 12 years at the helm of the School of Engineering and Applied Sciences, **Dean Mark Karwan** has decided to return to his first passion as an educator—teaching and conducting research within the recently renamed Department of Industrial and Systems Engineering.

Karwan began his UB tenure almost 30 years ago in the Department of Industrial Engineering and has held numerous leadership positions within UB Engineering, including chair of the department of Industrial Engineering and Associate Dean for Research and Graduate Education. Although Karwan will step down from his role as Dean, he will remain dedicated to UB and Engineering. "I'm a UB person and will always be a UB person."

CONT. ON PGS. 5, 7, 9, AND 14

UB Business Partners Day

The annual UB Business Partners Day, hosted by UB Engineering and the University to celebrate the successful and productive relationships among industry, government and the University, brought Carl F. Kohrt, president and CEO of Battelle, to Buffalo to speak on "The Business of Innovation: Operating at the Intersection of Technology and the Marketplace."

The event enables local leaders to hear a national speaker and also honors business and civic leaders who have demonstrated outstanding leadership in support of UB and Western New York. The 2005 Igniting Ideas honorees were Senator Charles Schumer and U.S. Representative Sherwood Boehlert for their commitment to the advancement of UB. The Vital Partners award was presented to Niagara Mohawk, a National Grid Company, and accepted by Dennis Elsenbeck, vice president of business services.



DENNIS ELSENBECK, NIAGARA MOHAWK VICE PRESIDENT OF BUSINESS SERVICES, RECEIVES THE VITAL PARTNERS AWARD FROM DEAN MARK KARWAN



SENATOR CHARLES "CHUCK" SCHUMER RECEIVES THE IGNITING IDEAS AWARD FROM UB PROVOST SATISH TRIPATHI



REPRESENTATIVE SHERWOOD BOEHLERT RECEIVES THE IGNITING IDEAS AWARD IN WASHINGTON D.C. DEAN MARK KARWAN AND UB PROVOST SATISH TRIPATHI PRESENT THE AWARD.

For more information, please see <http://www.eng.buffalo.edu/events/iuday/index.htm>.

This year's program is Thursday, June 15.

Dean's Council Deliberates



DEAN'S COUNCIL MEMBERS AND THE UB ENGINEERING DONOR WALL

UB Engineering's Dean's Council met at UB for two days in the fall to be updated on School progress and offer suggestions for future plans. **Kenneth Manning**, BS ES '72 and Council chair, presided.

Dean Mark Karwan began business with reports on the state of UB Engineering, UB 2020, and plans to reorganize the Office of Research and Graduate

Education. The group enjoyed a presentation on "Extreme Events: Mitigation and Response – A Strategic Strength" by **Michel Bruneau**, director of the Multidisciplinary Center for Earthquake Engineering Research (MCEER), including observations made by UB faculty of Hurricane Katrina devastation. The presentation was followed by a tour of the Network for Earthquake Engineering Simulation Facility hosted by **Andrei Reinhorn**, Clifford C. Furnas Eminent Professor of Structural Engineering.

During lunch, the Council heard from both student clubs and Development. **Jeremy Burger**, **Meghan Deily**, **Tom Najuch** and **Greg Nelson** of the student chapter of the American Society of Civil Engineers presented on a number of their activities, including the

seismic design competition, concrete canoe team, and the steel bridge competition. **Kelly Miller** and **Bonnie Bielec** of Engineers for a Sustainable World presented on the group's efforts to promote sustainability, including UB on B20, a campaign to get UB vehicles running on a 20% blend of biodiesel fuel. **Tim Siderakis**, assistant dean of development, unveiled the new UB



DEAN'S COUNCIL CHAIRMAN KENNETH MANNING ADDRESSES THE GROUP

CONT. ON PG. 12

Alumni News

UB Engineering Says, "Go Bulls!"



UB Engineering alumni, students, faculty and staff enjoyed two chances to cheer for the UB football team. The Annual Engineering Alumni Association (EAA) tailgate party got the season kicked off right at the home opener on September 17 against the Rutgers Scarlet Knights. Bulls fans enjoyed desserts and good company before the game.



Homecoming

UB Engineering alumni and friends met again to enjoy the festivities of the homecoming game against Akron on October 8. The UB Alumni Association welcomed all of the UB alumni with food and fun before the game.



Basketball

When the UB Bulls Basketball team got into action, UB EAA visited Alumni Arena to root for our team. On January 21, 2006, over 70 alumni came to enjoy the 19th annual Engineering at UB Basketball event. UB EAA presented the Engineering Spirit Award to the New York Nu chapter of Tau Beta Pi during the post-game pizza party.



EAA TREASURER STEVE BUECHI PRESENTS THE ENGINEERING SPIRIT AWARD TO TAU BETA PI VICE PRESIDENT, JANINE ZIELINSKI, PRESIDENT, DAN GAJEWSKI, AND CLUB MEMBERS. EAA BOARD MEMBER JIM BOYLE AND BASKETBALL EVENT CHAIR RICK RINK LOOK ON.

Class of 1955 50th



ALLAN QUINBY, RALPH QUANCE, RALPH JOHNSON, RICHARD WEBER, RICHARD KNAPP, JERRY CONROY (KNEELING), JOHN MCCLIVE, BOB GARBACZ, DAN CLARK, CARL ALBERT

The Class of '55 met for its annual summer picnic at the home of Dan and Rita Clark. This was the ninth year the group met at the Clarks' in East Aurora. The special day marked the group's fiftieth anniversary and was celebrated with a champagne toast.

UB Pillars Society

Please join fellow UB alumni of 50 or more years at the summer gathering of the Pillars Society. The group will meet on June 15, 2006 for a luncheon at the Center of Tomorrow. On June 16, the group will partake in a day excursion. Please contact Patty Starr at the UB Alumni Association for more details: (716) 829-2608 or pstarr@buffalo.edu.

Pillars Society 2005



JOHN DANIELS, BS ME '50, DONALD SCHEU, BS EE '49 MS EE '61, RICHARD KNAPP, BS EE '55, GLENN JOHNSON, BS ME '50, RICHARD WEBER, BS IE '55, JOHN MCCLIVE, BS ME '55, RALPH JOHNSON, BS ME '55, DANIEL CLARK, BS ECE '55, SHERIDAN YONDT, BS ME '50, DONALD DONEWIRTH, BS ME '50, JOHN DICKY, BS ME '50

A reunion group was honored at a fall Pillars Society Luncheon that featured guest speaker John Edens from University Archives. Engineering alumni also gathered at UB's Center for Tomorrow following the meal.

ALUMNI MEMBERSHIP

Graduates of UB's School of Engineering have the opportunity to improve their alma mater through the new joint membership between the Engineering Alumni Association and the UB Alumni Association. Members have the opportunity to participate in fun events such as the tailgates and basketball games featured in our Alumni News as well as feel proud about giving back to UB.

Membership dues:

- support alumni in 21 cities in the U.S. and 11 international locales, providing important opportunities to network and reconnect;
- support scholarships for engineering students as well as student events such as Engineers Week and the Fall Picnic;
- help produce UB Today, the alumni magazine, and @ub, the university's e-newsletter, sharing the latest accomplishments and remarkable research happening at UB;
- connect UB alumni to current students through support of the University Student Alumni Board and partnerships with the offices of Student Life, Student Affairs, Athletics and Career Services; and
- deliver programs such as mentoring, "Dinner with Twelve Strangers," and Homecoming.

Just by joining the alumni association, members can make a direct impact on UB, current students and alumni around the world.

To renew or begin your membership, go to www.alumni.buffalo.edu. Once there, click on the "Membership" tab at the top right. Then, in the left column, you can join either online or by mail. Be sure to notice the special membership type for UB Engineering alumni.

Stay Connected... Permanently

With all the changes in life, it's nice to have some things stay the same. The UB Alumni Association now offers lifetime email accounts to all alumni. It is a great way to connect with former friends and new colleagues that can be found on the UB Connect alumni directory. The service is free and exclusively available to all UB alumni.

If you are interested in signing up for your free, permanent UB email account, please visit the UB Alumni Association website at: <http://alumni.buffalo.edu/index.html> and click on the "UB Connect" tab. UB Connect is supported in part by members' dues. If you would like to support this and other alumni association programs, please visit www.alumni.buffalo.edu and click on the membership tab. If you are currently a member – thank you!

Class Notes

1970s

Elizabeth Casciani, BS EE '78 MBA '83, has been appointed vice president, operations and services at Praxair Inc.'s Technology Center in Tonawanda.

Lloyd DeVaux, BS EE '78, has been named chief operating officer of BankAtlantic Bancorp, the holding company for BankAtlantic, Florida's second-largest bank. DeVaux has worked as a systems engineer for IBM, for petroleum companies in Europe and the Middle East, and as the chief information officer and executive vice president of Union Planters Bank's holding company.

Joe Frandina, BS CIE '78, was highlighted in a recent edition of *Engineering Times*, a publication of the National Society of Professional Engineers. Frandina serves as the Buffalo Bills' director of stadium operations and is responsible for the Bills' buildings and grounds, HVAC, plumbing, electrical, structural, maintenance, snow removal and house cleaning, as well as overseeing facility renovations and construction.

Jeff Groob, BS ME '77, has been named president of First Mobile Technologies. He previously worked in international marketing for General Electric Aircraft Engines, served as a divisional general manager for Entek IRD/Rockwell Automation, and was chief executive officer of SensorScript Corp.

Terry Kazmierczak, BS ME '73, has been named to the board of directors of Leadership Buffalo, a group committed to developing the current and future leaders of Buffalo and Erie County through enhancing our social capital and helping leaders to lead from a common set of core values—service, diversity, inclusion and openness to change. Kazmierczak is employed by M&T Bank.

Richard Marczewski, BS ME '79, has been appointed a senior mechanical engineer at Watts Engineering and Architecture in Amherst, NY. Marczewski, a LEED accredited professional, is a licensed professional engineer in New York, Ohio and New Jersey.

Mahesh Muchhala, MS CE '70, co-founded CertifiedMail in 1999 and is now CEO and president. The company helps organizations safely send and track sensitive information over

the Internet by creating secure e-mail with the press of a button, without the need for additional software or training. The patented technology has gained market acceptance because of its simplicity and transparency.

Saverio Pugliese, BS ES '71, has been named director of the Transportation Sciences Center at Calspan Corp.

David Oppenheimer, BS ME '78, has been appointed senior vice president and chief financial officer of MFORMA, a leading global publisher and distributor of mobile entertainment. "David Oppenheimer is a proven financial executive whose experience ranges from oversight of growth initiatives, M&A transactions, and financial planning, to treasury, controller-ship and investor relations functions," said Jonathan Sacks, MFORMA president and CEO. "He is a perfect fit for our management team." Previously, Oppenheimer has been chief financial officer at Digital Impact.

Robert Schultze, BS IE '72 MBA '77, is director of the Virginia Retirement System, the 27th largest pension fund in the United States, serving 520,000 current and former Virginia public employees which are planning or financing their retirements. He manages a staff which invests in stocks, bonds and "alternative investments" of real estate, private equity and hedge funds.

1980s

Ed Crean, BS EE '82, is a senior RF engineer at Symtx and has 22 years of experience in RF design, manufacturing, and management. He recently published a feature article on RF Power Amplifier Testing on EvaluationEngineering.com. The article can be found at www.evaluationengineering.com/archive/articles/1105/1105rf_power.asp.

John Dunbar, BS CIE '80 MBA '81, was awarded the Entrepreneurship Award from UB's School of Management and its alumni association. Dunbar is president of Strategic Investments and Holdings.

Timothy Gawenus, BS CIE '89, has been hired as a project manager by FRA.

Nirup Krishnamurthy, MS IE '87 PhD IE '91, has been named Executive Vice President and Chief Technology Officer for Northern Trust, a leading global provider of asset management and asset services to affluent individuals, corporations, and institutions. Krishnamurthy has recently served as

Vice President and Chief Information Officer of UAL Corporation.

Krishna Kolluri, MS IE '88, executive vice president, security products, at Juniper Networks, has been appointed to the board of directors at Nevris Networks. Kolluri joined Juniper through the acquisition of NetScreen Technologies, where he was general manager of NetScreen's Secure Access Products. He brings extensive entrepreneurial experience and proven success at bringing disruptive network security solutions to market.

Thomas Paolicelli, BS CIE '88, rejoined Moody's Investors Service as a vice president and senior analyst on the infrastructure team of the public finance group. Paolicelli will work as Moody's lead analyst for the New York revolving fund and pooled loan sectors. He will also cover a diversified portfolio of credits in other infrastructure-related areas across the U.S., including airports, ports, public power, toll roads, and mass transit. Paolicelli served on the infrastructure team at Moody's before working as the treasurer of the New York City Municipal Water Finance Authority.

Paul Schifferle, BS AE '88 MS ME '04 and adjunct instructor of mechanical and aerospace engineering, has been named technical manager of the Flight Research Group at Calspan Corporation, a local technology company. The group provides specialized aircraft-related research, development, test and evaluation and training services.

Venkatesh Srinivasan, MS CE '88 PhD CE '93, has been named director of business development for Phyton Biotech, Inc., a DFB Pharmaceuticals affiliate and world leader in the use of plant cell culture technology. Srinivasan has served as senior scientist of research and development for the company since 1996. As a senior scientist, he and his team optimized the plant cell fermentation processes for production of paclitaxel and other

taxanes; dealt with intellectual property issues; consulted in research and manufacturing related to the technology transfer; and documented and managed governmental regulatory filings.

Douglas Stryker, BS ME '82 MS ME '90, has been named director of the Systems Integration and Design Group at Calspan Corp.

1990s

Keith Bernard, BS CIE '94, has been appointed to the board of directors of the YMCA of Greater Buffalo. Bernard is assistant vice president at Parsons Brinckerhoff.

Eric Fischlein, BS CIE '97, has been named project engineer at Clough Harbour and Associates, a full service engineering firm.

Sumeet Gadi, MEng CIE '97, has been promoted to vice president at Barnhart Inc., a San Diego-based general contractor and construction manager. He has been with Barnhart for nine years and is currently managing the Ramona Unified School District's school modernization program in Ramona, CA.

Richard Henry III, BS CIE '90, is vice president of Clark Patterson Associates. He manages a staff of 20 and is the designated principal-in-charge for more than 70 projects. He also plays a role in Clark Patterson's business development efforts and the firm's overall management and decision-making process.

James Hogan, BS CIE '98, has been hired by Nussbaumer and Clark, a local multidisciplinary engineering and land surveying firm. Hogan is presently working on civil engineering design for subdivisions in the South Towns.

Vincent Kirsch, BS CIE '92, has been named senior project manager at LP Ciminelli, a commercial construction company.

PE Contact Hours for License Renewal

UB Engineering is pleased to be recognized as an approved NYS provider site for professional engineer continuing education. UB Engineering provides PE Continuing Education options in three forms:

1. Graduate courses via our distance learning system EngiNet™
2. Special short courses
3. Departmental seminars

For further information, registration, or particular company needs, contact Marge Hewlett, mhewlett@eng.buffalo.edu, 716/645-2768 x1106.

Class Notes (cont.)

Peter Nieves, BS EE '95, has joined the firm Sheehan Phinney Bass + Green of Manchester, NH. Nieves is a patent attorney, whose practice focuses on many aspects of intellectual property, including domestic and foreign preparation and prosecution of patents, domestic and foreign preparation and prosecution of trademarks, licensing, and disputes concerning patents, trademarks, copyrights and domain names.

Steven Ranalli, BS CIE '94, has been named senior associate for the design firm of Clark Patterson Associates. With the firm since 2003, Ranalli, manager of the Buffalo office and senior project manager in the transportation division, will be responsible for client development in Western New York and transportation projects throughout New York State.

EngiNet™ Offerings

EngiNet™ is principally a graduate-level distance learning program. We offer courses year-round in the following areas:

[Civil, Structural and Environmental Engineering](#)
[Computer Science and Engineering](#)
[Electrical Engineering](#)
[Engineering and Applied Sciences](#)
[Industrial Engineering](#)
[Mechanical and Aerospace Engineering](#)

Summer and Fall 2006 courses are being planned now. See our website <http://www.eng.buffalo.edu/EngiNet/> for class lists and more program information.

For more information, contact Marge Hewlett, EngiNet™ Administrator at the School of Engineering and Applied Sciences: 716/645-2768 x1106 or enginnet@eng.buffalo.edu

Anthony Santarosa, MS ME '97, owner of Radioactive Cycles, has teamed with the Buffalo Sabres and Dunlop Tire Corp. to give away one of his custom motorcycles. Santarosa uses his engineering education to design specialty bikes which are custom-fitted for the customer and refurbished used models. He will be showcasing the Sabres bike at motorcycle events around the country.

Timothy Walck, BS CIE '91 MEng CIE '97, has been named principal at Wendel Duchscherer, an Amherst, NY design firm. Walck is operations manager for the Infrastructure Group and is responsible for overseeing project management functions. He currently serves as the town engineer for Wheatfield, NY and village engineer for Middleport, NY.

Michael Zacher, BS CIE '90, has been named senior project manager at LP Ciminelli, a commercial construction company.

2000s

Brian Alessi, BS CSE '04, has been promoted to an eBusiness analyst in the Information Technology Department of Delaware North Cos., a hospitality and food service provider.

Job Hunting?

Alums – Do you know that you can still receive FREE career advice?

Career Services offer a wide variety of services to engineering and applied sciences alumni, including résumé/cover letter critiques, job search and interviewing tips, access to online job postings, résumé referral, on-campus interviewing, and individual career counseling appointments. Check out our Meet-A-Mentor program, and get connected to UB alums who are working in various fields! Visit the Career Services office in 259 Capen Hall to speak with a counselor or call (716) 645-2231. For more information, log on to www.ub-careers.buffalo.edu.

Luis Concha, BS IE '05, has been hired by Kawasaki's train manufacturing plant in Yonkers, NY.

Maham Dard, BS EE '05, has been appointed as a staff engineer in the Buffalo office of C&S Engineers.

Sasidhar Eranki, MS ME '05, has been promoted to vice president at Moog Inc. He will be responsible for developing and deploying the engineering talent of the Aircraft Group. Throughout his career at Moog, Eranki has been involved in the design and production of a variety of control systems for industrial and aircraft applications. He has worked in Engineering, International Business Development, Product Line Management, and as Deputy General Manager of the Aircraft Group and Director of Engineering.

Michael Finn, BS CIE '05, has been appointed as an engineer in the Municipal Services division of TVGA Consultants.

Helena Holecikova Guerra, BS CE '00 BS Nursing '05, has been commissioned a second lieutenant in the Air Force Nurse Corps.

Nathan Maerz, BS IE '05, has been named process improvement and lean engineer at Polymer Conversions, a contract manufacturer of injection molded tight tolerance plastic parts in Orchard Park, NY. Maerz is a certified Six-Sigma Black Belt.

Joseph Mannarino, MBA '90 PhD CIE '01, has been promoted to senior vice president at LP Ciminelli, a commercial construction company. Previously vice president and project executive on the Buffalo Public Schools Program, Mannarino has been with the company for 15 years.

Joseph Manuse, BS CIE '05, has been appointed as an engineer in the TVGA Consultant's Transportation Group.

Jeremia Murphy, BS CIE '01, has joined Concord Engineering and Surveying Inc. as a civil design project engineer. Murphy specializes in site development plans for commercial and residential subdivision projects, hydraulic analysis, design calculations for public water supply, gravity, sanitary sewer and storm water collection systems.

Michael Rogalski, BS EE '00, has been promoted to managing associate of the Buildings Engineering Practice in Buffalo by Stantec, an engineering, architecture and design firm. Rogalski, a professional engineer and LEED accredited professional, has been with the firm for five years.

James Ruppert, BS CIE '05, has been appointed to the Transportation Group of TVGA Consultants.

Fenglin Yang, PhD CE '00, research engineer and manager of the R&D lab at Harper International Corp. is featured in an article "Precision Encapsulation" in Food Engineering Magazine. Yang discusses his work on the microencapsulation process for mint oil and garlic oil for food applications. The process produces perfectly rounded spheres with extremely tight size distribution, even at a microscopic level, and promises higher value foods with broader profit margins. The article can be found at http://www.foodengineeringmag.com/CDA/ArticleInformation/features/BNP_Features_Item/0,6330,152379,00.html

In Memoriam

UB Engineering offers its sincere sympathy to family, friends and classmates of those alumni who have recently passed away.

William Bailey, BS EE '52

Charles Bartholomew, BS CE '78

George Briggs, BS ES '70

Robert Butler, BS ME '50

Alan Cieluszek, BS IE '74 MBA '75

Francis Colin, BS '55

Ray Cotter, BS ME '51

Gerald Cymny, BS ME '56

Robert Derenda, BS CE '97

Leon Dzygun, BS CE '69

James Fitzgibbons, BS ES '53
MS EE '56

Orrin Gott, BS ME '01, MS ME '03,

James Hawkins, BS EE '85

Kenneth Kelly, BS ME '52

Thomas Mayer, BS ME '51

John Peterson, BS CIE '02

Edward Pieniazek, BS ME '64,

Cameron Queeno, BS CIE '79

Edward J. Rutkowski, BS ME '50

William Slater, BS ME '70

Ian Smith, MS EE '62,

Michael Spaziante, Jr., BS EE '74

Richard Tyler, BS EE '53

Willis Whiting, BS EE '49

UB ALUM SOARS AT NASA

NASA Administrator Michael Griffin named **Christopher Scolese, BS EE '78**, as the agency's chief engineer.

As chief engineer Scolese is responsible directly to the administrator for the overall review and technical readiness of all NASA programs. He is in charge of a staff of over 30,000 people, 20,000 of whom are engineers. The Office of the Chief Engineer assures that the development efforts and missions operations are being planned and conducted on a sound engineering basis with proper controls and management of technical risks.

Scolese is the recipient of several honors including the Presidential Rank Award of Meritorious Executive, Goddard Space Flight Center's Outstanding Leadership, two NASA Outstanding Leadership Medals, and the American Institute of Aeronautics (AIAA) and Astronautics National Capital Section Young Engineer/Scientist of the Year award. He is an Associate Fellow of AIAA and a member of the Institute of Electrical and Electronics Engineers.

Karwan (cont. from pg. 1)

Provost and executive vice president for academic affairs, **Satish Tripathi**, praised Karwan's accomplishments and leadership. He said, "From the beginning of our own administrative roles at UB, both President Simpson and I have appreciated and benefited from Dean Karwan's leadership and counsel. He has been instrumental in the many successes of the School and is truly a great citizen of our University. We will miss his leadership as dean and will look forward to continuing to benefit from his sage counsel and perspective as he resumes his faculty role."

During Karwan's term, UB Engineering has experienced the creation and expansion of a number of research centers and the school has experienced substantial growth in research expenditures. Tripathi highlighted Karwan's identity as "an undergraduate education innovator" developing successful programs such as the Student Excellence Initiative which has resulted in the increased selectivity of UB Engineering's undergraduate students as well as the School's significant advances in student retention. Karwan has also encouraged the growth of the School's international programs including internships in 30 countries. UB Engineering now ranks in the top four engineering schools in the country for students participating in international education programs. A national search is underway for Karwan's successor. The new dean is expected to be in place at the start of the fall 2006 semester.

See article "Karwan Term Highlights" on pages 7, 9, and 14 for more information about Karwan's achievements as UB Engineering Dean.

The Center for Industrial Effectiveness's (TCIE) Six Sigma Black Belt training is getting national exposure on iSixSigma's website. iSixSigma is a national magazine providing practical advice to help business professionals stay on top in today's competitive marketplace and be more effective on the job. TCIE offers a variety of Six Sigma, ISO and Lean workshops to help you learn to maximize production efficiency and deliver quality products.

If you are interested in learning how TCIE programs in Six Sigma training can help you, check our schedule online:

<http://www.tcie.buffalo.edu>.

Abbreviations Used in SEAS News

DEPARTMENTS

CBE, Chemical and Biological Engineering
CSE, Computer Science and Engineering
EE, Electrical Engineering

CSEE, Civil, Structural and Environmental Engineering
ISE, Industrial and Systems Engineering
MAE, Mechanical and Aerospace Engineering

DEGREES

CE, Chemical Engineering
CS, Computer Science
CIE, Civil Engineering
CompE, Computer Engineering
EE, Electrical Engineering

ES, Engineering Science
EnvE, Environmental Engineering
IE, Industrial Engineering
AE, Aerospace Engineering
ME, Mechanical Engineering

Invitation to Hire UB Engineering Co-op Students

Co-op students can create profit for your business.

We encourage our alumni and industrial partners to consider the advantages of employing UB Engineering and Applied Sciences students through the Co-operative Engineering Education Program.

Co-op students have completed their junior year, including coursework in their major, and business-success skill training through the Engineering Career Institute. They are prepared for challenging, value-added technical assignments.



Please consider employing one or more of these students.

For more information, contact:

Dean C. Millar, Assistant Dean

415 Bonner Hall, (716) 645-2768 x1112

dcmillar@eng.buffalo.edu, www.eng-intern.buffalo.edu

KATRINA (CONT. FROM PG. 13)

Jerome O'Connor, MCEER senior program manager for transportation research, said, "We want to know, specifically, what caused these buildings to fail. Is it a design flaw, is it something we could improve?"

Michel Bruneau, professor of civil, structural and environmental engineering, highlighted the need to analyze structures from a multi-hazard perspective. "Our approach here is to find solutions that can protect structures from a variety of hazards at one cost as opposed to the current variety of solutions that exist for each separate hazard. We want to take an optimized approach."

One researcher, **James Jensen**, professor of civil, structural and environmental engineering, studied the water supply problems during and after Hurricane Katrina. In addition to flooded wastewater treatment plants, Louisiana is home to approximately 20,000 wastewater treatment units owned by individual homeowners which were inundated with the flood, creating environmental hazards. Over a month after the storm, some residents still were without water.

One conclusion of the research is that often the second disaster—the flooding and loss of power—is more devastating and paralyzing than the initial storm. According to Daniel Hess, assistant professor of architecture and planning, "The back-to-back disasters led us to think about suggestions for emergency planners: Imagine the worst event possible and then double it. And don't plan for only one hazardous event."

Education News

UB Joins in Collaborative Effort to Enhance Science and Engineering Education in India

UB has joined with four U.S. universities, a group of Indian institutions and three international corporations to enhance science and engineering education in India using a new satellite distance-learning network operated by the Indian Space Research Organization.

Satish Tripathi, UB provost and executive vice president for academic affairs, noted, "India has one of the largest and fastest-growing higher education systems in the world, producing a large number of top engineering students to support the high-tech industries of the world. The globalization of higher education, exemplified by this far-sighted initiative, gives UB the opportunity to be involved in building capacity in India and helping to prepare students who may eventually come to UB as graduate students and faculty."

Under the agreement, faculty from UB Engineering will teach in India for a semester at a time and will be involved in contributing teaching materials to a digital content library that will be created for the Indian students. Research collaborations with faculty in India also will be encouraged.

Stephen C. Dunnett, UB vice provost for international education, noted that UB enrolls more than 700 students from India, many of whom are in graduate programs in engineering and computer science. "The outstanding students we receive from India contribute in vital ways not only to UB's own educational and research endeavors but to the advancement of high tech industries in the United States," he added.

According to the memorandum of understanding signed by Tripathi and Indian Prime Minister Manmohan Singh, the goal is to ensure "quick and simultaneous delivery of lecture sessions" to undergraduate and graduate-level college and university students throughout India in a broad range of subjects. The latter include computer science and engineering; information and communication technologies; electronics and communication; material sciences; biotechnology and bioinformatics; nanotechnology, and others.

EngiNet™ links student in Iraq to UB

Jennifer LaBuda, a graduate student in the department of mechanical and aerospace engineering, was called to active duty in Iraq at the end of 2003, while she was working as an associate validation scientist at American Pharmaceutical Partners Inc. on Grand Island and studying part-time at UB. While she was deployed, she was able to continue her studies through EngiNet™, a UB Engineering distance-learning program. "I used the class to take my mind off of the events we had going on over there," LaBuda says. According to **Marge Hewlett**, administrator of EngiNet™, the number of students in the armed forces taking EngiNet™ courses has increased significantly.

LaBuda credits the support of her teacher, **Carl Chang**, professor of industrial engineering, with easing the difficult task of taking a class from Iraq. Taking a class in a war zone was no easy task. Reading materials and CDs burned with video of class lectures came in the mail, with packages taking two to four weeks to arrive. LaBuda occasionally took reading with her on the road while she worked as a truck driver with the 369th Transportation Company.

Immediately, she was able to put her EngiNet™ course "Principles of Engineering Management I" to use as a staff sergeant, a position she was promoted to overseas. "The management part helped out a lot," she says. "I learned a lot about leadership and motivation."



UB Engineering students were well-represented at the 2005 Celebration of Academic Excellence. Undergraduate research poster presentations were displayed by the following students: **Karen Beljan**, CSEE; **Brian Belmont**, MAE; **Justin Boyd**, CSE; **Colleen Bronner**, CSEE; **Gregory Chapman**, CSE; **Erich Devendorf**, MAE; **Yie Meng Hoi**, MAE; **Mike Licitra**, EE; **Brian Peer**, CBE; and **Stefan Zickler**, EE.

Jeffrey Berman, CSEE graduate student, won the 2005 Best Student Article Competition for his paper, "Testing of a Laterally Stable Eccentrically Braced Frame for Steel Bridge Piers" sponsored by the Multidisciplinary Center for Earthquake Engineering Research (MCEER). At the group's annual meeting, Berman also was thanked for her work as a two-term president of MCEER's Student Leadership Council.

Seethal Mishra, MS IE '03, was selected as the 2005 MOR Journal Award winner at the 73rd Military Operations Research Symposium at the United States Military Academy at West Point, NY for his paper "A Rule Based Approach for Aircraft Dispatching to Emerging Targets." The work was co-authored by **Rajan Batta**, professor of Industrial and Systems engineering and associate dean of graduate education, and Robert Szczerba, senior research scientist at Lockheed Martin Systems Integration.

UB helps SUNY launch first online B.S. in electrical engineering

UB Engineering and the schools of engineering at the SUNY university centers at Stony Brook and Binghamton together are creating the world's first fully online bachelor's degree program in electrical engineering.

"Geography will no longer be a barrier to a SUNY education for engineering students who live outside of this state, or for that matter, this nation, or who cannot attend classes on campus because of professional and personal commitments," said **Dean Mark Karwan**.

The new program is an outgrowth of SUNY EngiNet™, which brought SUNY's graduate engineering courses to individuals and employees of companies through the use of videoconferencing technologies, CDs and, more recently, streaming video and other Web-based approaches.

GRADUATION RECORD SET

Graduate Degree Summary

Academic Year 2004-05

Degree	Total Awarded
Master's of Science	332
Master's of Engineering	39
Doctorate	63
Total Graduate Degrees	434

UB Engineering set a new record for awarding the most graduate degrees in its history in the academic year 2004-05.

According to **Andres Soom**, former associate dean of research and graduate education, "These numbers, when put on a per faculty basis, place us in the top 15 of more than 180 US PhD-granting engineering schools. The number of PhD degrees granted is one of the best overall measures of the vitality of research programs at leading research universities. On the same basis our master's degrees are now the highest of any public research university in the nation's top 50. Over the past three years, we exceeded

our own enrollment targets, even while the global and national competition for graduate students has grown. It is a testimony to the attractiveness of our programs and the exceptional productivity of our faculty that we have been able to temporarily manage these extraordinarily high master's enrollments while maintaining high levels of activity in undergraduate education, research and service."

Innovative Teaching Using Traditional Methods

Kemper Lewis, associate professor of mechanical and aerospace engineering, is borrowing from an ages-old teaching method to instruct UB Engineering students.

"Just as medical students learn human anatomy through dissection, my students learn engineering through 'product dissection,'" says Lewis.

Students in Lewis' sophomore mechanical and aerospace engineering course disassemble, and then reassemble, a variety of complex products, including car engines, television/VCRs, copy machines, even a lawn mower. In the process, they are required to create a computer-aided-design (CAD) entry that illustrates how the products are put together.

The National Science Foundation has endorsed Lewis' methods with a grant to develop digital designs from student projects to be included in a national repository of CAD data for consumer and industrial products. Lewis is project director of the undertaking—called CIBER-U: Cyber-Infrastructure-Based Engineering Repositories for Undergraduates—which is being implemented in undergraduate engineering design courses.

Cooling Off the Competition

"Mr. Freeze," the Chem-E-Car designed by chemical engineering students, finished fourth in the seventh annual Chem-E-Car competition in Cincinnati. The competition, which kicked off the annual meeting of the American Institute of Chemical Engineers (AIChE), attracted students from 31 universities across the country. UB's team previously placed second at the regional conference in Easton, PA.

The competition requires students to power shoebox-sized cars via a chemical reaction and carry a specified payload for a given distance. Students are not given the payload or distance until one hour before the competition.

"The Chem-E-Car team did an excellent job in preparing for this competition," said **Manolis Tzanakakis**, assistant professor of chemical and biological engineering who served as advisor to the UB team. "Besides teamwork, the students had the opportunity to experience in practice some of the difficulties associated with applying what they are taught in class. Such an experience will be a valuable asset as they are preparing for their professional careers."

Team members include **Lindsay Mroz, Alex Buffone, Abhijeet Kohli, Robert Forbes, William Frank, Rachel Frydrychowski, Michelle Halvarson, Nicole Hartley, Jeffrey Kraska, Andrew Waterman, Sarah O'Hara, Stacy Pustulka, and Wei Seang Ooi.**

KARWAN TERM HIGHLIGHTS

EDUCATION AND CURRICULUM DEVELOPMENT

- Improved quality of freshmen class with review process for admittance into UB Engineering based on additional factors including NYS Regents math and science test scores and high school performance in math and science courses.
- Established the Student Excellence Initiative which includes programs such as tutoring and faculty-student mentorships to help all students achieve their academic potential and build supportive relationships with their peers and the faculty.
- Expanded the Engineering Career Institute (ECI) which provides career effectiveness skills to post-junior-year engineering students.
- Established the Cooperative (Co-op) Engineering Program.
- Expanded International Education Program with opportunities including internships in 30 countries and appointed an assistant dean to oversee the program in 1997. The program now ranks in the top four engineering schools in the country for students participating in international education programs.
- Increased current overall enrollment per faculty to a position in top 25 of 190 Ph.D. granting engineering schools. Degrees granted per faculty in top 15 of all 350 engineering schools.
- Graduate program selectivity rankings show that UB is more selective than Purdue, Georgia Tech, Penn State, Rutgers, Delaware, Virginia Tech, Florida, Washington, and RPI among others.
- Oversaw the merger of Computer Engineering portion of Electrical and Computer Engineering and Computer Science Department to form the new Department of Computer Science and Engineering (CSE).
- Created new degree programs in Computer Engineering, Environmental Engineering; combined BS/MEng degree in Civil Engineering; Dual Degree BS Civil Engineering/BS-BA Computer Science; and expanded practice-oriented Master of Engineering degree programs. Re-established and revised all combined BS/MBA programs. Recently received approval for an interdisciplinary graduate program in bioengineering.

Tau Beta Pi Earns Commendation



NEW YORK NU CHAPTER PRESIDENT DAN GRAJEWSKI RECEIVES THE AWARD FROM MICHAEL FOZDAR, CHAIR OF THE AWARDS COMMITTEE

The New York Nu Chapter of Tau Beta Pi Engineering Honor Society received an honorable mention for the 2005 R.C. Matthews Outstanding Chapter Award at the 2005 Tau Beta Pi convention in Salt Lake City, Utah. The award for overall chapter achievement was indicative of a second place finish out of 229 chapters.

The awards committee praised the group for their hard work, particularly their service activities which demonstrate great dedication in contributing to the community.

The committee said, "The originality of [the New York Nu] chapter projects and the motivation of the individuals in [the] chapter have demonstrated [their] resolve for [their] chapter to uphold the ideals of Tau Beta Pi."

Additionally, the chapter received a Secretary's Commendation for the second consecutive year for timely reporting to the Headquarters office and was also honored for its 31 projects during 2004-2005, including work to beautify Main Street and holding a Relay for Life.

The 22nd annual Technical Job Fair, convened by UB Career Services, brought students together with local, state and national companies and government agencies with technical job openings.



A National Grid representative discusses the benefits of working at the company



A student talks with Praxair representatives



Fisher Price attracted student interest and offered exciting career possibilities

Tau Beta Pi Inducts New Members



Tau Beta Pi New York Nu chapter inducted 44 new members in its recent semi-annual induction ceremony. Tau Beta Pi is the largest and oldest engineering honor society, the nation's second-oldest honor society, and the only engineering honor society representing the entire engineering profession. The induction ceremony was followed by a dinner with family and friends.

New members include:

Gabriel Abdella, IE
Huiming Ang, ME
Kevin Becker, CS
Chern Wei Beh, IE
Michael Bonarski, ME AE
Brandon Brown, ME
Zakery Carr, AE
Tsz Fung Chan, EE
Mark Debois, CIE
Jordan Diez, ME
Timothy Giles, EE
Jesse Gotham, CIE
Thomas Gueli, CE
Jeremy Gworek, CIE

Victor Ho Hang Fung, EE
Gregory Hartman, AE
Adam Heiermann, AE ME
Mark Huntington, ME
Seong Ho Hwang, IE
Brett Juhas, ME
Brian Kopacz, ME
Jeremy Kruger, AE ME
Danielle Kubicki, CIE
Ryan Lange, EE
Hui Chean Lin, CE
Jeremy Marschke, AE
Matthew McGurn, ME
Joshua Morss, ME
Tomasz Nierodzinski, EE

Thomas Anthony, Occhino, CS
Jeffrey Olson, ME
Toshi Omori, ME
Jayan Sushil Patel, CS EE
Stephen Pfetsch, CS Math
Laura Przybylski, CIE
Stacy Pustulka, CE
Nadine Roberts, CIE
Joseph Stellrecht, CS
Kristie Struzik, EE Math
Philip Trinca, AE
Brian Urbanczyk, EE
Christopher Wirz, ME AE
Yao Liang Wong, ME
Man Tsz Yau, CE

Honors Recruitment Dinner



TBP OFFICERS WITH GOLD LEVEL SPONSOR GENERAL MILLS

This year the New York Nu Chapter of Tau Beta Pi hosted their Annual Honors Recruitment dinner. General Mills and Intel were the Gold Level Sponsors and Moog Inc. and Ralcorp Holdings were Bronze Level Sponsors. **Janine Zielinski**, Tau Beta Pi's External Vice-President coordinated the event with planning help from **Dan Gajewski**-President, **Mark Szymanski**-Corresponding Secretary, and **Kevin Wyffels**-Chapter Secretary.



TBP OFFICERS WITH GOLD MEDAL SPONSOR INTEL

Along with Tau Beta Pi members, the following engineering honor societies attended: Alpha Pi Mu - Industrial Engineering, Chi Epsilon - Civil Engineering, Eta Kappa Nu - Electrical and Computer Engineering, Omega Rho - national Operations Research, Pi Tau Sigma - Mechanical Engineering, Sigma Gamma Tau - Aerospace Engineering.

The event had the pleasure of attendance from twenty companies, including: Atlantic Testing Laboratories, ATTO Technology, Bureau Veritas Consumer Products Services, CSX, Ecology and Environment, Electric Boat, Fisher Price, General Mills, General Motors Powertrain, Harris Corporation, InfiMed Inc., Intel, ITT Industries - Space Systems Division, Lockheed Martin, Moog Inc., National Grid, NSWC Indian Head Maryland, Ralcorp Holdings Inc., Syracuse Research Corporation, and The United Illuminating Company.

SIX SIGMA GRADUATES



The Industrial and Systems Engineering department in conjunction with The Center for Industrial Effectiveness (TCIE) awarded Six Sigma Black Belt designation to eight students who successfully completed the first year of the program. The students gained high marks in courses on Quality Assurance and Six Sigma Quality, completed two one-semester projects in industry under the guidance of Six Sigma Black Belt mentors, and passed a comprehensive written examination. The

Six Sigma graduates claimed that their Black Belt designation had been helpful in the job market, with one claiming that it was the deciding factor in his job offer. If you are interested in TCIE programs in Six Sigma training, please see TCIE's website: <http://www.tcie.buffalo.edu>.

Machines that Score



UB's Robotics Team, an interdisciplinary student club, may use computers to move their robots in soccer matches, but these students know that it takes their own human hard work to drive success. Team members **Michael Licitra**, BS EE '05, and **Stefan Zickler**, BA Interdisciplinary Social Sciences '05, competed in their first RoboCup World Cup in Osaka, Japan during the summer of 2005. The team won the "Open Challenge Award" for the most technically impressive freestyle presentation. Licitra and Zickler said, "Our robots performed some synchronous driving patterns which seemed to be quite a crowd pleaser."

The team previously defended their national championship in the Small Size League of the RoboCup American Open in May 2005 with new robots and software. Their five robots are part of an ambitious research project which challenges student members to apply classroom lessons to solve real world problems. According to Licitra, "When you get to apply what you learn in class, you're much better off. It's a great way to learn."

The team previously defended their national championship in the Small Size League of the RoboCup American Open in May 2005 with new robots and software. Their five robots are part of an ambitious research project which challenges student members to apply classroom lessons to solve real world problems. According to Licitra, "When you get to apply what you learn in class, you're much better off. It's a great way to learn."

Developing Science and Technology Around the Globe

UB Engineering and the Vietnam Education Foundation (VEF) have entered into an agreement to allow top scholars from Vietnam to pursue graduate training in science and technology at UB.

"We believe that this partnership will not only provide UB with a unique chance to help a young country develop human capital for its emerging technology sector, but it also will deeply enrich the UB students and faculty who have the opportunity to work with these fellows," said **Dean Mark Karwan**.

Kien Pham, executive director of VEF said, "We are delighted to have the UB School of Engineering and applied Sciences in the VEF Alliance. Together we will help transform science and technology in Vietnam, and in that process, serve as enduring bridges between the two countries."

VEF is an initiative of the U.S. Congress to bring the U.S. and Vietnam closer through educational exchanges. VEF has more than 100 fellows at 37 top U.S. graduate institutions, the majority of whom are pursuing doctoral degrees. Upon completion of their degree, the fellows will return to Vietnam to work in research and industry.

KARWAN TERM LEGACY:

SCHOOL ENHANCEMENT

- Established UB Engineering (Advisory) Dean's Council in 1995.
- Established Junior Faculty Mentoring Program in 1996. Combined with excellent hiring and nurturing in the departments, UB Engineering has averaged three NSF CAREER awards per year among its junior faculty since 1995.
- Promoted faculty diversity, achieving a 43% increase in female faculty and a 200% increase in Hispanic faculty.
- Instituted a national advertising campaign which includes: UB Engineering newsletter with a distribution of 20,000 and an online version available at: http://www.eng.buffalo.edu/seas_news.php; the Igniting Ideas series; and the Innovation postcard series.
- Surpassed our \$18M goal for the 1996-2003 Generation to Generation campaign with \$19.2 million.
- Led internal UB Engineering campaign: \$2.8M, 90% faculty participation, significant staff involvement.
- Began and expanded the Delta Society (est. 1995), an annual giving club of \$1,000+, with close to 100 individual members and 56 corporate members.
- Facilitated growth in annual Dean's Scholarship Reception to recognize students and steward donors.
- Recently received a \$25 million challenge grant from New York State for a new UB Engineering building.

ECONOMIC DEVELOPMENT AND INDUSTRIAL OUTREACH

- Helped establish the Strategic Partnership for Industrial Resurgence (SPIR) program in 1994 to assist WNY and NYS companies with renewing, revitalizing, and redirecting NYS industry and in 2004/2005—completed 305 projects, served 175 companies/agencies, helped create 383 jobs, helped retain 4319 jobs, and leveraged over \$33m federal/state dollars.
- Broadened important economic outreach for the School and University through The Center for Industrial Effectiveness (TCIE), whose 2004-2005 revenues exceeded \$1.4 million. TCIE's business development activities led to 154 project proposals.
- Facilitated the establishment of on-site industry-based masters level programs at Motorola (1996) and Niagara Mohawk (1994 and 2004), adding to the existing programs at Delphi Harrison, Moog, and Praxair.
- Initiated Industry University Day/UB Business Partners Day to bring keynote speakers to the WNY business community. Past events have featured speakers such as Norman Augustine, Vice Chairman of Lockheed Martin and CEO and Chairman of the National Academy of Engineering; Paul Allaire, CEO & Chairman of Xerox; Michael Capellas, president of Hewlett-Packard; Carl F. Kohrt, CEO and president of Battelle; Governor George Pataki; and Senators Charles Schumer and Hillary Rodham Clinton.
- Led the development of the Office of Science Technology Transfer and Economic Outreach (STOR) (Formerly UB Business Alliance) which was created to provide a "one-stop shopping" approach to expedite access to UB's resources to meet the needs of business and industry and be a business-oriented organization with a commitment to be responsive, flexible, and entrepreneurial.

Faculty & Staff News

Drury Honored

Colin Drury, UB Distinguished Professor and chair of industrial and systems engineering, has recently received two distinguished awards for his excellence in industrial engineering.



DRURY AND BRIAN PEACOCK, CHAIR OF THE AWARDS COMMITTEE, AT THE HUMAN FACTORS AND ERGONOMICS SOCIETY'S 2005 CONFERENCE

Drury has written more than 300 publications covering industrial process control, quality control, aviation maintenance and safety. His work in aviation maintenance human factors has included visual and non-destructive inspection, the use of simplified English for maintenance technical documentation, the effectiveness of error investigation processes, and the effect of English as a second language on maintenance error. His current focus is on applying human factors and ergonomics theory to improve the task structure, environment and training facilities used in aviation maintenance.

Drury received the Human Factors and Ergonomics Society's 2005 A. R. Lauer Safety Award in recognition of his outstanding career-long contributions to human factors and safety in industry, aviation, surface transportation, consumer products, and medical services. This award is given annually for "outstanding contributions to... a broad range of safety issues."

Drury also received the 2005 Excellence in Aviation Research Award from the Federal Aviation Administration (FAA) for his work in aviation maintenance human factors. "This research makes a difference," said FAA Administrator Marion Blakey. He commended the work for "enabling us to raise the bar for aviation safety."

Drury is internationally recognized for his research and has been a key contributor to the FAA Human Factors in Maintenance Research and Development Program, conducting critical safety research since 1989.

Drury continues to serve the industrial engineering community. He recently was named to the Committee on the Continuing Operability of Chemical Agent Disposal Facilities and Equipment with the Board on Army Science and Technology.

Mook Recognized for International Efforts

D. Joseph Mook, professor and chair of mechanical and aerospace engineering, will receive the 2005 Chancellor's Award for Internationalization to support a new UB study abroad program for summer 2006. Mook's program, "Intensive Engineering Program in Thailand," will be based at Chiang Mai University (CMU), UB's longstanding exchange partner institution and one of the leading universities in Thailand.

15-20 engineering students are expected to enroll in the six-week program. Mook will teach English-language engineering classes for the UB students as well as their CMU peers. The program will afford students the opportunity not only to take classes with their Thai counterparts, but also participate in organized cultural and recreational activities outside of class.

Sandra Flash, director of study abroad programs, noted that UB is able to offer an impressive portfolio of exchange and study abroad programs thanks to creative and dedicated faculty members such as Mook and fellow UB award winner, Maria Horne, associate professor of theatre and dance. "Our faculty's commitment to developing and leading exciting new overseas programs has not only greatly enhanced opportunities for students to gain critically important international experiences, but also revolutionized our approach to study abroad through the delivery of short-term, discipline-specific programs," Flash said.

The Chancellor's Award for Internationalization was established by the SUNY Office of International Programs to support the development of short-term overseas academic projects in less commonly traveled countries. Mook's program joins an impressive group of engineering study abroad opportunities, currently offering students a choice of over 100 universities in more than 25 countries.

Brunskill Leaves Legacy of Innovation

Above all else, **Corky Brunskill** believes that computer technology should not be about the technician. This simple belief led some members of the University to see Brunskill as "the white knight for a lot of folks in the science and engineering side of the University," according to Jerry Koudelka, professor of biological sciences. "When we recruit new faculty from the outside, they are routinely impressed by what [Brunskill's] operation is able to offer them," Koudelka says, crediting Brunskill's efforts with helping UB hire and retain top scientists.

His expertise and love for UB has already been missed since Brunskill retired after more than 30 years at UB, starting work just after graduating from the University and moving up in information technology to serve as the director of Science and Engineering Node Services.

Carl Lund, professor and chair of chemical and biological engineering, praises Brunskill for his willingness to help students and faculty more than would be expected. "He cares really deeply about the University and educating the students," Lund says. "And he's been highly supportive of new faculty in terms of getting them up and running."

SENS is now directed by **David Yearke**, who previously served as associate director.

Faculty and Staff News

Stuart Chen, associate professor of civil, structural and environmental engineering, was awarded a Fulbright Scholarship and is spending the 2005-2006 year in Turkey, primarily at Istanbul Technical University. He is lecturing on developments in bridge engineering design and construction.

Michael Constantinou, professor and chair of civil, structural and environmental engineering, and **Andrei Reinhorn**, Clifford C. Furnas Professor of structural engineering, were honored with the 2005 Civil Engineering Research Foundation Charles Pankow Award for Innovation recognizing collaborative design, development and construction efforts. Constantinou and Reinhorn were honored for their research focused on making buildings more earthquake-resistant. They worked with WSP Cantor Seinuk, Enrique Martinez Romero S.A. and Taylor Devices Inc., to develop a new system for bracing building walls which was applied to Torre Major, the tallest office tower in Mexico City.

Ismael Regis de Farias Jr., assistant professor of industrial and systems engineering, was awarded a 2005 IBM Faculty Award for Innovation, an international honor that supports advancement in teaching, research and community-building using open source technologies.

Andre Filiatrault, professor of civil, structural and environmental engineering and deputy director of the Multidisciplinary Center for Earthquake Engineering Research, was interviewed on CNN's "Lou Dobbs

Changing Faces in UB Engineering Administration

In order to promote the growth and success of UB Engineering, the Office of Research and Graduate Education has been re-organized. **Rajan Batta** will be taking over the position of Associate Dean for Graduate Education and **Carl Lund** will serve as Associate Dean for Research.

Lund served nine years as chair of Chemical and Biological Engineering. **David Kofke**, professor of chemical and biological engineering, will assume these duties for a three-year term.

Batta chaired Industrial and Systems Engineering from 1992-2003. This academic year he is a participant in a faculty in leadership program with university administration.

UB Engineering wishes to thank **Andres Soom** for his work as Associate Dean of Research and Graduate Education. Dean Mark Karwan noted that Soom's tenure was "a most remarkable, effective and dedicated decade of service to the School." Soom returns to teaching and research duties in the department of mechanical and aerospace engineering.

UB Engineering offers its sincere sympathy to family and friends of Chuck Dement, research assistant professor with a joint appointment in Management. His contribution will be missed greatly, and we send our condolences to Chuck's wife Dottie, his daughter Octavia, and his family.

Tonight." Filiatrault joined a discussion about the earthquake in Pakistan and India and spoke about the need to improve the seismic resilience of buildings in the U.S.

Daniel Fischer, associate professor of computer science and engineering, was one of three UB individuals or teams winning the Sixth Community Wide Experiment on the Critical Assessment of Techniques for Protein Structure Prediction (CASP). The UB teams were amongst only 17 winning predictor teams in the pool of 150 predictor teams from universities and scientific institutes around the world. "This really put UB and its New York State Center of Excellence in Bioinformatics and Life Sciences on the map," said Fisher. The other winning UB teams were: Jeffrey Skolnick, professor of structural biology, and Yang Zhang, assistant professor and member of the Data Intensive Analytical Bioinformatics Core Group; and Yaoqi Zhou, associate professor, and Hongyi Zhou, research assistant professor, both in the Department of Physiology and Biophysics.

Venu Govindaraju, professor of computer science and engineering, has been elected an Institute of Electrical and Electronics Engineers fellow for his contribution to handwriting recognition. IEEE Fellows are a select group of members selected for the group's most prestigious honor.

Kemper Lewis, associate professor of mechanical and aerospace engineering, has been named interim director of the New York State Center for Engineering Design and Industrial Innovation (NYSCEDI). **Dean Mark Karwan** noted, "As an extremely active and successful member of the global engineering design community, Kemper brings a very broad set of appropriate skills and experiences to the position." Karwan also thanks **Christina Bloebaum**, professor of mechanical and aerospace engineering and founding director of NYSCEDI, for an incredible job in leading the Center to a record of success in realizing its mission of supporting and advancing the research mission of UB and its faculty, helping NYS industry through integration of advanced design and visualization technologies, and educational outreach activities on and off campus.

James Mayrose, research associate professor of mechanical and aerospace engineering, **Thenkurussi Kesavadas**, associate professor of mechanical and aerospace engineering, and **Kevin Chugh**, adjunct assistant professor of mechanical and aerospace engineering, were named Western New York Inventors of the Year for a glove-like medical device that measures the shape and hardness of a patient's tissue. The glove is embedded with sensors that connect to a computer to record changes in a lump over time and share the results with others. The award is

sponsored by the Niagara Frontier Intellectual Property Law Association and the Technical Societies Council of the Niagara Frontier.

Vladimir Mitin, professor and chair of electrical engineering, won a faculty development grant from the New York State Office of Science, Technology and Academic Research designed to assist universities in recruiting and retaining world-class research faculty in science and technology fields with strong commercial potential, as well as to provide for significant expansion of economically important research and development opportunities. Mitin received the award to conduct multidisciplinary research designed to develop and commercialize multifunctional nanosensors and sensor networks to enhance health care, especially for remote applications, to improve detection of contaminants and to boost advances in quantum communication.

Chunming Qiao, professor of computer science and engineering, received the Best Tutorial Paper Award for 2005 from the IEEE Communications Society for his IEEE Networks paper on Optical Burst Switching. In addition, two of his former students have recently been awarded NSF CAREER awards: 2004 graduate **Xiaojun Cao** is currently at RIT and 2002 graduate **Hongyi Wu** is at Louisiana.

Ruckenstein Honored

A special symposium was held at the 2005 American Institute of Chemical Engineers meeting honoring **Eli Ruckenstein**, Distinguished Professor of chemical and biological engineering, on the occasion of his 80th birthday. The day of the meeting was named for Ruckenstein and speakers presented during a full-day session. Additionally, UB's department of chemical and biological engineering hosted an evening reception.

Ruckenstein was also honored by the UB Engineering community for his contributions to the School and University. He was praised for his dedication to chemical engineering and the continual increase in the number of his publications.

Manolis Tzanakakis, assistant professor of chemical and biological engineering, received a 2005 James D. Watson Award to develop strategies for the generation of insulin-producing cells from stem cells for diabetes therapies. The James D. Watson Investigator Program serves, through professional recognition and development, to facilitate New York's ability to retain its top young scientific talent with awards to investigators who perform research in the life sciences or in other life science enabling disciplines.

Jinhui Xu, assistant professor of computer science and engineering, received a National Science Foundation Faculty Early Career Development (CAREER) Award for research in Computational Geometry and applications in Cardiovascular Treatment.

UB Recognizes Faculty Scholars, Inventors and Entrepreneurs

UB Provost **Satish Tripathi** and **Robert Genco**, former interim vice president for research and director of UB's Office of Science, Technology and Economic Outreach (STOR) hosted the Scholars, Inventors and Entrepreneurs reception to honor the research and commercialization achievements of faculty members.

The following SEAS faculty members were among the honorees:

Venugopal Govindaraju, **Sargur Srihari**, **Dave Bartnik**, **Vemulapati Ramanaprasad** and **Srirangaraj Setlur**, all of the Center of Excellence for Document Analysis and Recognition (CEDAR) developed Stochastic Modeling of High-Level Structures in Handwritten Word Recognition which was licensed to XactData, Inc.

Joseph Mollendorf, professor of mechanical and aerospace engineering, David Pendergast, physiology and biophysics, and Albert Termin II, division of athletics, along with Robert Cuvillo, formerly of UB, developed Low Drag Swim Apparel, which was licensed to TYR Sport Inc.

James Mayrose, research associate professor of emergency medicine and mechanical and aerospace engineering, and **Thenkurussi Kesavadas**, associate professor of mechanical and aerospace engineering, received a patent for a system and method for analyzing a region below one or more layers of tissue.

Jeffrey Errington, assistant professor of chemical and biological engineering, and **Hung Ngo**, professor of computer science and engineering, were honored with the Exceptional Scholars Award for their outstanding research performance.

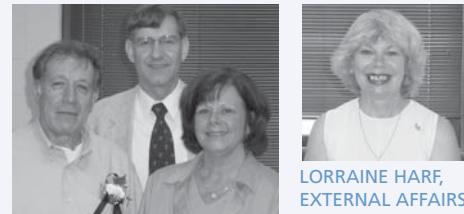
Vladimir Mitin, professor and chair of electrical engineering, and **Chunming Qiao**, professor of computer science and engineering, received Exceptional Scholars Sustained Achievement Awards.

SERVICE AWARDS

The following faculty and staff were recognized for their years of service to UB—40 Years: **Chia Ping Yu MAE**. 30 Years: **Joseph Mollendorf MAE**. 20 Years: **Kasra Etemadi EE**, **Pao Lo Liu EE**, **William Macy Machine Shop**. 10 Years: **Kevin Hulme NYS-CEDII**, **Vemulapati Ramanaprasad CEDAR**, **Srirangaraj Setlur CEDAR**, **Timoleon Siderakis Development**, **Rohini Srihari CEDAR**, **Louis Zicari CIWM**



40 YEARS OF SERVICE: DENNIS MALONE, DEAN MARK KARWAN, DAVID SHAW



30 YEARS OF SERVICE: HECTOR VELASCO, DEAN MARK KARWAN, KRISTINE BOVENZI

LORRAINE HARF, EXTERNAL AFFAIRS



20 YEARS OF SERVICE: FRONT: JAYNEE STRAW, WILLIAM RAPAPORT, JOSEPH ATKINSON; BACK: PATRICIA KRAEMER, RAJAN BATTA, DEAN MARK KARWAN



10 YEARS OF SERVICE: FRONT: CATHY KENNEDY, JO MEACHEM, LINDA BOVINO, AIDONG ZHANG, DEAN MILLAR; BACK: CEMALETTIN BASARAN, DAVID BARTNIK, DEAN MARK KARWAN

Greetings & Promotions

UB Engineering Congratulates:

Promoted to full professor:

Cemal Basaran, CSEE
Alexander Cartwright, EE
Harsh Chopra, MAE
James Jensen, CSEE
Rakesh Nagi, IE
Abani Patra, MAE
Tarun Singh, MAE

Promoted to Secretary 1:

Theresa Nusstein, SEAS Dean's Office
Cheryl Robbins, CSEE

UB Engineering welcomes new faculty:

Murat Demirbas, CSE
Kwang Wook Oh, EE
Michalis Petropoulos, CSE
Sheng Zhong, CSE

UB Engineering welcomes new staff:

Amy Zeller, CSEE

Dean's Council (cont. from pg 1)

Engineering Donor Wall. (See article "Honoring Donors on page 15.") The afternoon session continued focusing on UB Engineering's relationship to UB's strategic strengths with a presentation from **Venu Govindaraju**, director of the Center for Unified Biometrics and Sensors, and **Bharat Jayaraman**, chair of Computer Science and Engineering, on "Information and Computer Technology – A Strategic Strength."

The afternoon continued with a focus on marketing UB Engineering with presentations from **Robert Barnes**, associate dean of external affairs, **John Van Benschoten**, associate dean of undergraduate education, **Andres Soom**, associate dean of graduate education, and **Mark Karwan**, dean. The Council finished their afternoon with a session with graduate research assistants. The evening was spent at the Dean's Council dinner with Jorge Jose, UB vice president for research, hosted by Dean Karwan.

The Dean's Council welcomed eight new members this year: **Dennis Elsenbeck**, vice president, business services National Grid; **Lester Gerhardt**, professor and associate dean, Rensselaer Polytechnic Institute; **Doug Hillman**, general manager, Kearfott Guidance & Navigation Corp; **Maria Lehman**, vice president and program director, URS Corporation; **Tom Lynch**, vice president Americas operations Bureau Veritas, Consumer Products Services; **Hormoz Mansouri**, president, E.I. Team Inc.; **Kitty Pilarz**, director, Mattel Worldwide Product Safety, Fisher-Price; and **Scott Stevens**, president, Dimension Fabricators, Inc.. Other members in attendance included **Russell Agrusa**, CEO, president, and treasurer, Iconics, Inc.; **Joseph Allen**, Argotyche, Inc.; **Michael Cadigan**, vice president of operations, IBM Technology Group; **Ramji Gupta**, product line manager, Moog, Inc.; **Timothy Klein**, president, CEO and co-founder, ATTO Technology, Inc.; **Rajeeva Lahri**, chief technology officer, Intersil Corporation Inc.; **Steven Lerner**, senior vice president and chief technology officer, Praxair, Inc.; and **Larry Peckham**.

Research News

Assessing the Damage from Katrina



Days after Hurricane Katrina hit, research teams from UB's Multidisciplinary Center for Earthquake Engineering Research (MCEER) were dispatched to the Mississippi coast to conduct structural analysis and remote sensing of damage to large structures with a multi-hazard perspective, examining structural damage, but also gathering valuable data about how hospitals, transportation agencies, utility companies and building managers decided to adhere to, or alter, their evacuation plans before, during and after Hurricane Katrina.

"These kinds of decisions go beyond the technical world," said **Andre Fillatrault**, deputy director of MCEER and professor of civil, structural and environmental engineering. "In addition to researching technical methods for reinforcing structures after earthquakes or other hazards, MCEER couples engineering expertise with social science expertise to learn how organizations behave when faced with a disaster of this magnitude," he added.

Gilberto Mosqueda, assistant professor of civil, structural and environmental engineering, said, "We hope to make MCEER the clearinghouse in terms of data on damage to engineered structures along the Gulf Coast." Mosqueda focused on damage to commercial buildings and lifelines, including electric, gas and phone lines.

His team also focused on hospitals in the region. "In particular, we heard that Tulane University Hospital remained operational for a time after it was flooded," said Mosqueda. "How did they do it and what are they nonstructural components, such as life-saving medical equipment, that must be secured so that hospitals can continue to function even in a natural disaster? This is the kind of data that then can be applied to other disasters, such as earthquakes or terrorist attacks."

CONTINUED ON PG. 5

UB Honors Top Principal Investigators

UB's top 100 principal investigators were recently recognized for having the highest totals among UB faculty members for federal awards as of October 1, 2005.

UB Engineering honorees included:

Stelios Andreadis, CBE	Hui Meng, MAE	Andrei Reinhorn, CSEE
Michael Bruneau, CSEE	Russ Miller, CSE	Walter Sarjeant, EE
Alexander Cartwright, EE	Abani Patra, MAE	Sargur Srihari, CSE
George Lee, CSEE	Chunming Qiao, CSE	Aidong Zhang, CSE

"Smart Concrete" Could Improve Levees



The failure of levees in the wake of Hurricane Katrina points out the need for new technologies to strengthen levees and monitor their reliability, according to **Deborah Chung**, National Grid Professor of Materials Research and director of the Composite Materials Research Laboratory.

Chung's "smart concrete" includes short carbon fibers in the conventional concrete mixture, giving the concrete the ability to detect stress and tiny deformations. In the presence of structural flaws—within a levee, for example—the concrete's electrical resistance increases and the change can be detected by electrical probes placed on the outside of structures.

Similarly, the electrical properties of smart concrete could be used to detect underground stress that builds prior to an earthquake, to monitor building occupancy for intruders or for stragglers during an evacuation, and to monitor traffic flow in an emergency or around U.S. borders.

UB Work Targets "Extreme Events"



Ten days after 9/11, UB structural engineers were at Ground Zero investigating the collapse of the World Trade Center and surrounding buildings. Shortly after Hurricane Katrina, UB earthquake engineers were studying fallen bridges and collapsed buildings.

UB faculty are applying their expertise in research to help the world prevent or better cope with the myriad problems that have occurred in Louisiana, Mississippi and Texas in the wake of Hurricanes Katrina and Rita. This research builds on anti-terrorist work already underway and promises to aid in work on all sorts of "extreme situations," including terrorist attacks, natural and man-made disasters.

"Prior to 9/11, we thought of terrorism as a series of sporadic events," says **Michel Bruneau**, professor of civil, structural and environmental engineering, who recently has studied the aftermath of Hurricane Katrina and field-tested the blast resistance of bridges for the Federal Highway Administration. "Now we realize that terrorism is something that will be with us for the foreseeable future."

Bruneau is helping coordinate a campus-wide effort to harness UB research expertise across a range of disciplines—from microbiology and immunology to geographic information science, chemistry and engineering—and apply that expertise to the development of tools and techniques to respond to "extreme events" such as terrorism and catastrophic natural disasters.

Mitigation and response to extreme events is one of 10 strategic strengths, areas in which the University has potential to excel and to distinguish itself among its peers, identified in the first phase of the UB 2020 strategic planning process. By combining scholarly diversity around this common theme, and by bringing together UB research groups that have not traditionally interacted with each other, the hope is that truly unique research programs will emerge.

Adapting Skills to Improve Stroke Therapy

Hui Meng, professor of mechanical and aerospace engineering and research professor of neurosurgery in the School of Medicine and Biomedical Sciences, initially built her career on the study of turbulent flows generated by jet engines, aerosol particles and other aerodynamic systems. Today, she's turned her focus to biomedical engineering and is applying her skills to understanding flow in the tiny blood vessels that lead to the human brain. At UB's Toshiba Stroke Research Center, where she is a codirector, Meng leads a research team that studies the relationship between blood flow and brain aneurysms, the abnormal pouching of brain vessels that can lead to the most severe form of stroke—hemorrhage.

"It's not always intuitive how mechanical forces interact with biology," Meng said. "We know that blood-flow dynamics play a critical role in the initiation, growth and rupture of an aneurysm, but we don't know through what cellular and molecular mechanisms. Local changes in blood flow alter the gene expressions of the abnormal vessels, thereby offering opportunities for therapy. Since each patient's vessel anatomy is different, each case has to be computed individually to get the accurate flow dynamics."

To simulate patient blood-flow dynamics, Meng and her UB colleagues use techniques borrowed from mechanical engineering, such as computational fluid dynamics, a technique originally developed to simulate flows in engines and around automobiles, and particle image velocimetry, which provides measurements of flow fields. The goal is to assess the effectiveness of current methods of improving the outcomes of stroke patients by redirecting blood flow. Meng said, "We look at the flow data, and we say, 'Here's where the highest shear stress and pressure are and therefore this is likely or not likely to continue to grow and rupture.' We suggest to the clinician how the flow should be modified to reduce the rupture risk."

SEARCH ENGINE SEEKS VULNERABILITIES

As part of the effort to anticipate—and thwart—the plans of potential terrorists, the Federal Aviation Administration is supporting the development of a new search engine by UB researchers that is designed to detect "hidden" information that can be gleaned from public Web sites. The system permits users to find the best trail of evidence through many documents that connect two or more apparently unrelated concepts.

Funded by the FAA and the National Science Foundation, the UB project is based on Unintended Information Revelation (UIR), a search technique designed to uncover hidden information. The premise of UIR is that pieces of information that by themselves appear to be innocent may be linked together to reveal inadvertently highly sensitive data.

The need for such a tool arose after 9/11 when the FAA started focusing on information being disseminated on its Web site. "It couldn't tell if it was possible to infer things that the FAA doesn't want others to infer by putting together data from this page and that page and that page," said **Rohini Srihari**, associate professor of computer science and engineering, who is developing the new search engine with her colleagues in the Center of Excellence in Document Analysis and Recognition (CEDAR).

Sudarshan Lamkhede, **Anmol Bhasin** and **Wei Dan**, graduate students in computer science and engineering, and Nick Schwartzmeyer, a graduate student in linguistics, are working with Srihari on the project.

Igniting Ideas 6



UB Engineering is pleased to announce the final issue of the six-part Igniting Ideas series "Big-Picture Engineering." The issue covers visualization, simulation and modeling. We've included articles on increasing the performance of

aviation security screeners with false targets to measure alertness, modeling groundwater contaminants, and detecting leaks aboard the International Space Station.

This series highlights our school's research focus areas and can be viewed online at www.eng.buffalo.edu/IgnitingIdeas.

KARWAN TERM LEGACY: RESEARCH

- Grew total research expenditures from \$23.4 million in 1998 to \$37.3 million in 2005. UB Engineering ranks 32nd out of 350 (Top 10% of engineering schools) in research expenditures per faculty
- Took a major role in formation of four UB Engineering research centers which, in combination, have received over \$2 million in capital and \$9 million in external research funding: Center for Excellence in Global Enterprise Management (GEM); Center for Multisource Information Fusion (CMIF); New York State Center for Engineering Design and Industrial Innovation (NYSCEDII); Center for Unified Biometrics and Sensors (CUBS). Strongly supported the development of three multi-million dollar UB multi-disciplinary centers: Center for Computational Research (CCR); Institute for Lasers, Photonics, and Biophotonics (ILPB); and Center for Advanced Photonics and Electronics Materials (CAPEM), now Center on Hybrid Nanodevices and Systems (CoHNS) and Center for Spin Effects and Quantum Information in Nanostructures (CSEQuIN).
- Functioned as a leading member of a small Calspan UB Research Center (CUBRC) strategic planning committee to diversify and expand the CUBRC research portfolio, now over \$8.5 million in expenditures per year.

Development News

The UB Engineering Development staff is grateful for the generosity of our alumni, friends and corporate sponsors. We have had an active year and have been very successful in developing resources for the School. For information on specific scholarship programs, please see our articles “Scholarship Giving Changes Lives” and “Promoting Engineering Education.” We are also proud of the achievements of our human resources and wish to thank our Dean’s Council for their dedication to UB Engineering. Please see the article “Dean’s Council Member Joins Astronaut Hall of Fame” for an example of a successful Dean’s Council member who offers a lifetime of experience to UB Engineering leadership.

Again this year, we feature the annual report of financial gifts on pages 16–18.

If you would like to speak with us about giving to UB Engineering, please contact the Development staff at 645-2133 or e-mail [Tim Siderakis](mailto:tsiderak@buffalo.edu), assistant dean of development, at tsiderak@buffalo.edu

Dean’s Council Member Joins Astronaut Hall of Fame

Spacewalker **Joseph Allen, IV**, a UB Engineering friend, advisor, donor and member of the UB Engineering Dean’s Council, was recently inducted into the Astronaut Hall of Fame. Allen is a space shuttle veteran and traveled into space twice, in 1982 and 1984. He was a physicist who joined NASA in 1967. He has served as CEO of Space Industries, Inc., Calspan SRL Corp, and Veridian Corp. Currently he is the principal at Argotyche, Inc.

A gift from Allen was instrumental in the establishment of the Veridian Fellowship Fund in UB Engineering. He also serves on the board of directors for the Calspan-University at Buffalo Research Center, a partnership focused on bringing together scientists and engineers from academia and industry for opportunities in research and economic growth.

Allen has received many honors and awards, including an honorary SUNY doctor of science degree and the UB Alumni’s Association’s Walter P. Cooke Award, which recognizes non-alumni for their notable and meritorious contributions to the University and its family.

HONORING DONORS



UB Engineering has always been grateful for its donors and now there is a public symbol of our appreciation. The new Donor Plaque hangs at the Dean’s office in Bonner Hall and acknowledges the Million Dollar Roundtable (lifetime

contributors of \$1 million or more), the Founders Society (lifetime individual contributors of \$50,000 or more), the Delta Society Gold Members (current annual contributors of \$5000 or more), and the Delta Society (current annual contributors of \$1000 or more). Additionally, the plaque recognizes the UB Engineering Dean’s Council for the dedication of their time and talents to the School.

If you would like to speak to the Development Team about contributing to UB Engineering, please contact [Tim Siderakis](mailto:tsiderak@buffalo.edu), assistant dean of development, at (716) 645-2133 x1129 or tsiderak@buffalo.edu.

The plaque was sponsored by the UB Office of Advancement, Audrey Olmstead, acting vice president of University Advancement.

Promoting Engineering Education

Two locally-owned professional design firms are offering scholarships for minority students who attend UB in the fields of architecture and engineering. **Wendel Duchscherer Architects & Engineers, P.C.**, and **Watts Engineering & Architecture, P.C.** are actively involved in the Buffalo Public Schools’ ongoing major reconstruction effort and wanted to create incentives for area students. Both companies have a history of supporting minority causes and are actively involved with Buffalo-Area Engineering Awareness for Minorities (BEAM).

“As a business enterprise, we believe it is incumbent upon us to be a leader in the hiring of minorities and women,” said Edward Watts, president of Watts Engineering & Architecture. “However, the availability of minority engineers and architects in the marketplace is very limited and we believe that providing these scholarships is another way of demonstrating our commitment to increasing the number of minorities in these professions.”

The Watts scholarship is designed for a UB Engineering student and will cover full tuition. The winner will have an opportunity to apply for a summer internship at the firm.

Scholarship Giving Changes Lives

UB engineering student **Rachel Marie Styn**’s life has changed because of the generosity of **Jim Smist** and his wife, **Mary**. The Smists have established the **Felix Smist Scholarship** in honor of Jim’s father, **Felix**. It took Felix 16 years of studying part-time on nights and weekends while working full-time and raising a family to complete his engineering degree at UB, but he did it in 1965.

The **Felix Smist Scholarship** will pay Rachel’s tuition, for up to six years, as she attends UB Engineering part-time.

Styn is an executive assistant/system training specialist at **Healthcare Solutions WNY, LLC**, in Cheektowaga, NY. She is a single parent to five-year-old **Chloe**.

Styn is grateful for the **Smist Scholarship**. She says, “It is inspiring and heart-warming that a person could have so much love and respect for his father that he would create this scholarship in his honor. I am honored to be the recipient of the **Smist Scholarship**, and I look forward to the time when I can repay his kindness by providing assistance to a student in similar circumstances.”

DELTA SOCIETY MEMBERS

\$50,000 and up

James W. McLernon '50, Bloomfield Hills, MI

Nancy and Lawrence L. '74 Peckham, Webster, NY

Margaret T. Schenk '41, *In Memoriam*

\$10,000–\$49,999

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Raj G. Varadarajan '76, Englishtown, NJ
Jeffrey Y. Wong '84, Norwood, NJ
Maria Lucia Zabko, Woodbridge, VA

Scholar's Society, \$250–\$499

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son, White Plains, NY
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Park, NY
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Michael D. Brunner '84, Seattle, WA
John L. Burr '78, Kingston, NY
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Kris L. Fisher '01, Silver Springs, NY
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Guy H. Gettys Jr. '83, Flemington, NJ
William J. Gibson, Buffalo, NY
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Capistrano, CA
Robert E. Grace '63, Fairport, NY

Roger John Gray '70, Clarence Center,
NY
Martin Gary Green '75, Oxford, MI
Steven E. Gross '72, Newtown, PA
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M. Amine Hajji '73, San Jose, CA
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Gary L. Innes '66, Livonia, MI
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Viejo, CA
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Base, CA
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Scholar's Society, \$250–\$499

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Akber J. Afridi '83, New York, NY
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LA
Walid F. Amer '82, Leesburgh, VA
Wayne A. Anderson '70, Eden, NY
Michael C. Apap '93, Stamford, CT
Mark J. Azzaro '80, Bridgeton, NJ
David J. Baer Jr. '80, Glenwood, NY
Jeffrey J. Baker '83, Burnt Hills, NY
Raghuram Balasubramanian '90,
Kirkland, WA
Eric C. Banas '84, Wheatfield, NY
Jennifer Ann Barnes '95, North Tonawa-
nda, NY
Robert C. Barone '96, Lackawanna, NY
Francine Battaglia '92, Ames, IA
Melinda J. Bauerlein '00, West Seneca,
NY
G. Paul Becker '60, Boston, MA
Steven M. Bederian '79, Queensbury,
NY
Brian L. Bell '82, Niagara Falls, NY
Christina A. Bellis '80, Orchard Park, NY
Edward R. Belmore '73, Albany, NY
David Benua '79, Marblehead, MA
John A. Berggren '90, Baltimore, MD
Jeffrey F. Black '72, Marietta, GA
Ronald J. Blaszk '79, Syracuse, NY
Richard L. and Penny J. '80 Blumstein
'78, Edison, NJ
Edward T. Bochynski '88, Miamisburg,
OH
David M. Boland '95, San Diego, CA
Michael E. Bordonaro '85, Towaco, NJ
Miss Tami A. Boss '81, Kingston, PA
Mark A. Boyle '86, Nanuet, NY
Miss Amy R. Brisson '82, Arlington, VA
Abraham Brouk '77, Pittsford, NY
Alisa Brown '02, Eden, NY
Robert D. Brown '68, Santa Fe, NM
Thaddeus F. Bryzinski '50, North
Tonawanda, NY
Jeffrey S. Buell '84, Huntingdon Valley,
PA
Laura Bukkosy Smith '94, Pittsfield, MA
Joseph A. Bulger Jr. '86, Austin, TX
Rapus Bunupuradah '97, Bronx, NY
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Ming S. and Lisa L. '71 Chang '70,
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Philip E. Chang '83, Orchard Park, NY
Der-San Chen '70, Tuscaloosa, AL
Jir-Shyr Chen '96, Beaverton, OR
Yue Quan Chen '98, Brooklyn, NY
Salina Yukyan Cheung '97,
Edgewater, NJ
Calvin C. Chien '74, Newark, DE
Kenneth A. Cichocki '77, Roseville, CA

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Francis L. Conte '74, Swampscott, MA
Timothy J. Curry '00, Buffalo, NY
Michael L. Dee '83, Livonia, NY
Dominic L. Del Rosso '89, Seabrook, TX
Patrick G. Dempsey '90, Franklin, MA
Arthur M. Denz '65, West Seneca, NY
David H. Devendorf, Liverpool, NY
David R. Dieter '76, Reston, VA
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nda, NY
Howard G. '95 and Karen E. '93 Ebersman,
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Rotimi Erogbogbo, Brooklyn, NY
Benjamin L. Fan '00, Tyngsboro, MA
Yuan-Neng Fan '82, Paradise Valley, AZ
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Gerard R. Freddo '80, Mentor, OH
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James B. Gensel '95, Pine City, NY
Biju George '00, Hillsboro, OR
Roger D. Georgi '59, East Amherst, NY
Gary M. Gilbert '74, Minoa, NY
Jeremy L. Gilbert '81, Fayetteville, NY
Albert G. Giuliano
David Gerard Glista '87, Durham, NH
Timothy M. Glover '83, Watertown, NY
Peter V. Glynn '82, Davidsonville, MD
Marianne Golden '84, Austin, TX
Catherine L. Goodykoontz '77,
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Timothy J. Greiner '81, North
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Linda Hall-Bovino, Kenmore, NY
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Robert M. Happ '85, Roswell, GA
Thomas M. Hart '90, Chandler, AZ
Kenneth M. Hatterm '81, Fort Lee, NJ
Steven G. Hayes '93, Orlando, FL
Robert G. Helenbrook '69, Grand Island,
NY
Herbert and Charlene A. Henken,
Newton, MA
Roger C. Hennesen '70, Getzville, NY
Timothy W. Herlehy '66, Lake View, NY
David W. Hoch '83, San Diego, CA
Lawrence E. Hochreiter '63, State Col-
lege, PA
Leonard F. Hoffman Jr. '60, Circleville, OH
Harold S. Holman '59, Golden Valley, MN
David M. Hom '86, Louisville, KY
Frank L. Howell '77, Tampa, FL
John K. Howell '71, Tonawanda, NY
Min-Hsiung Hu '73, Murrysville, PA
Raymond Huetter, Rochester, NY
David K. Humphrey '67, Webster, NY
Martin C. Hutkin '75, Woodside, NY
Thomas J. Indrunas '86, Winter Springs,
FL
Robert L. Jacoby '80, Spring, TX
David L. Jayne '89, Arlington, VA
Dhananjay S. Joshi '03, Germantown,
MD
Christine M. Joyce '86, South Boston, MA
Steven J. Kargatis '68, Hampstead, NH
Samy V. and Rajeev V. Karuppana '71,
Reno, NV
Dennis M. Kasprzyk '78, Des Moines, WA
Thomas S. Katra '68, Fayetteville, NY
Jaime S. Katz '82, Wilton, CT
Henry J. Kazimor '50, Victor, NY
Gretchen E. Keenan '84, Inver Grove
Heights, MN
Arnold C. Keller '76, Amherst, NY
Patrick Richard Kelly '90, Albuquerque,
NM
Carl F. Kesselman '82, Santa Monica, CA
Paul T. King '99, Buffalo, NY
Shue F. King '81, Montville, NJ
John A. Kirkgasser '83, South Windsor,
CT
Jan A. Klapetzky '70, Williamson, NY
Gerald M. Knapp '89, Baton Rouge, LA
Paul C. Knibloe '61, Hamburg, NY
Brenda Ball Knight '92, Columbia, MD
Rajanagaprasad Kodali '87, Rochester
Hills, MI
James P. Kois '63, Knoxville, TN
Andrew R. Komarek '85, Fairport, NY
Chi H. Koon '90, Flushing, NY
Stanley J. Kopec Jr. '72, Portland, OR
Stephen R. Kornienko '01, Rochester, NY
Donald J. Koscheka '77, Colts Neck, NJ
Richard D. Kosmerl '72, Arcade, NY
Vasilios Kourkoumelis '97, Astoria, NY
John M. Kravec '68, Manhattan Beach,
CA
John J. Lanahan '80, Lenoir City, TN
Regina M. Larrabee '79, Welcome, MD
Roger C. Larson '76, Santee, CA
Jason R. Lasker '03, Lancaster, NY

Uldis Lauks '62, Kitchener, ON
Dar Shyang Lee '95, Union City, CA
John J. Lee '76, Middle Village, NY
Stanley Lew '73, Greenville, SC
Jingquan Li '96, Skaneateles, NY
Qun F. Liao '93, San Jose, CA
Nan Jae Lin '75, Burlington, MA
Kevin C. Lindquist '98, Albany, NY
Betty J. Lock '86, Williamsburg, VA
Gerard T. Loughran '81, Dix Hills, NY
Gary D. Luke '85, Fair Oaks, CA
William Joseph Lyons '79, Orchard Park, NY
Robert C. Mac Lagger Jr. '73, Brooklyn, NY
Mark E. Mahlmeister '82, Unadilla, NY
Jeffrey B. Mahon '02, Syracuse, NY
Ronald J. Maj '82, Owings Mills, MD
Saifuddin M. Mamoon '91, San Ramon, CA
Paul G. Markwardt '78, Wantagh, NY
Allan R. Martin '75, Rahway, NJ
Richard W. Martin '92, Crofton, MD
Chris J. Maurath '81, Chicago, IL
Paul E. McAnany '77, Hornell, NY
Andrew McBride '84, Austin, TX
Norman R. McCombs '68, Tonawanda, NY
Liam J. McDowell '89, Alexandria, VA
Patrick S. McFall '92, Springville, NY
Brian J. McGee '96, San Jose, CA
Martin T. McGrath Jr. '85, Palm Bay, FL
David L. McLaughlin '59, Kenmore, NY
Paul F. McParlane '83, San Diego, CA
Kelly R. Meredith '01, Owego, NY
William C. Merriman '84, Carson, CA
Kurt A. Miller '94, Benson, NC
Gregory Minnick '81, Toms River, NJ
Michael S. Mintier '04, Clifton Park, NY
Edward C. Morris '73, Herndon, VA
David J. Mortensen '78, Mission Viejo, CA
Paul R. Motyka '68, Acton, MA
Christopher Gerard Murphy '97, Hinesburg,
VT
M. Laurie Murphy '74, Topanga, CA
Ashwin Nagaraj '95, Plymouth, MN
Pradeep M. Nagaraj '01, Sunnyvale, CA
Jayasimha M. Nagaraja '99, San Mateo, CA
Kristina W. Nancollis '81, Fayetteville, NY
Pavankumar R. Nandikonda '00, San Jose, CA
Sudeep Narain '91, Campbell, CA
Christopher E. Nardecchia '85, Byron Center,
MI
John Narog Jr. '50, Huntington Beach, CA
Bernard T. Neu '79, Lancaster, NY
George W. Neuner '65, Winchester, MA
Huy X. Nguyen '77, Midlothian, VA
Donald J. Nixon '92, Portageville, NY
Craig D. Norberg '77, Beacon, NY
David C. Norton '81, East Aurora, NY
George H. Norton '48, Salt Lake City, UT
Daniel E. Oldman '77, Durham, NC
Joseph S. Olewnicki '00, Flushing, NY
Edward T. Ostrowski '69, Chesterfield, VA
Orland H. Oswald '51, Buffalo, NY
Thomas A. Pagliuco '77, East Brunswick, NJ
Prasad M. Pandit '96, Getzville, NY
Edward J. Paprocki '81, Longmeadow, MA
Michael N. Parasch '92, Penfield, NY
Howard E. Parks Jr. '64, Phoenix, AZ

CORPORATIONS, FOUNDATIONS, AND ORGANIZATIONS

\$100,000 and up

SGI, Mountain View, CA

Analytical Graphics, Inc., Exton, PA

\$50,000 to \$99,999

American Chemical Society, Buffalo, NY
Earthquake Protection Systems, Inc., Vallejo, CA
Johnson & Johnson, New Brunswick, NJ
National Grid, Syracuse, NY
Praxair Inc., Danbury, CT
Whitaker Foundation, Arlington, WA

\$10,000 to \$49,999

Buffalo Structural Steel, West Amherst, NY
Community Foundation for Greater Buffalo, Buffalo, NY
Fujitsu Laboratories of America, Inc., Sunnyvale, CA
GE Foundation, Fairfield, CT
International Business Machines Corporation, Purchase, NY
Kistler Instrument Corporation, Amherst, NY
NEC Laboratories America, Inc., Princeton, NJ
Pascor Atlantic Corporation, Bland, VA
Sprint Corporation, Westwood, KS
Sun Microsystems, Incorporated, Palo Alto, CA
TX RX Systems, Inc., Angola, NY
Xerox Foundation, Stamford, CT

\$5,000 to \$9,999

Atto Technology Inc., Amherst, NY
Buffalo News, Buffalo, NY
Eric Mower and Associates, Inc., Buffalo, NY
Harris Corporation, Melbourne, FL
John W. Danforth Company, Tonawanda, NY
McAuley Seton Home Care, Cheektowaga, NY
Motorola Foundation, Schaumburg, IL
Praxair Foundation Inc., Danbury, CT
Taylor Devices, Inc., North Tonawanda, NY
Wilson Sporting Goods, Chicago, IL

\$2,500 to \$4,999

AirSep Corporation, Amherst, NY
Calspan UB Research Center, Buffalo, NY

ExxonMobil Foundation, Princeton, NJ
Gentcorp LTD., Lancaster, NY
Centerstone Development, Buffalo, NY

\$1,000 to \$2,499

Applied Sciences Group, Inc., Buffalo, NY
Blasland, Bouck & Lee, Inc., Syracuse, NY
Delaware North Companies, Inc., Buffalo, NY
Ethox Corporation, Buffalo, NY
First Hospital Products Inc., Sanborn, NY
Fisher-Price, East Aurora, NY
IBM International Foundation, Research Triangle, NY
IMS Gift Program for Education, Allentown, PA
Intel Foundation, Hillsboro, OR
International Imaging Materials Inc., Amherst, NY
Juniper Networks, Princeton, NJ
Kaleida Health, Buffalo, NY
Keller Technology Corporation, Buffalo, NY
Kimberly-Clark Foundation, Inc., Dallas, TX
Moog, Inc., East Aurora, NY
NY Water Environment Assoc, Alexandria, VA
Phillips Lytle LLP, Buffalo, NY
ServerWare Corporation, Rochester, NY
URS Corporation, Inc., Buffalo, NY

\$500 to \$999

Cannon Design, Grand Island, NY
Carleton Technologies, Inc., Orchard Park, NY
Dominion Foundation Matching Gift Program, Princeton, NJ
Ford Motor Company Fund, Dearborn, MI
HSBC Bank USA, Prospect Heights, IL
National Starch and Chemical Foundation, Bridgewater, NJ
Northrop Grumman Foundation, Los Angeles, CA
Raytheon Charitable Gift Fund, Princeton, NJ
Scholarship Foundation, Cherry Hill, NJ
Verizon Foundation, New York, NY

\$250 to \$499

Altria Employee Involvement Programs, Princeton, NJ
AT&T Foundation, New York, NY
Boeing Company, Seattle, WA
Cadence Design Systems, Inc., Princeton, NJ
Con Edison, New York, NY
Mattel Children's Foundation, Princeton, NJ
Merck Company Foundation, Princeton, NJ
UPS Foundation, Inc., Atlanta, GA
Xerox Corporation U.S.A., Stamford, CT

\$100 to \$249

Alcoa Foundation, Pittsburgh, PA
Bristol-Myers Squibb Foundation, Inc., Princeton, NJ
BWXT Y-12. L.L.C., Oak Ridge, TN
ConocoPhillips Corporation, Bartlesville, OK
Cooper Industries Foundation, Houston, TX
Exelon Corporation, Chicago, IL
Franklin Beedle & Associates, Wilsonville, OR
General Physics Corporation, Elkridge, MD
Hershey Foods Corporation Fund, Hershey, PA
Hewlett Packard Co., Foundation, Palo Alto, CA
Honeywell International Foundation, Princeton, NJ
Household International, Incorporated, Prospect Heights, IL
IDEX Corporation, Northbrook, IL
IMAPS Educational Foundation, Washington, DC
Ingersoll Rand Company, Huntersville, NC
MMC Matching Gifts to Education Program, Princeton, NJ
Occidental Petroleum Charitable Foundation, Los Angeles, CA
Pfizer Foundation, Princeton, NJ
Praxair Matching Grants, Princeton, NJ
Procter & Gamble Fund, Cincinnati, OH
Public Service Electric & Gas Company, Newark, NJ
QUALCOMM Incorporated
Shell Oil Company Foundation, Houston, TX
Walt Disney Company Foundation, Burbank, CA

Century Club, \$100-\$249 (cont.)

Girish K. Patel '75, Hixson, TN
David D. Patrick '70, Talking Rock, GA
Richard K. Patterson Jr. '71, Richmond, VT
James D. Pawela '73, The Woodlands, TX
John L. Pawlak III '01, Orchard Park, NY
Lisa Carrie Pawlak '97, Raleigh, NC
Mark J. Pazder '76, East Aurora, NY
Earl T. Pearson '55, Tucson, AZ
David L. Peet '80, Wilmington, DE
Alan D. Percy '83, Orchard Park, NY
Ronald L. Peterson '75, Amherst, NY
Daniel B. Phillips Ph.D. '79, Rochester, NY
Dino Piccione '73, Dumfries, VA
Ronald J. Piracci '69, Clifton Park, NY
Wen Shen Pong '94, San Francisco, CA
Gregory J. Popp '88, Albany, NY
Sherwood P. Prawel III '87, North
Tonawanda, NY
Subramani Rajaram '80, Flanders, NJ
Paul S. Rataj '83, San Jose, CA
Linda S. Regan-Pellicone '83, Plano, TX
Stanley E. Rittgers '68, Stow, OH
Kathryn J. Rivers '85, Rochester, NY
Linda J. Roach '82, Austin, TX
Lance E. Robson '66, Eagles Mere, PA
James A. Rogers Jr. '64, Grand Island, NY
Robyn H. Rothstein '94, New York, NY
Thomas G. Ruby '83, Commack, NY
Janet M. Safier '91, Getzville, NY
John Saintcross Jr. '77, Delmar, NY
Suaad H. Sait '90, Austin, TX
Pingkeung Sam '98, Chicago, IL

Martin Sanborn '96, Glenellyn, IL
Henry L. Sandonato '78, Lewiston, NY
Sanjiv Sarin '83, Greensboro, NC
Sohrab Savoji '84, Corona, CA
Herbert R. Schaub '82, East Amherst, NY
William J. Schaumloffel '86, Phoenix, AZ
Joyce Ann Schmid '90, Cardiff-By-The-
Sea, CA
Eileen C. Schmitt '82, Campbell, CA
Kristopher D. Schroder '00, Seaford, NY
James Scinta '78, Bartlesville, OK
Catherine J. Scott '84, Cornwall-on-Hud-
son, NY
John E. Sherwood '73, Knoxville, TN
Vassilios I. Sikavitsas '00, Norman, OK
Edward Y. Sing '64, Bloomfield Hills, MI
Gregory A. Skonecki '89, Rochester Hills,
MI
Bryan T. Smith '82, East Aurora, NY
Gregory N. Smith '82, Herndon, VA
Commander Marven M. Smith '50,
Lucedale, MS
Jason L. Sollecito '01, Kenmore, NY
James R. Sonnenmeier '94, Erie, PA
Edward F. Spellman '82, Grafton, OH
Anthony E. Spezio '68, Laurel, MD
Robert Spina '96, Winchester, MA
Daniel R. Spisiak Jr. '80, Elmhurst, IL
Donald L. Starkey '67, Beaufort, SC
Eric R. Stegman '86, Ridgefield, CT
Brian P. Studt '91, Cicero, NY
William P. Sturner '78, Cherry Hill, NJ

William N. Sullivan '68, Albuquerque, NM
Ronald S. Svec '80, Berkshire, NY
Rodney J. Tabaczynski '66, Northville, MI
Paul W. Taylor '69, Summerfield, FL
Dustin D. Tellinghuisen '98, North
Tonawanda, NY
Steve R. Tewinkle '88, Keller, TX
David T. Theoclitus '88, Gillette, NJ
William R. Tixier '85, Grand Island, NY
Vincent Tomassetti '88, West Chester, OH
Keith R. Tompkins '65, Chesterland, OH
Donald E. Tranquillo '92,
Mamaroneck, NY
Michael P. Treanor '89, Scotia, NY
John P. Trunzo '59, Youngstown, NY
Christopher J. Truskey '00, Amherst, NY
Steven Tsengas '60, Mentor, OH
Eric J. Tyler '80, Pittsford, NY
Thomas J. Uhl '84, Vestal, NY
David P. Vallett '82 and Carol Mester
Vallett '78, Fairfax, VA
John L. Vanderhoef '79, Niskayuna, NY
Andrew C. VanEtten '90, Silver Spring,
MD
Mark J. Vitale '89, Piffard, NY
Hung P. Vo '79, Chantilly, VA
Richard A. Voit '92, Amherst, NY
James R. Vorburger '79, East Aurora, NY
William Dean Waffner '77,
East Aurora, NY
Daniel L. Warren '92, Yorktown Heights,
NY

Norman J. Warren '59, Niagara Falls, NY
Herbert M. Wendling '49, Alden, NY
Frederick Scott '00 and Caren A. '00 Wenner ,
Albuquerque, NM
Rebecca R. Wightman '00, East Aurora, NY
John P. Wilkinson '98, Oakmont, PA
Brad M. Williams '99, Ronkonkoma, NY
Richard A. Williams '94, Allentown, PA
Gordon J. Wilson '49, Hamburg, NY
David B. Winans III '74, Simpsonville, SC
Kurt N. Wolfanger '84, Kenmore, NY
Mark B. Wolfe '82, Miami Springs, FL
Mary Ellen Wolinski '80, Myrtle Beach, SC
Cheechiu J. Wong '72, Fairport, NY
Sailai Wong '87, Sudbury, MA
Yickcheong Woo '79, Flushing, NY
Gary W. 73 and Mary Jo Wood, Loudonville, NY
George D. And Nonnie M. Woodward '85,
Redding, CA
Scott H. Woodward '01, Akron, NY
David W. Wundrow '90, Brecksville, OH
Tanuja Yalamanchili '88, New Providence, NJ
Miintsong M. Yang '86
Alan Yerushalmi '95, New York, NY
George J. Zanelli '82, Orchard Park, NY
Harv Zapata '01, Midlothian, VA
Xiangjie Zhao '02, Elmhurst, NY

BEAM/Pre-College News

SENIOR STUDENT RECOGNITION DINNER

BEAM (Buffalo-area Engineering Awareness for Minorities) held its second annual Senior Student Recognition Dinner in the fall and was attended by over 120 students and corporate supporters. UB Engineering sponsored the dinner.

BEAM honored 15 high school students for their outstanding high school records. In addition, BEAM highlighted 12 UB engineering students who have been involved doing volunteer work with BEAM students. Several of the students are members of the National Society of Black Engineers or the Society of Hispanic Professional Engineers.

Guest speaker, BEAM Alumnus, **Garrett Cunningham** spoke on the importance of BEAM to his success and to the education of Buffalo Public School children. Cunningham, a past BEAM scholarship winner, senior UB engineering student and Ford Motor Company intern, thanked BEAM for his introduction to the engineering profession and the encouragement and enrichment classes enabling him to succeed.

Student biographies were presented and students received their own business cards to hand out to the corporate members.

Praxair offered two \$2500 scholarships to be presented to BEAM seniors who will be entering into an engineering curriculum in the fall. Watts Engineering & Architecture presented the 2006 Minority Scholarship Program for African Americans applying to the UB School of Engineering.

The following sponsored tables included students and members: LPCiminelli, Fisher-Price, Moog, Praxair, UAW Region Cap Counsel, URS Consulting Engineers and the Buffalo Public Schools Career & Technical Education Department.

Summer Program

Eleven minority high school students participated in the BEAM pre-collegiate summer program. This five-week program, coordinated by **Drexel Gidney**, Senior Academic Advisor and Director of Minority Engineering Programs consists of math enrichment, introduction to engineering, computing, and physics. Engineering students **Philana Owusu**, **LaVone Rodolph** and **Folarin Erogbogo** instructed the students in math and computers.

The following students and UB Engineering volunteer faculty preceptors participated in the 2005 BEAM/SEAS Research Honors Summer Program:

Christopher Guerra, 11th grade, Canisius H.S., worked with **Venkat Krovi**, MAE, and graduate student, **Glenn White**. His research project entailed designing and building a robot that could navigate through a maze independently.

Jessica Hernandez, 11th grade, Williamsville East H.S., worked with **Bina Ramamaurthy**, CSE. Jessica's project focused on becoming proficient in the use of the software "Flash Macromedia."

Brian Harper, 12th grade, Hutch Tech H.S., worked with **Matheos Koffas**, CBE, and graduate student **Yajun Yan**. His project involved DNA cloning, making agarose gel and DNA preparations.

Demetra Mclwain, 12th grade, Hutch Tech H.S., worked with **Mark Swihart**, CBE, and graduate student, **Folarin Erogbogo**. In addition, she was mentored by Kristen Lane an undergraduate student from the University of South Carolina. Her project consisted of grafting molecules onto silicon quantum dots.

Hieu Quang Nguyen, graduate, Grover Cleveland H.S., worked with **Alexander Cartwright**, EE, and graduate student **Sarojini Ramakrishnan**. He explored "Skin Reflectance Spectroscopy and Applications in Skin Biometry".

Cities of Tomorrow



The professional and student sections of the American Society of Civil Engineers hosted its 14th annual regional Future City Competition for middle school students. The national contest allows students to build models of imaginary futuristic cities with at least one working part that is not controlled by electricity. The students must also design a virtual layout of their city, write essays about their city and specified engineering topics and prepare a verbal presentation for the judges. Winners travel to the national competition in Washington, D.C. to compete for a trip to U.S. Space Camp in Huntsville, Alabama.

INVESTIGATING FLIGHT



8th grade BEAM Summer Students took a field trip to Niagara Aerospace Museum.



8th & 9th grade BEAM summer students building and testing catapults.

For information on BEAM and volunteer opportunities, contact Marilyn Helenbrook, Executive Director BEAM 206 Fronczak Hall 645-3066 email helenbrk@eng.buffalo.edu

UB Engineering Calendar of Events

Student Welcome Picnic 2005

UB Engineering kicked off the 2005-2006 academic year with a Welcome Picnic. A large number of students gathered to enjoy hot dogs and a few laughs. Engineering club members worked the grill and helped everybody enjoy the lunch..



Scholarship Reception

March 31

Preview Day-open house

April 1

Dean's Council Meeting

April 27-28

Order of the Engineer and

EAA Engineer/Applied

Scientist of the Year

TBA

Commencement

May 13

Math is Everywhere

May 18-19

Business Partners Day

June 15

UB Pillars Society

June 15-16

For more information, contact
Patty Starr at (716) 829-2608 or
pstarr@buffalo.edu



This is a publication of the School of Engineering and Applied Sciences – External Affairs and the Engineering Alumni Association, University at Buffalo. Robert E. Barnes, editor; Leslie Graff, associate editor; Deanie Hedrick, assistant editor. Other contributors: the UB Reporter, the UB Office of Publications, and The Spectrum. Anyone wishing further information on the articles contained herein may call External Affairs at (716) 645-2768 x1110, fax (716) 645-2495, or e-mail ub-seas@eng.buffalo.edu.

UB Engineering
University at Buffalo *The State University of New York*
THE SCHOOL OF ENGINEERING AND APPLIED SCIENCES

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