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## Ground-Shaking Earthquake Laboratory Opened



Photo by T. Minico

Dedicating the Grand Opening plaque from left to right: Michael Constantinou, professor and chair CSEE, Dean Mark Karwan, UB President John Simpson, A. Galip Ulsoy, NSF Division Director of Civil and Mechanical Systems, Andrei Reinhorn, CSEE Clifford C. Furnas Professor of Structural Engineering, and Michel Bruneau, CSEE professor and director of MCEER.

A new era in earthquake-engineering research was ushered in at UB with the grand opening of the National Science Foundation's George E. Brown Jr. Network for Earthquake Engineering Simulation (NEES) Facility within the Department of Civil, Structural and Environmental Engineering. The \$21.2 million NEES Facility is the largest investment in the NSF's \$81.9 million project to improve the understanding of earthquakes and their effects on buildings, bridges, roads, transportation systems and other infrastructure. The project is named in honor of the late California Congressman George E. Brown, Jr., former chairman of the House Science Committee and an advocate in Congress for engineering and science.

The UB NEES facility is a key node in a nationwide earthquake-engineering "collaboratory"—a network of 15 state-of-the-art laboratories at universities throughout the US that will allow earthquake engineers and students at different institutions to share resources, collaborate on testing and exploit new computational technologies.

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## Ruckenstein Honored with the National Academy of Engineering's Founders Award



**Eli Ruckenstein**, SUNY Distinguished Professor of Chemical and Biological Engineering and the first full-time professor in the SUNY system to be elected to the prestigious National Academy of Engineering (NAE), has been recognized with the organization's Founders Award. The award honors outstanding members who have upheld the ideals and principles of the NAE and who are "the elite of the NAE," individuals who have proven their worth not only to the engineering community throughout the years, but also through their dedication to the organization.

"Professor Ruckenstein's election to the NAE in 1990 was a momentous first for SUNY and UB, as it is the highest professional distinction an engineer can achieve in the U.S.," said dean Mark Karwan. "The NAE's decision to name Professor Ruckenstein the 2004 recipient of its Founders Award, which can only be awarded to those who have been elected to this distinguished organization, is yet another first for UB and SUNY," he continued. "It is fitting testimony to a scholarly career characterized by the achievement of numerous, critical 'firsts' spurred by Professor Ruckenstein's ability to solve intractable research problems by approaching them in fundamentally novel ways."

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## UB's New Leaders

### Simpson Inaugurated as UB President



Photo by N. Parisi

At his investiture as the 14th president of the University at Buffalo, **John B. Simpson** set a course for the university in the 21st century that will entail "great daring, and great devotion, pursuing great achievement," a course that he predicted will culminate with UB finding "its destined place among the nation's very leading universities."

He noted that the public research university's role is evolving in the 21st century, and that, now more than ever, it spurs cultural, technological and economic development. "I wholeheartedly endorse this cultural evolution of the university's public role," Simpson said. "At the dawning of a new knowledge revolution, I believe it is most appropriate that society look to the university—

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### Tripathi Welcomed as New Provost



**Satish K. Tripathi**, an internationally accomplished computer scientist, was appointed UB Provost by President John B. Simpson. "I am very honored and pleased to name Satish Tripathi as UB's new provost," said

Simpson. "Satish is a man of the highest integrity and personal scholarly distinction. He is very intelligent, analytical and has built a first-rate faculty at Bourns College of Engineering at the University of California, Riverside in a short period of time."

# ALUMNI NEWS



## Dear SEAS Alumni,

UBEAA has been active this past semester with both students and alumni in many fun-filled events. We began this fall by again co-sponsoring the student picnic in early September to kick off the new school year. We then continued our tradition of the annual UB Bulls Football pre-game tailgate on October 16th for SEAS alumni, students, faculty, staff, and friends to support their UB Bulls. All who came enjoyed the hot dogs, pop, good company, and of course the football game.

We are happy to announce that the UBEAA is joining with the UB Alumni Association to establish a joint membership program. This new program will offer our members more while maintaining our long-standing identity. We will continue to program successful alumni gatherings like our Football Tailgate and SEAS Night at UB Basketball. Further, we will co-sponsor important events supporting current students such as SEAS Scholarship Reception and recognizing

alumni achievement through the Engineer of the Year Award.

To recognize and welcome our colleagues from computer science, we will also be changing our name from the UBEAA to the UB Engineering and Applied Sciences Alumni Association (EASAA).

Alumni time and financial resources make our programs go. Please help us make the coming year a success.

I invite you to join us as a paying member for 2005 – your dues will go toward sponsoring events and assisting SEAS student clubs. You can also help us help current students by contributing to our special scholarship fund.

Your Board of Directors continues to extend an invitation to join us in accomplishing our programs. If you are interested in joining the EASAA Board, please contact us at [ub-eea@eng.buffalo.edu](mailto:ub-eea@eng.buffalo.edu) with a short resume telling us about yourself and your interest in joining the Board. Current Board members will review all applications submitted, and new members will receive an invitation to join us as soon as possible. Please note that the board is also changing to correspond with the organization's new form.

Together, we can make a positive contribution to our school and enjoy our UB.

Yours truly,

Stephen J. Golyski, PE, CIE BS '73, MS '81

UB EAA Past President

## Know An Outstanding Engineer Who Deserves Recognition?

The UB Engineering and Applied Sciences Alumni Association is seeking nominations for the 2005 Engineer/Applied Scientist of the Year. Just send us a resume, and a brief write-up about the person's outstanding contributions to the engineering profession, the public welfare, and/or human kind. Submit nominations to the UBEASAA Award Committee by January 30, 2005 for presentation of the award at the Order of the Engineer Ring Ceremony in April 2005. The winner will receive a Buffalo Trophy, and have his/her name placed on a plaque in the SEAS Dean's Office, External Affairs, 415 Bonner Hall, UB Amherst Campus.



Please send nominations to:  
**The University at Buffalo  
Engineering and Applied Science  
Alumni Association  
415 Bonner Hall  
University at Buffalo  
Buffalo, NY 14260**  
Or, e-mail nominations to:  
[ub-eea@eng.buffalo.edu](mailto:ub-eea@eng.buffalo.edu)

## EAA Board of Directors

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Stephen J. Golyski, P.E.,  
Past President

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See calendar on last page for upcoming events.

## Class Notes

**Vassilios Alexiadis**, MS CIE '86, published research in the *Institute of Transportation Engineers Journal* on "The Next Generation Simulation Program." The work, undertaken with the Federal Highway Administration, developed a core of open behavioral algorithms in support of microscopic traffic simulation.

**Michael Armbruster**, BS ME '00, has been merging a classic fishing lure design with innovative technology as co-founder and vice-president of Bikini Lures, a Buffalo-area start-up company that is seeking to revolutionize the tackle industry. Their Solaris lures integrate 14 flashing LED lights that blink in an erratic pattern imitating sunlight flashing off fish scales and an internal speaker that produces sounds like a fish in trouble. The lure, which can be recharged with a 9-volt battery, won "Best New Hard Bait" honors at the 2004 International Convention of Allied Sportfishing Trades, the tackle industry's largest event.

**Chandra Bhansali**, PhD Eng Science '80, was recognized as one of the Top 100 Most Influential Accountants by *Accounting Today Magazine*. As president and co-founder, Bhansali oversees AccountantsWorld in its quest to be the accounting industry's leading web portal and practice development resource.

**Erich Bloch**, BS EE '52, was inducted into the Computer History Museum in Mountain View, California for his engineering management of the IBM Stretch supercomputer and his work on the first use of miniaturized circuits in the IBM System/360 mainframe computer. The museum houses the world's largest collection of computing artifacts.

Separately, Bloch was also recognized as a "Western New York Pioneer of Science" by the Hauptman-Woodward Medical Research Institute. Previous recipients of this biennial recognition include the prolific inventor Wilson Greatbach, MS EE '56, and SUNY Distinguished Professor Eli Ruckenstein, CBE.

**Richard Chang**, MS Nuclear E '74, president and CEO of Semiconductor Manufacturing International Co (SMIC), is turning this firm into a global semiconductor giant. In four years, he has transformed flat patches of land on the outskirts of Shanghai into the world's fourth-largest contract chipmaker. This year, when production hits a projected 124,750 eight-inch wafers per month, SMIC is likely to grab the number three spot from Singapore's Chartered Semiconductor Manufacturing. "We want to be one of the best," Chang says. "Five to six foundries can be successful in the world. The top three can be very profitable, but the top five to six can be successful." Before founding SMIC, he was president of Worldwide Semiconductor Manufacturing Co in Taiwan. Chang previously spent 20 years at Texas Instruments.

**Carolina Desmone**, BS AE & ME '95, was recognized with the Society of Women Engineer's Distinguished New Engineer Award for her outstanding contributions to the military, aerospace, and energy industries in quality, innovation, and productivity, and for exceptional support of the mission and goals of the Society. As a Six Sigma Blackbelt working for GE Energy, Desmone is a consultant, mentor, and coach for the Optimization Services Technology team.

**Nicholas Fruscello**, BS IE '03, co-owner of the computer networking company Quantum City Solutions, is bringing free wireless Internet access to downtown Syracuse. So far, the company has developed three large Wi-Fi "hot zones." They hope to cover the whole downtown in the future.

**Stewart Haney**, BS EE '87, was honored as one of *Business First's* 40 Under Forty Class of 2004. The forty honorees were acknowledged for their records of professional success and community involvement in the Buffalo Niagara region. Haney has been a project engineer for UB's South Lake Village Housing, Erie County Family Court Building, and the first Leadership in Energy and Environmental Design (LEED) certified green building in Western New York. As a volunteer coach for the Amherst Soccer Association, he has led teams to three straight Western New York youth division championships.

**Bethany Ann Madge Acquisto**, MS CIE '98, Ph.D. '03, married Alfred S. Acquisto this summer. Madge Acquisto is working as a post-doctoral fellow and research scientist with the U.S. Environmental Protection Agency Office of Research and Development.

**Kelly Perkins**, BS CIE '04, joined Hunt Engineers, Architects and Land Surveyors, P.C. as a junior transportation engineer. A member of the American Society of Civil Engineers, she has previous experience as an intern with the Erie County Highway Department.

**Thomas Poppek**, Esq., BS EE '96, ME '97, joined Hodgson Russ LLP's Intellectual Property & Technology Practice Group in the firm's Buffalo office. He concentrates his practice in counseling clients on protecting their intellectual property interests in patents, copyrights and trademarks.

**Christopher Scolese**, BS EE '78, was named Deputy Director of NASA's Goddard Space Flight Center; he will serve as the principal operating official with general management responsibility for Center programmatic activities and management of resources. Scolese is the recipient of several honors including the Presidential Rank Award of Meritorious Executive, GSFC Outstanding Leadership, two NASA Outstanding Leadership Medals, and the AIAA National Capital Section Young Engineer/Scientist of the Year award. He is

an Associate Fellow of the American Institute of Aeronautics and Astronautics and a member of the Institute of Electrical and Electronics Engineers.

**Gerard J. Sentz**, BS CIE '81, MS '82, was appointed deputy Erie County Public Works commissioner for highways. Previously, Sentz was the department's director of Utilities, Energy and Grant Management.

**Corey Smith**, BS ME '93, has been working successfully as a feature animator, character/creature modeler, facial animator, and modeling supervisor with such notable Disney characters as Tinkerbell, Peter Pan, Ariel, Flounder, Jasmine, Aladdin, Iago, Simba, Lumiere, Donald Duck and Mickey Mouse. Smith is also co-owner and vice president of Atomic Monkey Inc., a firm specializing in toys, prototypes, and manufacturing. Working with companies including Fox, DreamWorks, and the WB. He has created collectibles of cartoon characters such as the Simpsons and action figures from programs such as "Buffy the Vampire Slayer" and "The X-Files."

**John P. Spensieri**, BS IE '86, was appointed Vice President of Sales for NewRiver, Inc., a leading expert in financial data technology. With nearly 20 years of sales experience, Spensieri most recently held the position of senior vice president for Thomson Financial. In addition to his role as head of sales for ThomsonOne, Spensieri led a 50-person team managing sales for the eastern region and is also credited with implementing a data integrity policy for the broker dealer community that has become the industry standard.

**Lesley Weitz**, BS ME '02, received the 2004-05 Tau Beta Pi Charles H. Spencer Fellowship. The Fellowship, named for Tau Beta Pi's national president from 1936 to 1947, is awarded to a winner whose contributions to her or his collegiate chapter are judged worthy of commendation. Lesley is currently working toward her master's degree in aerospace engineering at Texas A&M University where she is on an NSF Fellowship; she plans to continue doctoral studies there. Previously, she worked for one year at Moog Inc. as a product/project engineer and oversaw aspects of both the F/A-18 E/F "Super Hornet" and the F-35 "Joint Strike Fighter" programs. She was President of TBP's New York Nu Chapter, mentor to technical communications students, New York State co-op student-of-the-year 2001, and featured student in 2002 in *Diversity/Careers Magazine*.

## Pillars Society 2004



**Dennis Malone, Ken Young, and Charles Fogel.**

Distinguished Service Professor **Dennis Malone**, BA Physics '54. Both were welcomed into UB's Pillars Society by Professor Emeritus **Charles Fogel**, BA Physics '35, MA '38.

UB's Pillars Society, the body recognizing those alumni of fifty years or more, had their annual luncheon in the UB Anderson Gallery surrounded by the artwork of UB Distinguished Professor Harvey Breverman who was this year's featured speaker. The extensive exhibition, "Humanist Impulses: Selected Paintings, Drawings, Prints," was a part of the celebrations surrounding President Simpson's inauguration.

Attendees included **Ken Young**, BS ME '54, and our SUNY Distinguished Service Professor **Dennis Malone**, BA Physics '54. Both were welcomed into UB's Pillars Society by Professor Emeritus **Charles Fogel**, BA Physics '35, MA '38.

The annual Pillars Society luncheon was sponsored by the UB Alumni Association.

## Alumni Homecoming Celebrations

The Annual Engineering Alumni Association tailgate party brought together several generations of UB Bulls fans for hot dogs, soda and company before the October 16th homecoming game against the Miami RedHawks. In a separate tent, UB's Alumni Association welcomed all of the UB alumni who came for the game.



**Greg McDonald, BS IE '93, co-chair of the Detroit chapter of the Alumni Association, smiles with Victor E. Bull at the Alumni Association tent**



**Rick Rink\* grills for EAA Alumni**



**Jim Boyle\* and Jack Heine.\*  
\* SEAS Alumni**



**R. Kent Roberts\* with his sons and daughter peering over his shoulder.**

### UB EASAA Day at Basketball

Come show UB and SEAS spirit by cheering for our Bulls and being part of the ESPN2 televised broadcast of the UB Bulls Men's Basketball vs. Ball State game at 12 noon on Saturday, February 12.

Tickets are available for the EASAA section by calling 716/645-2768 xt.1110 by Friday, February 4th.

### Engineering Students Available for Employment

SEAS is continually looking for placement opportunities for its students in summer, co-op, and internship employment, as well as career positions.

We invite you and your company to benefit from having excellent students doing first-rate work in all disciplines- Aerospace, Chemical, Civil, Computer Engineering, Computer Science, Electrical, Environmental, Industrial, and Mechanical.

**Please contact Dean Millar at  
(716) 645-2768, ext. 1112  
or via email at  
dcmillar@eng.buffalo.edu**

## Spring 2004 EngiNet™ Offerings

### Civil, Structural and Environmental Engineering

- CIE 500 Wood Structures Design
- CIE 507 GIS Applications in Civil Engineering
- CIE 593 Project Management
- CIE 595 Construction Technology and Equipment
- CIE 619 Structural Dynamics of Earthquake Engineering II

### Computer Science and Engineering

- CSE 521 Operating Systems
- CSE 542 Software Engineering Concepts
- CSE 543 Intro to Language Processors
- CSE 587 Information Structures

### Electrical Engineering

- EE 505 Electronic Devices I
- EE 513 Communication Electronics
- EE 519 Industrial Control Systems
- EE 529 Introduction to Electromagnetic Compatibility

### Engineering and Applied Sciences

- EAS 522 Principles of Engineering Management II
- EAS 580 Technical Communications for Engineers
- EAS 583 Engineering Procedure Writing
- EAS 590 Case Studies in Engineering Management

### Industrial Engineering

- IE 504 Facilities Design
- IE 507 Design and Analysis of Experiments
- IE 509 Total Quality Management
- IE 551 Simulation and Stochastic Models

### Mechanical and Aerospace Engineering

- MAE 529 Finite Element Structural Analysis
- MAE 542 Eng Apps of Computational Fluid Dynamics
- MAE 552 Heuristic Optimization
- MAE 554 Road Vehicle Dynamics

EngiNet™ is principally a graduate-level distance learning program. 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](mailto:enginnet@eng.buffalo.edu)

All courses are subject to satisfactory enrollment.

# Alumni Obituaries & Death Notices

**Robert Graham**, BS EE '51, was involved in designing electrical systems for the nuclear submarine base in Bangor, WA, and was chief electrical engineer for Mare Island Naval Shipyard in Vallejo, CA. He spent the next 16 years as manager of physical plant services at Eastern Washington University. He then went to work for Kootenai Electric as engineering manager, after having served on the Kootenai Electric Board of Directors, until his retirement. Survivors include his wife of 52 years, Grace; two daughters, Wende Riordan and Nancy Evers; and four grandsons.

**Robert Stafford Price**, BS IE '53, enlisted in the Navy at age 17 in 1943, then reenlisted after graduating from UB to serve in the Korean War. Upon discharge, he worked for Fairchild Engine and Aviation in Farmingdale and then for Sperry Gyroscope of Lake Success, where he remained for 35 years. He was later honored by the Navy for his efforts with the Naval Submarine Ballistic Missile Fleet during the Cold War. Price retired from Sperry in 1991. He was a senior member of the Society of Logistic Engineers, recipient of the American Theater Medal, the Asiatic Pacific Medal and the Victory Medal. Prior to his military service, Price was a volunteer with the U.S. Army Group Observer Corp. Price is survived by three children, Eric, of Valley Stream, David, of Westbury, and Ellen Williams of Centerport; and five grandchildren.

**Walter Romashko**, BS ME '61, retired in 1992 after 35 years with General Mills. He is survived by wife, Phyllis; and sons, Walter Jr. and Timothy.

## New and Improved Membership

We are pleased to offer joint membership with the UB Alumni Association (UBAA). This cooperation between UBEASAA and UBAA will provide you the best from both organizations—the membership benefits and activities of the larger university group blended with our personalized, SEAS focused activities. Rest assured that UBEASAA will continue to serve SEAS, its students, and its alumni as it has in the past.

To renew or begin membership, go to [www.alumni.buffalo.edu](http://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.

## BS IE Class of 1984 Reunion



From left to right: Brett Kauffman, Jim Sutton, Emily Comerford, Dale Szydlowski, Mike Weekes and Mike Diberardino

This summer the BS IE Class of 1984 celebrated their 20 year reunion. The group enjoyed a Fish Fry at CPG and pool along with beef on weck at Anacones. The second day included breakfast at Pano's, a tour of the north campus followed by golf at Delaware Park. The group is planning a 2005 Reunion set for July 9 and 10, 2005, coordinated by Mike Weekes.

## Class of '55 Summer Picnic



Ralph Johnson, Dan Clark, Jerry Conroy, Bob Garbacz, John McClive, Dick Knapp, and Dick Weber.

For the past decade, some of the Class of '55 graduates and their wives have met for a picnic on the last Saturday of July. This year's picnic was at Dan and Rita Clark's home in East Aurora. With wide-ranging discussion, a great time was had by all. They are looking forward to their fiftieth anniversary picnic on July 30, 2005 and invite all who were involved in the Class of '55—teachers, fellow students, and fellow graduates—to come and enjoy an afternoon of food, fun and talk. For more information, contact Dan Clark at 716/652-0035 or by email at [dann2dc@aol.com](mailto:dann2dc@aol.com).

## A Call to the Class of '55

Start making your plans for October 2005! The Class of '55 will be having its fifty year reunion so start collecting memories and send them in. If you can't come, send a note of greeting that will be shared with fellow class members. One event will be the Pillars Society luncheon and a planning group will meet in early 2005 to come up with a program for gathering members. To get involved or for more information, contact Dan Clark at [dann2dc@aol.com](mailto:dann2dc@aol.com) or John McClive at [jmcclive@verizon.net](mailto:jmcclive@verizon.net).

## PE Continuing Education Options Available

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

1. Graduate courses - via our distance learning system EngiNet™. These courses are available as for-credit and not-for-credit. Most qualify as 36 contact hours of PE Continuing Education. For not-for-credit audits student must contact the professor for permission. You must inform the professor you are seeking PECE contact hours and a final assessment is required.
2. Special short courses - these are custom-designed courses that are offered on specific technical topics and are of variable length (often two or three days in length).
3. Departmental seminars - seminars on technical topics are usually 1 contact hour.

For further information, registration, or particular company needs, contact Marge Hewlett, [mhewlett@eng.buffalo.edu](mailto:mhewlett@eng.buffalo.edu), 716/645-2768 x 1106.

# STUDENT NEWS

## Engineering Career Institute Celebrates 10 Years

For more than a decade, the Engineering Career Institute (ECI) has assisted SEAS graduates into their professions. More than a thousand students have benefited from ECI's unique combination of professional development and industrial work experience, learning critical business-oriented skills in a seminar setting and then "cutting their teeth" in industry through technical summer jobs.

**Dean Millar**, SEAS Assistant Dean for Corporate Relations, has tirelessly and congenially lead ECI since its inception, developing it into a national-class program that gives students a leg-up on the job market, benefits employers, and strengthens SEAS's reputation. Millar's work and vision were recognized earlier this year with SUNY's prestigious Chancellor's Award for Excellence in Professional Service, which honors individuals who have transcended the normal definitions of excellence. (continued on pg. 12)

## Solar Splash '04



In what has become a Buffalo summer tradition, a regatta of solar-powered boats descended on Hoyt Lake in Delaware Park for Solar Splash, the World Championship of Solar Boating. UB's ASME club, in cooperation with Buffalo State College, entered the competition with a boat skippered by **Justin Frascino**, MAE senior. Support for the boat came from Buffalo Bearing, Cooper Turbo-compressor, GM Powertrain, MOOG, Thermal Foam, and UB's Student Association. The group's advisor is **Tarunraj Singh**.

## New Graduate Certificate in Information Assurance

The Center of Excellence in Information Systems Assurance Research and Education (CEISARE) is offering a new graduate certificate to equip students with a comprehensive understanding of the many facets of information assurance and security. With the rapid growth of the Internet and, in turn, the creation of numerous new information channels, the task of securing these channels and their underlying systems has become an industry-wide and national-level priority.

Students may elect to follow either a Technical or a Managerial path in the certificate. Students will obtain a necessary foundation in information assurance while, to some degree, tailoring the certificate to their interests. The certificate brings together Computer Science and Engineering with the School of Management, the School of Law, and the Mathematics Department. For more information, see the CEISARE website at

<http://www.cse.buffalo.edu/caeiae>.

## Student Mourned

**Dominic Kin Fung Ho**, a senior in MAE, was tragically killed in a motorcycle accident. Son of Kwong Wah and Fung Sin (nee Tang) Ho, he is survived by many relatives and friends.

## Opening Day



SEAS' sixth annual Opening Day event welcomed incoming freshmen with a daylong event that included meeting other incoming students, small group interactions with faculty, and insight from engineering student leaders. After witnessing an indoor kiting demonstration, each laboratory group had a short time to design, fabricate, and demonstrate an indoor kite from a given kit of materials.



## Student News

**Daniel Britt**, CSE, was awarded a full academic graduate scholarship at UB from the Department of Defense through the Information Assurance Scholarship Program. In 2003, Britt was a graduating member of the first advanced course in engineering on Cyber Security offered at the Air Force Research Lab in Rome; upon completing his master's program, he will be employed by the federal government.

**Eric Cichowski** and **Todd Schmidt**, CBE, won the "Fluid Properties Challenge" at the American Institute of Chemical Engineers Meeting. Working with **Jeffrey Errington**, assistant professor CBE, they used molecular simulation to give the best prediction of a previously unmeasured fluid phase property.

## Project Teamwork



SEAS students from across the departments came together to problem-solve in small teams, satisfying a new Accreditation Board for Engineering and Technology (ABET) requirement for interdisciplinary teamwork. Working with limited materials, they developed free-standing towers.

# Tech Job Fair

The 21st Annual Technical Job Fair, convened by UB Career Services, brought students together with local, statewide, and national companies and government agencies that have technical job openings.



Recruiting familiar faces—Kim Davis, BS EE '04, discusses Lockheed Martin with current EE senior Adam Grenzsbach.



New York Nu officers with representatives of General Mills and Praxair initiate the new sponsor plaque.

## Honors Recruitment Dinner

UB's New York Nu Tau Beta Pi Chapter's yearly Honors Recruitment Dinner, sponsored by General Mills and Praxair, was a rousing success, bringing together 16 companies and agencies with students from the SEAS honors society and from fellow honors societies who supported the event, Chi Epsilon, Eta Kappa Nu, Omega Rho, and Pi Tau Sigma. Attendees enjoyed a mini tech fair with recruiters from Atlantic Testing Laboratories, Consolidated Edison, Fisher-Price, General Dynamics Corporation—Electric Boat Division, General Mills, Harris RF Communications, Honeywell International, InfiMed, Lockheed Martin, Moog, NSWC Indian Head, NYS Department of Transportation, Praxair, Ralcorp Holdings, Syracuse Research Corporation, and the US Navy Officer Program. The event was organized by New York Nu officers **Matthew Watkins, Evan Haas, Melissa Chow, Caitlin Mahon, and Ravi Chopra.**

## Job Hunting?

Alums—do you know that you can still receive FREE career advice?

Career Services offers a wide variety of services to engineering and applied sciences alumni, including resume/cover letter critiques, job search and interviewing tips, access to online job postings, resume 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!

Contact Melissa Hubbard, Engineering Career Counselor, at 645-2231 to make an appointment, or visit the Career Services office in 259 Capen Hall to speak with a counselor. For more information, log on to [www.ub-careers.buffalo.edu](http://www.ub-careers.buffalo.edu).

## Engineering Honors Scholarship to Honor Past UB President

Several local business leaders surprised former UB President **Steven B. Sample** with a scholarship named on his behalf, an honor they felt befit the visionary leader noted for his support of scholarship at the highest levels.

Donors to the endowed scholarship fund included Jeremy M. Jacobs '60, chair and CEO of Delaware North Companies, Inc.; Stanford Lipsey, president and publisher, The Buffalo News; Robert G. Wilmers, chair and CEO, M&T Bank, and the directors of Moog, Inc. The scholarship will pay tuition and fees for four years for an undergraduate student who is in the School of Engineering and Applied Sciences and has been admitted as a freshman to UB's Distinguished Honors Scholars program. The scholarship will be awarded every four years, anticipated to begin in either Fall 2005 or 2006.

Jacobs, chair of the UB Council, took the lead in developing the fund. "Steve Sample had a vision of UB that included raising its overall level of scholastic achievement and recognition by the public," Jacobs said, speaking on behalf of the donors. "It was under his guidance that UB became a member of the Association of American Universities, a highly prestigious organization whose members include the country's top-level public and private educational institutions. Today we continue to benefit from the foundation that Sample laid as student applicant numbers grow along with increased averages in test scores and class rank."

## HFES Raises Ergonomic Awareness

As part of National Ergonomics Month in October, the Human Factors Engineering Society showcased their active program to the campus community. They presented information about the Industrial Engineering Department, displayed tools and instruments used in the profession, and discussed various research studies that are currently being performed in the department.

## Chancellor's Awards

Four SEAS faculty were honored with 2004 SUNY Chancellor Awards for Excellence from Chancellor Robert L. King. For the Chancellor's Award for Excellence in Scholarship and Creative Activities which recognizes the work of those who engage actively in scholarly and creative pursuit beyond their teaching responsibilities, **Michael Constantinou**, professor and chair CSEE, **David Kofke**, professor CBE, and **Alan Selman**, professor CSE were recognized. **D. Joseph Mook**, professor and chair MAE, received the Chancellor's Award for Excellence in Teaching which honors those who consistently have demonstrated superb teaching at the undergraduate, graduate or professional level.

A UB faculty member since 1987, Constantinou also is co-director of the Structural Engineering and Earthquake Simulation Laboratory (SEESL) in CSEE. His research interests include structural engineering, earthquake engineering, seismic isolation, seismic-energy dissipation, large-scale testing and performance-based design. His work on the seismic modernization of the Ataturk Airport Terminal in Istanbul, Turkey, won a Grand Award in the American Consulting Engineers Council's 36th Annual Engineering Excellence Award competition and a Diamond Award from the New York Association of Consulting Engineering Companies.

Kofke joined the UB faculty in 1989. His research interests lie in thermodynamics, statistical physics and molecular simulation. He has received numerous awards, among them a Presidential Young Investigator Award from the National Science Foundation, the Dow Outstanding New Faculty Award from the American Society for Engineering Education and, most recently, the John M. Prausnitz Award for achievement in applied chemical thermodynamics from the International Conference on Properties and Phase Equilibria for Product and Process Design. Kofke received the Chancellor's Award for Excellence in Teaching in 1994.

A UB faculty member since 1986, Mook also serves as MAE chair and SEAS assistant dean for international education. His research interests include controls, dynamics, system identification, estimation theory, modeling and nonlinear and chaotic dynamic systems. He has received numerous awards for his teaching, including a 2000 Milton Plesur Excellence in Teaching Award from the undergraduate UB Student Association and the Ralph R. Teeter Outstanding Educator Award from the Society of Automotive Engineers.

Selman joined the UB faculty in 1990 as chair of computer science. A specialist in computational complexity theory, he serves as editor-in-chief of the journal *Theory of Computing Systems* and is a member of the editorial boards of the *Journal of Computer and System Sciences* and the *Chicago Journal of Theoretical Computer Science*. A recipient of the Exceptional Scholar Award from UB in 2002, Selman is a Fellow of the Association for Computer Machinery, which awarded him its ACM-SIGACT Distinguished Service Award in 2001.

## C. P. Yu Retires

Professor **C. P. Yu** joined the faculty of UB in 1964 after obtaining his Ph.D. from Purdue University. He was a member of the Division of Interdisciplinary Studies and Research, and the Engineering Science Department before joining the Department of Mechanical and Aerospace Engineering in 1981. He was Chairman of Mechanical and Aerospace from 9/83-8/86.

Yu has had a distinguished career in research working in a variety of areas including electro/magneto-hydrodynamics, plasma physics, aerosol physics and inhalation toxicology. He has published over 160 papers in archival journals and has made over 130 conference presentations. He has been PI on over two million dollars of funded research from sponsors such as NSF, NASA, and NIH. He has graduated 20 Ph.D. students and over 30 M.S. students. Seven of his former students are university faculty (2 in the US and 5 in Taiwan), two are CEO's of companies, three are Directors of Research and Development, and many others have research positions in major companies and governmental labs.

In 2002, Yu was named a UB Exceptional Scholar to recognize his long-term contribution to science and engineering.

## Faculty Awards and Honors

**Jeffrey Errington**, assistant professor of chemical and biological engineering, received a 2004 James D. Watson Investigator Award from New York State for his work to develop methods to preserve biomaterials to impact the design of pharmaceutical drug formulations as well as other industrially relevant products. The Watson program assists New York's leading research institutions in recognizing, retaining and professionally developing early career scientists who demonstrate leadership potential at the frontier of knowledge in the life sciences and conduct research that is anticipated to enhance economic development in the state.

**Venu Govindaraju**, professor of computer science and engineering and director of the Center for Unified Biometrics and Sensors, was recognized with a 2004 Global Indus Technovators Award in InfoTech. The awards, sponsored by the Indian Business Club at MIT, honor upcoming innovators. Govindaraju was cited for his research, particularly his Handwritten Address Interpretation software that has been used by the USPS to sort more than 650 million letters and parcels daily. His further work in biometrics, including fingerprint and face recognition, was also cited for its impact in security and forensics.

**David Kofke**, professor of chemical and biological engineering, was awarded the prestigious 2004 John M. Prausnitz Award for "significant and lasting contributions to the field of applied chemical thermodynamics." Sponsored by the International Conference on Properties and Phase Equilibria for Product and Process Design, the award recognizes Kofke's broad efforts to advance applied thermodynamics through the development and application of molecular simulation methods. Only the third person to win this triennial award, Kofke was selected for excellence in research on phase-equilibria, an important subfield in applied chemical thermodynamics. "Phase equilibrium underlies all the interesting and useful phenomena in nature," explained Kofke, "because the properties of a physical system depend first of all on the thermodynamic phase it is in."

Kofke was also recognized this year as a recipient of the SUNY Chancellor's Award for Excellence in Scholarship and Creative Activities and was named a UB Distinguished Professor.

**Rakesh Nagi**, associate professor of industrial engineering, was recognized by *Business First's* 40 Under Forty Honor. The forty honorees, coming from 11 broad fields, were acknowledged for their professional success and community involvement.

**Walter J. "Jim" Sarjeant**, James Clerk Maxwell General Dynamics Chair in Energy Systems, was honored with the William G. Dunbar Award at the 2004 IEEE International Power Modulator Conference for "continuing contributions to high voltage research, development and education and for dedication to transferring that technology to the high voltage community."



# Faculty Scholars, Inventors, and Entrepreneurs Recognized

The 2004 annual UB-wide Scholars, Inventors and Entrepreneurs Reception honored numerous SEAS faculty for their research and commercialization achievements

The following faculty members were named on US patents awarded to the SUNY Research Foundation: **Paschalis Alexandridis** and **Sriram Neelamegham**, CBE, for the Recovery of Liquids from Absorbent Packaging Materials. **Eli Ruckenstein**, CBE, for a Method of Making Graft, Block-Graft and Star-Shaped Copolymers by In-Situ Coupling Reaction whose o-inventor was Hongmin Zhang. **Thenkurussi Kesavadas**, MAE, for Rapid Informational Prototype, Including Rapid Colored Prototypes with co-inventor **Kirk Stalis**, BS MAE '97, MS '99.

The following faculty members who started a business based on their research were recognized for their entrepreneurial spirit: **Eliot Winer**, formerly of UB, together with **Christina Bloebaum** and **Kenneth English**, both MAE and New York State Center for Engineering Design and Industrial Innovation (NYSCEDI), and Michel Brummer founded Visual Design Systems, an online visualization and design provider that utilizes copyrighted design and engineering software. **Sargur N. Srihari**, CSE, along with Yong-Chul Shin, founded CedarTech. The company focuses on products and solutions for the computer interpretation of patterns, including document analysis and recognition tasks.

The Center of Excellence for Document Analysis and Recognition (CEDAR) was recognized for inventing technology that was licensed to an industrial partner for their User Interface for Forensic Document Examination System.

**Albert Titus**, EE, and **Kenneth English**, NYSCEDI, were recognized for receiving support from the New York State Center for Advanced Technology in Biomedical and Bioengineering, which supports university-industry collaboration.

## SEAS Service Awards



**30 and 40 Years of Service:** **Corky Brunskill**, **Gary Majewski**, **Dean Mark Karwan**, **Eli Ruckenstein**, **Larry Soong**, **Dale Taulbee**, **Front Row:** **Nancy Jurewicz**, **Donald Givone**, **Marie Huber**, **Donna George**.



**10 and 20 Years of Service:** **Alan Rabideau**, **Scott Weber**, **Dean Mark Karwan**, **Ken Peebles**, **Rakesh Nagi**, **Front Row:** **Tarunraj Singh**, **Mark Pitman**, **Mary Dahl**, **Scott Woodward**, **Robert Wetherhold**.

The following SEAS faculty and staff were recognized for their years of service to UB – 40 Years: **Donald Givone** EE, **Larry Soong** CSEE, **Dale Taulbee** MAE. 30 Years: **Corky Brunskill** SENS, **Donna George** MAE, **Marie Huber** SEAS, **Nancy Jurewicz** CSEE, **Gary Majewski** CSEE, **Eli Ruckenstein** CBE. 20 Years: **Mary Dahl** External Affairs, **Richard Longley** Design Services, **Ken Peebles** Machine Shop, **Mark Pitman** CSEE, **Scott Weber** CSEE, **Robert Wetherhold** MAE, **Scott Woodward** Engineering Design Services. 10 Years: **Gary Dargush** CSEE (belated), **Cathy Muscarella** EE, **Rakesh Nagi** IE, **Chunning Qiao** CSE, **Alan Rabideau** CSEE, **Tarunraj Singh** MAE.

## Promotions

### SEAS Congratulates:

#### Promoted to full professor:

**Hui Meng**, MAE

**Chunning Qiao**, CSE

**Andrew Whittaker**, CSEE

#### Promoted to associate professor with tenure:

**Victor Paquet**, IE

**Mark Swihart**, CBE

#### Promoted to senior programmer analyst

**Scott Berner**, Science and Engineering Node Services (SENS)

## Greetings & Farewells

### SEAS welcomes new faculty:

**Matthew Beal**, CSE

**Jonathan Bird**, EE

**David Forliti**, MAE

**Susan Hua**, MAE

**Gilberto Mosqueda**, CSEE

**Timothy Terrill**, CSE

**Satish Tripathi**, CSE and UB Provost

### SEAS welcomes new staff:

**Melissa Hubbard**, Staff Assistant, Career Planning and Placement

**Jonathan Klubek**, Programmer – Analyst, SENS

**Jenna Postolese**, Staff Assistant, Buffalo Engineering Awareness for Minorities

### SEAS says goodbye to retiring faculty:

**Apostolos Papageorgiou**, CSEE who has taken a position in Greece

**Chia Ping Yu**, MAE now professor emeritus

## NYSTAR Grant Facilitates Hire

The New York State Office of Science, Technology and Academic Research (NYSTAR) awarded **Jonathan Bird** a Faculty Development Award as a new professor in the Department of Electrical Engineering. The grant was one of four that NYSTAR awarded in order to assist institutions of higher education to recruit scientists to New York State or retain them here, helping to ensure the continued long-term growth of the state's high-technology industries.

According to Dean Mark Karwan, the successful recruitment of Bird helps strengthen a core focus for the university in nanotechnology. Bird's research ranges from fabrication of novel nanoelectronic structures and the characterization of their electrical qualities to quantum chaos in quantum dots and proof-of-principle demonstrations of spintronic devices that exploit unique properties of semiconductor nanostructures. Bird will work closely with faculty from several departments who are collaborating on interdisciplinary research at centers including the Center for Advanced Photonic and Electronic Materials and the Institute for Lasers, Photonics and Biophotonics.

## Virtual Clay



Researchers from UB's Virtual Reality Lab have developed a virtual clay sculpting system that enables users to replicate in real time on a personal computer the physical act of sculpting clay or other malleable material.

"This technology will give product designers, or even artists, a tool that will allow them to touch, shape and manipulate virtual objects just as they would with actual clay models or sculptures," says **Thenkurussi Kesavadas**, director of the Virtual Reality Lab and associate professor of mechanical and aerospace engineering. "We believe this tool will be a valuable first stage in the sculpting or molding of complex shapes, leading to the design of a variety of products for a variety of industries."

The technology utilizes a ModelGlove developed by the researchers to record the force exerted by hand when depressing and shaping a block of clay. This information, as well as information on hand position and speed of fingertip motion, is communicated to a PC where a virtual block of clay — possessing characteristics mimicking the physical properties of the clay — is shaped precisely to the contouring of the actual clay.

Currently the ModelGlove has a single touch sensor on the tip of the index finger. On the computer display, the user's finger is represented as one of three virtual tools: a sharp tool for making small deep holes, a medium size for gauging or molding the clay and a large tool for rough shaping of surfaces.

The next generation of the ModelGlove will have sensors on all fingers and on the palm of the hand to give users full finger control of virtual clay. This will enable users to perform complex touch actions — such as kneading the ball of clay — in the virtual environment. Kesavadas has applied for a provisional patent on the technology developed with **Ameya Kamerkar**, ME graduate student.

## New Sensor

CUBS researchers are developing a handheld sensor that can detect the presence of toxins potentially used as agents in biological warfare. The proposed sensor, which will utilize optical-detection and chemical-sensing technologies, could be used in urban, military, industrial and even home environments, says researcher **Albert H. Titus**, EE assistant professor. "Our sensor will have certain advantages over what is currently available," Titus says. "It will be lightweight, portable, relatively inexpensive to manufacture and it can be tailored to detect many types—or different quantities—of toxins."

The sensor also will have medical applications, as it can be adapted to detect glucose, pharmaceuticals or biomarkers in blood or saliva, and may serve as a diagnostic tool for assessing disease.

## CSE Distinguished Speakers

This fall for their Third Annual Distinguished Speakers Series, the Department of Computer Science and Engineering brought three pioneering professors to discuss their work. As part of the celebrations surrounding President John Simpson's inauguration, Ruzena Bajcsy from UC Berkeley gave a talk on "CITRIS: Accomplishments, New Opportunities, and Challenges" and Manuel Blum from Carnegie Mellon discussed "Toward the Design of a Conscious Self-Aware Free-Will Robot." Later in the semester, Larry Smith came from UC San Diego to present on "The Optiputer: A Science Driven LambdaGrid." In the spring, the series will complete with David Farber from UPenn considering "The Impact of the Real All-Optical Networks on Future Computer/Software Systems." His talk will take place on Friday, April 8 in 330 Student Union from 3:30-4:30 p.m.



**Russell Bessette addresses the conference.**

science and systems. The workshop was sponsored by the National Science Foundation and the U.S. Air Force Research Laboratory along with the support of U.S. Department of Defense and local institutions. Designed to raise awareness among academics and practitioners of secure knowledge management, the workshop looked toward the development of effective mechanisms to help secure data, information, and knowledge in a broad range of applications. Presenters from industry, academia, and government included Hun Kim, deputy director of the Department of Homeland Security's National Cyber Security Division and Russell Bessette, executive director, New York State Office of Science, Technology and Academic Research and member, Homeland Security Science and Technology Advisory Committee.

## Sending Stable Proteins

**Jeffrey R. Errington**, assistant professor of chemical and biological engineering, is exploring ways to preserve proteins and other biomaterials so that they can be more widely used, primarily in pharmaceutical products. With the support of a James D. Watson Investigator grant from the New York State Office of Science, Technology and Academic Research (NYSTAR), Errington investigates the properties of complex fluids and biological systems from a microscopic perspective. He applies that research to develop methods to preserve biomaterials in order to improve the design of pharmaceutical formulations. The work also is applicable to protein formulations in the personal-care and cosmetics industries.

Errington is focusing on finding ways to temporarily trap proteins in a solid state so that they can survive exposure to a range of atmospheric conditions. "We are trying to surround the protein, on a molecular level, with a rigid matrix that prevents it from being able to unfold," said Errington. "The idea is to keep the protein in its native state the entire time." Once the products arrive at their destinations, they could be reconstituted using a simple solution and administered to patients, he said.

## Secure Knowledge Management Workshop

Secure knowledge management, a growing dilemma of how to gather, organize, and share information while ensuring security, was the subject of a workshop brought together by **Shambhu Upadhyaya**, associate professor of computer science and engineering and director of the Center of Excellence in Information Systems Assurance Research and Education, jointly with H.R. Rao, professor of management

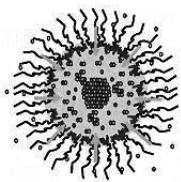
## New Tissue Engineered Blood Vessels

UB researchers have developed a process in which cells are used to construct new blood vessels, opening the door to growing new blood vessels for procedures like coronary bypass surgery. The small-diameter tissue engineered blood vessels (TEVs), developed and implanted in sheep, exhibited the strength and resiliency necessary for implantation after just two weeks in culture, to date the shortest development time for artificial vessels that have functioned successfully.

The researchers constructed the vessels by embedding vascular smooth-muscle cells isolated from sheep umbilical cords into fibrin, the essential clotting ingredient in blood. The fibrin gel matrix then was shaped into cylinders; after only two weeks, the tissue thinned down to approximately half a millimeter and they could then be implanted.

"We have shown that fibrin-based vessels can be implanted in vivo, remain patent and support blood flow rates for 15 weeks," said **Stelios Andreadis**, associate professor of chemical and biological engineering. He was co-author on the paper with Daniel D. Swartz, research assistant professor, and James A. Russell, professor, both in the Department of Physiology and Biophysics in the School of Medicine and Biomedical Sciences.

## Synthesizing Quantum Dots



A research team led by **T.J. Mountziaris**, professor of chemical and biological engineering, has invented a way to synthesize quantum dots—luminescent nanocrystals

made from semiconductor material. Sometimes called artificial atoms, quantum dots can be used to build new devices for biological and environmental sensing, quantum computing, lasers and telecommunications, among other applications.

The technique enables precise control of particle size by using a microemulsion template formed by "self-assembly." Mountziaris' co-researchers are **Paschalis Alexandridis**, professor of chemical and biological engineering; Athos Petrou, professor of physics; **Georgios Karanikolos**, a graduate student in CBE, and Grigorios Itskos, a graduate student in the Department of Physics.

Using the technique, the researchers have demonstrated the controlled synthesis of zinc selenide (ZnSe) quantum dots that exhibit size-dependent luminescence. When excited by ultraviolet light, quantum dots emit a particular fluorescent color and brightness, depending on the dot's size. The problem for scientists has been devising simple techniques to control their size.

The technique developed by the team gives them the ability to precisely control the size (and luminescence wavelength) of the ZnSe dots in one step. The researchers were able to grow ZnSe dots inside "nanoreactors" formed by heptane nanodroplets of an emulsion. By reacting hydrogen selenide gas with diethylzinc (DEZn) dissolved in the heptane, a single quantum dot is grown in each nanoreactor, allowing precise control of particle size by simply controlling the initial concentration of DEZn in the heptane.

The ZnSe quantum dots have potential for use in clinical and therapeutic diagnostics and for DNA analysis. The dots may be used, for example, as biological tags, attaching themselves to diseased cells, tumors or particular genes, alerting scientists to their presence in the body or in biological samples.

## Rapid Prototyping Brings together Smart Materials and Biomedicine



**Bahattin Koc**, assistant professor of industrial engineering, is coordinating UB's research efforts using a new rapid-prototyping machine, the FDM 3000 manufactured by Stratasys, to aid efforts by biomedical engineers to manufacture living tissues and organs, and fabricate customized implants and prostheses. The machine can produce within hours complex 3D structures directly from computer images—building the structures from the bottom up in .007-inch layers using ABS (acrylonitrile/butadiene/styrene) materials, a very durable, heat- and chemical-resistant type of plastic.

Koc, whose expertise is in computer-aided design and solid free-form fabrication, will work with UB researchers on design and fabrication methodologies to produce complex 3D parts used in bioengineering applications. He also will investigate the machine's use for fabrication of "smart" materials, composed of multiple layers of different materials possessing different properties and functions.

The prototyping machine also will be used immediately to advance the work of Stephen Bauer, clinical assistant professor of rehabilitation science and director of UB's Rehabilitation Engineering Research Center on Technology Transfer (T2RERC). Bauer specializes in the development of assistive devices and prostheses. Using the machine, Bauer can develop functional prototypes of customized prostheses and assistive devices produced from computer tomography (CT) scans or magnetic resonance imaging (MRI) of the patients.

## New Research Institute to Improve Airport Security

UB's new Research Institute for Safety and Security in Transportation (RISST) will examine ways to improve security systems at airports and other transportation hubs through a grant from the Transportation Security Administration (TSA). **Colin Drury**, UB distinguished professor and IE chair, leads the institute in its study of human factors that contribute to errors and inefficiencies in security systems, such as those used to inspect baggage and screen passengers in airports. RISST researchers also study how and why inspectors fail to find defects during routine aircraft maintenance.

Research in this area has been an ongoing focus of Drury's work, funded by the Federal Aviation Administration. Much of Drury's aviation-inspection research now takes place within RISST, where he and researchers continue examining the effects of fatigue on aircraft inspection, and the prevalence of language-related errors in aviation maintenance and inspection. Drury, who has reviewed security systems in airports around the world, is a member of TSA's Scientific Advisory Panel and serves on the National Research Council's Panel on Assessment of Technologies Deployed to Improve Aviation Security.

# Smart Sensor System

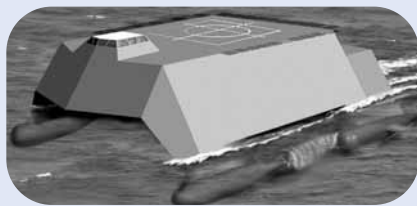
Johnson & Johnson is funding the development of a biologically inspired smart sensor system (BIS<sup>3</sup>) that has potential applications in medical and industrial situations, and that could enhance US military efforts to improve homeland security. The project is led by **Albert Titus**, EE assistant professor, and **Alexander Cartwright**, EE associate professor, and is conducted through the Institute for Lasers, Photonics and Biophotonics (ILPB).

"This is a great opportunity for us to interact with Johnson & Johnson, the world's most comprehensive and broadly based manufacturer of health-care products and a provider of related services," said **Dean Mark Karwan**. "It is an affirmation of the strength of our sensors program."

The ILPB's work in smart sensor technology involves the integration of photonics technology—from photonics communications, to photonics-based sensors, to hybrid electronic/photonics processing for a distributed smart sensor network—with chemical and biological detection modalities.

## Designing an All-Electric Warship

**Cemal Basaran**, director of the Electronic Packaging Laboratory and CSEE associate professor, is helping the US Navy to develop a next generation all-electric warship that will revolutionize the Navy's use of weaponry and manpower. The electric warship's system architecture will make available throughout the entire ship onboard electric power generated by the ship's power plants and mechanical propulsion system.



Standard shipboard electrical systems currently are unable to distribute this immense electrical power to all parts of the ship, making impractical the use of advanced weapons and sensors that require a lot of power, according to the Navy. Increased power availability will lead to computerization of most of the electric warship's operations, which will make much manpower redundant. The electric warship will require a crew of 100, compared to traditional battleship crew that numbers in the thousands, according to Navy estimates. The Navy plans to have the electric warship operational by 2012.

Basaran will design next-generation power electronics capable of carrying high-current density and high-power to all parts of the warship, using nano and microelectronics technology. This will be a critical component of the ship's system architecture, Basaran says. "The next-generation power electronics that will control the ship will lead to major improvements in effectiveness, survivability and cost savings, as well as a significant reduction in the size of the vessel's components," he adds.

## ECI Celebration (cont. from pg. 6)

### Reflecting on the Experience; Interviews with ECI's First Graduating Class

"The whole ECI program is a phenomenal program. It allows SEAS students to go out and get real-world experience; even more, they are mentored by some of the best engineers in the area. SEAS does a great job with developing theoretical expertise, but it is ECI that rounds out the program with hands-on experience. I have talked with colleagues and no other program gives the critical soft skills that ECI teaches. I have always felt that Dean Millar has created a phenomenal program, and my ten years of experience after graduating have only reinforced my regard for ECI. All of my friends who have been through the program have been successful, and they contribute part of their success to the strong start offered by the ECI program." **Rick Licursi**, BS AE & ME '95, UGS Technical Team Manager.

"ECI was great; it was a tremendous learning experience and I had a very good internship. The coursework and classes were very applicable to business life. At the same time that I completed my bachelors in civil engineering, I also finished a Masters in Business Administration. Many of the topics that were covered in the MBA were touched on in the ECI, exposing engineering students to critical real-world issues that aren't available elsewhere in the curriculum. I've found that the engineers who come out of the program are more well-rounded, which is exactly what sort of candidate I look for now that I conduct hiring." **Michael Colyer**, BS CIE & MBA '96, Director, Bell Helicopter Composite Center of Excellence.

# Wear More, Swim Faster

Swimmers wearing a suit covering their torso from shoulder to knee or ankle should have a performance edge over competitors wearing suits that provide less body coverage, a study conducted at the UB Center for Research and Education in Special Environments has shown.

Using special facilities that can test the effect of the suit alone—not the swimmer's technique or style—UB researchers found that shoulder-to-knee and shoulder-to-ankle coverage decreased overall drag by 10-15 percent compared to waist-to-ankle, waist-to-knee suits or the minimal-coverage brief traditionally used by male swimmers.

The purpose of the current study was to develop a method of determining quantitatively the relative contribution of friction, pressure and wave drag to total drag as a function of velocity. "This study confirmed the reported reduction in total drag of modern total-body-coverage suits. In short, better informed swimsuit design could result in better performance," said **Joseph C. Mollendorf**, first author on the study and co-associate director of the Center for Research and Education in Special Environments. Mollendorf is a professor of mechanical and aerospace engineering and professor of physiology and biophysics in the School of Medicine and Biomedical Sciences.

Additional researchers on the study were Albert C. Termin II, head swimming coach; **Eric Oppenheim**, former graduate student in the Department of Mechanical and Aerospace Engineering, and **David Pendergast**, professor of physiology and biophysics, adjunct professor of mechanical and aerospace engineering, and co-associate director of the Center for Research and Education in Special Environments.

## Announcing Igniting Ideas 5

"Energy, Flows and Materials Processing" is now available as the fifth issue of the six-part Igniting Ideas series that highlights our school's research focus areas. The issue covers processes and devices that use combustion, turbulence and fluid dynamics to achieve advancements in fire suppression, industrial mixing process, and water and air quality. We've included findings on heat management and aging that contribute to more robust power distribution, computers, and electronics.

To access past, current and future issues as they become available, visit:

[www.eng.buffalo.edu/IgnitingIdeas/](http://www.eng.buffalo.edu/IgnitingIdeas/)

# DEVELOPMENT NEWS

## Letter from the Dean



Dear Alumni, Corporate Colleagues, Faculty, Staff and Friends,

I would like to thank all of our loyal donors; with your gifts we continue to develop excellence in research, education, and student life. Looking back over the past year, I am proud of what we have accomplished together and know that, with your help, we will improve in the future.

Behind the scenes raising the resources that are vital to our ongoing mission, SEAS has a dedicated development staff. I would like to take this opportunity to recognize the work of Tim Siderakis, SEAS assistant dean and senior director of development, Mike Madonia, director, and Donna Linenfelser, administrative assistant, to all of our extended community. If you haven't had a chance to meet them already or even if you have, please take this introduction and the following information as an invitation to become more involved in the growth of SEAS.

Have a great holiday season.

Sincerely,

Mark H. Karwan

Dean

## Understanding SEAS Advancement and Development

By Tim Siderakis and Mike Madonia



### Who we are...

Our advancement staff has two development officers, Tim and Mike, along with Donna, our administrative assistant. Mark Karwan, our dean, is very involved in our efforts and is a key figure in the development program for the school...and also has a nice jump shot. For those of you who know Mark, you can attest to his commitment and enthusiasm towards building stronger relationships with our alumni, friends and corporate partners.

While we are charged with leading the development effort, we have considerable help. We have a group of faculty and associate deans who help and support our efforts daily (they never say anything bad about us...at least not to our faces). Then there's UB's Central Advancement and Development Office. This group houses advancement services, alumni

relations, annual programs (the people who call you every fall and spring), corporate and foundation relations, development communications, donor relations and stewardship, the office of planned giving, and our prospect research team. As you can see, we get a lot of help. But, with over 160,000 alumni from the University at Buffalo (20,000 for SEAS), it's easy to see why such help is needed.

### Why we do what we do...

UB has only had a major development program for approximately 12 years. This is because the University did not perceive a need for a strong development presence in the early 80s when approximately 90% of our expenditures were provided by the State of New York. Now, the state provides approximately 30% of our overall level of funding. This is in part because our overall budget has approximately doubled due to increased research and our good start in philanthropic support which together has helped build today's stronger school. We appreciate this base-level support that is about on average with what other major public state universities receive from their states. An important note is that other major state universities have had development organizations for a long time and established a culture of giving. They've built large endowments that help them insulate themselves from rough budget years, they have a dedicated donor base that gives annually, and they graduate new alumni every year who are committed to their school to promote and support it philanthropically. We are now just starting to accomplish some of these things and we have a long way to go.

As you may know, UB completed its first comprehensive capital campaign last fall. We raised \$291 million and surpassed our goal of \$250 million. This was monumental in our development program because it marked the first REAL comprehensive campaign (where all decanal units, as well as athletics and the libraries participated) in the university's history. What we are especially proud of is that SEAS lead the way by raising over \$72 million towards the university goal. This was anchored by one very large software gift, but even without that gift, we hit our goal. What would one expect? We are engineering and applied sciences after all. Solving problems and accomplishing goals is what we do.

(continued on pg. 18)

# DELTA SOCIETY MEMBERS

## \$100,000 +

Richard E. and Patricia H. '79 Garman, East Aurora, NY      James W. McLernon '50, Bloomfield, MI

## \$50,000 –\$99,000

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

## \$10,000–\$49,999

Joseph P. and Bonnie D. Allen, Washington, DC  
Lydia Benenson, Williamsville, NY  
Joe Y. Chuang '72, Palos Verdes Peninsula, CA

Robert H. '51 and Catherine H. Goldsmith, Rancho Santa Fe, CA  
Wilson Greatbatch '57, Buffalo, NY  
Jeremy M. Jacobs Sr. '60, East Aurora, NY

Dennis P. Malone '54, Williamsville, NY  
Gerald A. Sterbutzel, deceased  
Henry E. '49 and Joan H. Stone, San Jose, CA  
John Zahorjan, Seattle, WA

## \$5,000–\$9,999

Charles A. '42 and Philomena '39 Bauda, Boynton Beach, FL

Scott D. Stevens '79 and Coleen Burke-Stevens '79, Scotia, NY

William C. Styslinger III '69, Acton, MA

## \$2,500–\$4,999

Russell L. '76 and Paula T. '78 Agrusa, Westwood, MA  
Robert T. and Ann S. Brady, East Aurora, NY  
Michael J. Cadigan '79, Brewster, NY

Robert Francis Hanley Jr. '90, Neenah, WI  
Krishna S. Kolluri '88, Saratoga, CA  
Michael G. Majdalany '76 and Regina Chen, San Francisco, CA

Kathleen Ratcliffe, Warner, NH  
Robert Tell & Rebecca S. Landy, Orchard Park, NY

## \$1,000–\$2,499

James A. Alcott '72, Glenmoore, PA  
Erich Bloch '52, Washington, DC  
Abhay V. Borkar '94, Dayton, NJ  
Lunkit F. Cho '75, Mc Lean, VA  
Stephen D. '98 and Lori Lynn Clark '98, Raleigh, NC  
Donald J. Donewirth '50, Orchard Park, NY  
Charles M. '38 and Bernice Y. '46 Fogel, Buffalo, NY  
Henry H. '51 and Rosalyn Frank, Beachwood, OH  
Ephraim '90 and Anna Marie '92 Garcia, Cortland, NY  
Dino Gomez '86, Flushing, NY  
Paul S. Goodman '92 and Martha M. Harris '90, Buffalo, NY  
William Grappone and Anna Stave, Oneonta, NY  
Brian P. Gregory '96, Columbia, MD

Norman M. Hayes '80, Sunnyvale, CA  
Scott and Rachele K. Jawan, Warrenton, VA  
Bharadwaj and Padma B. Jayaraman, East Amherst, NY  
Mark H. and Sabina L. Karwan, Buffalo, NY  
Rajeeva Lahri '82, Atherton, CA  
George C. and Grace S. Lee, East Amherst, NY  
Carl J. '78 and Maria C. '81 Lehman, Orchard Park, NY  
Steven and Michelle Lerner, Ridgefield, CT  
Ioannis S. Logiadis, Athens, Greece  
Thomas J. Lynch '85, East Amherst, NY  
Roderick G. MacKinnon '82, San Diego, CA  
Michael J. and Linda S. Madonia, Cheektowaga, NY  
Kenneth A. Manning '77, Buffalo, NY  
James F. May '49, East Aurora, NY  
Yen N. Nguyen '74, Canyon Country, CA

Leroy H. '61 and Maria Y. Runk, Orchard Lake, MI  
Michael E. and Joan F. Ryan, Williamsville, NY  
Naida Irizarry Shaw '77, Palos Verdes Estates, CA  
Winslow T. Shearman '64, Binghamton, NY  
Timoleon C. and Elizabeth M. '91 Siderakis, Clarence Center, NY  
Tsu-Teh (Larry) and Dorothy Tsai Soong, East Amherst, NY  
Steven E. Still '76, Oakton, VA  
Howard E. Strauss '54, Williamsville, NY  
Lawrence B. Tentor '90, Glen Allen, VA  
Maung Thet Tin '96, Malden, MA  
Carlos O. Viteri '78, Yorktown, VA  
James J. Whalen, Clarence, NY  
Kent Yen '93, Tewksbury, MA  
Donald E. Yost '51, Los Gatos, CA

*Delta Society membership based on annual gifts of \$1,000 or more, except for alumni who have graduated within the last ten years, who may give \$500 per year.*

## DEAN'S ASSOCIATES, \$500–\$999

Ronald R. Arnold '81, Center Valley, PA  
Christina L. Bloebaum, Getzville, NY  
Sean P. Cunningham '89, Belmont, CA  
Richard T. Evans '71, Swanton, OH  
George Byron Fisher '50, Clarence Center, NY  
Douglas J. Hall '52, Bloomfield Hills, MI

Patricia J. Heneghan-Gaglione '84, Ridgefield, CT  
Jaime S. Katz '82, Wilton, CT  
Douglas A. Lazz '92, Middletown, RI  
Kenneth G. Parker '82, Williamsville, NY  
Franklyn W. Roesch '49, Warrensville Heights, OH

Walter James Sarjeant, Williamsville, NY  
David T. Shaw, East Amherst, NY  
Barbara Ann Sherman '97, Grand Island, NY  
John T. St. Martin III '98, Rochester, NY  
Charles E. Wadsworth '79, Ellicott City, MD  
Maria Lucia Zabko, Woodbridge, VA

## Abbreviations Used in SEAS News

**CE**, Chemical Engineering

**CBE**, Chemical and Biological Engineering

**CSE**, Computer Science and Engineering

**CSEE**, Civil, Structural and Environmental Engineering

**CIE**, Civil

**EE**, Electrical Engineering

**IE**, Industrial Engineering

**MAE**, Mechanical and Aerospace Engineering

**AE**, Aerospace

**ME**, Mechanical

## SCHOLAR'S SOCIETY, \$250-\$499

Mark J. Azzaro '80, Bridgeton, NJ  
Eric Reed Baker '01, Charlotte, NC  
Erik Thomas Baker '97, Monroeville, PA  
Robert E. Barnes '84, Amherst, NY  
William H. Bazell '96, Findlay, OH  
Abraham Brouk '77, Pittsford, NY  
Robert D. Brown '68, Santa Fe, NM  
M. Joseph Browne '78, Orchard Park, NY  
John L. Burr '78, Kingston, NY  
James P. Calamita '94, Spencerport, NY  
Salina Yukyan Cheung '97, Edgewater, NJ  
Stephen C. Costello '75, Houston, TX  
Gary F. Dargush '87, Snyder, NY  
Hendrick D. Delcham '93, Queens Village, NY  
John M. DelVecchio '91, Orchard Park, NY  
Dileep G. Dhavale '72, Worcester, MA  
John Dicky '50, North Tonawanda, NY  
Brook Evans, Amherst, NY  
Daniel J. Feeney '69, Vail, CO  
Gerald J. Fitzpatrick '88, North Potomac, MD  
William C. Frank '01, Fort Wayne, IN  
Charles J. Gagliano '93, Columbus, OH  
Exequiel E. Garcia '97, East Elmhurst, NY  
John A. Gerlach '75, Goshen, NY  
Albert J. Gerritz '50, Pittsford, NY  
Michael P. Girard '90, Portland, OR  
Robert E. Grace '63, Fairport, NY

M. Amine Hajji '73, San Jose, CA  
Susan M. Haller '95, Kenosha, WI  
Robert G. Harrison '83, Jericho, NY  
Steven G. Hayes '93, Orlando, FL  
Gary L. Innes '66, Livonia, MI  
Daniel P. Kaegebein '62, Depew, NY  
Matthew B. Kahn '98, Somerville, MA  
Sung Mo '72 and Myoung A. Kang, Santa Cruz, CA  
Bronislaus W. Kopra Jr. '66, Mission Viejo, CA  
Lidia P. Kostyniuk '75, Brighton, MI  
Leslie C. Kun '70, Williamsville, NY  
John Kyriazis '77, Trabuco Canyon, CA  
Gary P. LaBelle '81, Harrisburg, PA  
Roger C. Larson '76, Santee, CA  
John E. '89 and Patrizia Latvala, Grand Island, NY  
Gerald W. LaWall '54, Rohrerstown, MD  
Gina J. Lee-Glauser '88 and Mark N. Glauser '87,  
Manlius, NY  
Jonq T. Liu '75, Harrisburg, PA  
Narasimha R. Mannur '93, Gaithersburg, MD  
James M. McGrath '91, Exton, PA  
William M. McKeon '98, Lancaster, CA  
David C. McLaughlin '74, Kenmore, NY  
Todd Mendell '75, Sacramento, CA  
Lebone T. Moeti '82, Decatur, GA  
William D. Morrison '90, Hamburg, NY  
Pradeep M. Nagaraj '01, San Diego, CA

Pramod J. Nandapurkar '86, Plainsboro, NJ  
Frank Notaro '67, Amherst, NY  
Frank J. Notaro '85, Chicago, IL  
Charles B. Obosu '76, Oklahoma City, OK  
Michael C. Orlovsky '85, Baltimore, MD  
Bennett M. Ortiz '96, Miami, FL  
Thomas J. Owens '77, Tucson, AZ  
Dimitris A. Pados and Stella N. Batalama, East Amherst, NY  
Robert P. Palatnick '80, Cold Springs Harbor, NY  
Lisa Carrie Pawlak '97, Raleigh, NC  
Robert M. '83 and Andrea A. Rosten, Harrisburg, PA  
Martin Sanborn '96, Glenellyn, IL  
Albert E. Seames '53, Tucson, AZ  
Louis P. Sileo '67, Liverpool, NY  
David L. Spacone '78, Lewiston, NY  
Robert Spina '96, Winchester, MA  
John P. Stopher '94, Rockville, MD  
Matthew S. Szkotak '83, Boothwyn, PA  
John S. '86 and Lucinda L. '87 Tashman, Niwot, CO  
Douglas P. Taylor '71, North Tonawanda, NY  
Hai-Lung Tsai '80, Rolla, MO  
Michael J. Tuman '99, Albany, NY  
Alexander W. Tzetzio '96, Bethpage, NY  
William C. Washington '93, Baldwin, NY  
William L. Winstrom '70, Andover, NJ  
Jeffrey Y. Wong '84, Norwood, NJ

## Century Club, \$100-\$249

Robert G. Adams '66, Boston, MA  
Pavankumar R. Aduri '01, Ames, IA  
Akber J. Afridi '83, New York, NY  
John D. Albertson '85, Chapel Hill, NC  
Michael K. Alexander '78, Houston, TX  
Paschalis Alexandridis, East Amherst, NY  
Parviz D. Ali '92, Buffalo Grove, IL  
John P. Allen '81, Stroudsburg, PA  
David Lee Anderson '94 and Marca J. Lam-Anderson '94,  
White Plains, NY  
Wayne A. Anderson '70, Eden, NY  
Lisa A. Andruscavage '78, Roanoke, VA  
Anonymous Friends Gifts  
David J. Baer Jr. '80, Glenwood, NY  
Jeffrey J. Baker '83, Burnt Hills, NY  
Michael A. Balduzzi '81, Westmoreland, NH  
Eric C. Banas '84, Wheatfield, NY  
Jennifer Ann Barnes '95, North Tonawanda, NY  
Melinda J. Bauerlein '00, West Seneca, NY  
Brian L. Bell '82, Niagara Falls, NY  
Edward R. Belmore '73, Albany, NY  
Lewis A. Bernstein '96, Camillus, NY  
Ronald J. Blaszk '79, Syracuse, NY  
Guy T. Bobersky '78, Latham, NY  
Edward T. Bochynski '88, Miamisburg, OH  
Kalyani Bogineni '93, Hillsborough, NJ  
August Bonanducci '80, Jenkintown, PA  
Michael E. Bordonaro '85, Towaco, NJ  
Tami A. Boss '81, Kingston, PA  
Richard J. Boy '66, Rochester, NY  
Dennis P. Brady '02, White Plains, NY  
James J. Briggs '74, Rochester, NY  
Kraig R. Broecker '83, Ashburn, VA  
William R. Brownlie '76, La Verne, CA  
Michael D. Brunner '84, Seattle, WA  
Thaddeus F. Bryzinski '50, North Tonawanda, NY  
Jeffrey S. Buell '84, Huntingdon Valley, PA  
Paul R. Calabrese '72, Eden, NY  
Scott Keith '79 and Valerie J. '79 Campbell, Rochester, NY  
Van P. Carey '81, Albany, CA  
Thomas L. Casselman '82, Churchville, NY  
Bruce V. Caughell '65, Concord, NC  
Frederick M. Champion '75, Lansdale, PA  
Alvin Ken Chan '84, Framingham, MA  
Benson Chan '81 and On Chung '83, Vestal, NY  
Robert J. Chant '85, Highland Park, NJ  
Chin-Tien Chen '82, Sudbury, MA  
Lawrence C. Chen '87, San Jose, CA

Yue Quan Chen '98, Brooklyn, NY  
Ubaldo W. Cheung '87, New Hyde Park, NY  
Calvin C. Chien '74, Newark, DE  
Padmavati Chitrapu '89, Sterling, VA  
Mihwa Choi '01, Marietta, GA  
Kenneth A. Cichocki '77, Roseville, CA  
Thomas J. Cici '52, Evansville, IN  
Michael J. Cirrincione '79, Diamond Bar, CA  
Michael P. Clunie '72, Orchard Park, NY  
Donald A. Coates '84, Canton, OH  
Kenneth H. Collins '79, Kenmore, NY  
Bruce P. Connors '86, Lakewood, CO  
Francis L. Conte '74, Swampscott, MA  
Kenneth J. Crawford '78, West Chester, PA  
Andrew M. Cummings '85, Jacksonville, FL  
Andrew G. Cushing '97, Amherst, NY  
Gerald B. Dahl '73, Baldwinville, NY  
Richard Dahler '50, Farmington Hills, MI  
Hemant W. Dandekar '91, Lake Villa, IL  
Daniel D'Angelo '83, Clifton Park, NY  
Alexander Lee Darian '97, Huntington Station, NY  
Michael W. Denzel '84, Cupertino, CA  
John T. DeVore '91, Pinckney, MI  
Anthony M. DiFilippo '01, Hicksville, NY  
Albert Dishner '79, Bedford, NY  
Arthur G. Dohrman '76, Huntsville, AL  
Thomas Arthur Dougan '95  
David S. Douglas '80, Waterford, CT  
Walter P. Drabinski '72, Summerland Key, FL  
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John F. Drennen Jr. '76, Windsor, CT  
Donald J. Duquette '53, North Tonawanda, NY  
Jens Egerer '97, Munich, Germany  
Sasidhar Eranki '81, East Amherst, NY  
Carmen Fabiilli '83, Sylvania, OH  
Timothy J. Fahey '71, Utica, NY  
Daniel K. Faulhaber '86, Lancaster, NY  
Richard A. Ferraro '80, Washington, DC  
Fernando M. Ferreira '93, Clifton Park, NY  
Edward B. Fisher '67, Snyder, NY  
Kris L. Fisher '01, Silver Springs, NY  
David M. Ford '91, College Station, TX  
Brian C. Freier '81, Lancaster, NY  
Gerard A. Fritz '88, Buffalo, NY  
Christine A. Frysz '95, Marriottsville, MD  
Jorge E. '89 and Norma L. Hernandez de Gatica '96,  
Lakewood, OH  
Biju George '00, Beaverton, OR

Jill H. Gettys '82, Flemington, NJ  
Dominic A. Giannangeli '79, Lincoln Univ, PA  
Gary M. Gilbert '74, Minoa, NY  
Jeremy L. Gilbert '81, Fayetteville, NY  
Rajiv M. Ginde '89, Basking Ridge, NJ  
James E. Glatly '76, Houston, TX  
David Gerard Glista '87, Durham, NH  
Peter V. Glynn '82, Davidsonville, MD  
Owen J. and Marianne '93 Golden, Austin, TX  
Walter O. Gordon '93, Snyder, NY  
Stephen L. Graziano, Manlius, NY  
Martin G. Green '75, Oxford, MI  
Michael Green '82, Radnor, PA  
Edward W. Grenzig '78, Nesconset, NY  
Henry L. Grohman '97, Wappingers Falls, NY  
Steven E. Gross '72, Newtown, PA  
Richard S. Guido '80, Gibsonia, PA  
James H. Guildford '79, West Palm Beach, FL  
Yi Guo '95, Herndon, VA  
Linda Hall-Bovino, Kenmore, NY  
Robert M. Happ '85, Marietta, GA  
George M. Hardy '58, Buffalo, NY  
James E. Heiman '61, Pinehurst, NC  
Robert G. '69 and Marilyn F. '64 Helenbrook, Grand Island, NY  
Herbert and Charlene A. Henken, Newton, MA  
Roger C. Hennesen '70, Getzville, NY  
Gary R. Henniger '80, Wayne, NJ  
Robert A. Hiney '69, Croton On Hudson, NY  
Lawrence E. Hochreiter '63, State College, PA  
Leonard F. Hoffman Jr. '60, Circleville, OH  
Dorothy L. Holmes '84, Penfield, NY  
John K. Howell '71, Tonawanda, NY  
Min-Hsiung Hu '73, Murrysville, PA  
David K. Humphrey '67, Webster, NY  
Martin C. Hutkin '75, Woodside, NY  
Edward S. Hwang '97, Williston, VT  
Gerard W. '72 and Judith B. '71 Ittug, Washington, DC  
Robert L. Jacoby '80, Spring, TX  
David L. Jayne '89, Arlington, VA  
Thomas V. Johnson '97, Burlington, MA  
Dhananjay S. Joshi '03, Germantown, MD  
George H. Kam '69, deceased  
Kevin E. Kane '87, Marietta, GA  
Steven J. Kargatis '68, Hampstead, NH  
Thomas S. Katra '68, Fayetteville, NY  
Henry J. Kazimor '50, Victor, NY

# CORPORATIONS, FOUNDATIONS, AND ORGANIZATIONS

## \$50,000–\$99,999

American Chemical Society, Buffalo, NY  
Earthquake Protection Systems, Inc., Vallejo, CA  
Johnson & Johnson, New Brunswick, NJ  
Moog, Inc., East Aurora, NY  
MTS Systems Corp., Eden Prairie, MN  
Niagara Mohawk, a National Grid Company, Syracuse, NY  
Praxair, Incorporated, Danbury, CT

## \$10,000–\$49,999

Applied Sciences Group, Inc., Buffalo, NY  
ATTO Technology Inc., Amherst, NY  
Community Foundation for Greater Buffalo, Buffalo, NY  
GE Fund, Fairfield, CT  
International Business Machines Corporation, Endicott, NY  
Nokia Research Center, Burlington, MA  
Osmose Inc., Buffalo, NY  
Seismic Shock Control Systems Inc., Arlington, WA  
TX RX Systems, Inc., Angola, NY  
Xerox Foundation, Stamford, CT

## \$5,000–\$9,999

E&WG Foundation, Akron, NY  
ExxonMobil Foundation, Princeton, NJ  
John W. Danforth Company, Tonawanda, NY  
Kao Corporation, Tokyo, Japan  
Motorola Foundation, Schaumburg, IL

## \$2,500–\$4,999

American Lung Association of New York State, Albany, NY  
Rochester MicroSystems, Inc., Rochester, NY  
Technical Societies Council of the Niagara Frontier, Buffalo, NY  
Veridian Information Systems, Fairfax, VA

## \$1,000–\$2,499

Blasland, Bouck & Lee, Inc., Syracuse, NY  
EMC Corporation, Amherst, NY  
IBM International Foundation, Armonk, NY  
IMS Gift Program for Education, Allentown, PA  
Kimberly-Clark Foundation, Inc., Dallas, TX  
Korean Society of Steel Construction  
Pro Engineering Examination Course, Buffalo, NY

## \$500–\$999

David L. Babson and Company, Cambridge, MA  
General Mills, Inc., Buffalo, NY  
General Motors Foundation, Mill Valley, CA  
Inter Tech Industries, Williamsville, NY  
Morgan Stanley Foundation, New York, NY  
Raytheon Charitable Gift Fund, Princeton, NJ  
Scholarship Foundation, Cherry Hill, NJ  
Verizon Foundation, New York, NY

## \$250–\$499

Bristol-Myers Squibb Company, Buffalo, NY  
Cadence Design Systems, Inc., Princeton, NJ  
Daimler Chrysler Corporation Fund, Auburn Hills, MI  
FactSet Research Systems Inc., Greenwich, CT  
Ford Motor Company Fund, Dearborn, MI  
Intel Foundation, Hillsboro, OR  
Mattel Children's Foundation, El Segundo, CA  
National Society of Black Engineers, Alexandria, VA  
Pearson Education, Upper Saddle River, NJ  
Square D Foundation, Palatine, IL  
Superior Technical Resources Inc., Williamsville, NY

## \$100–\$249

Acris International Corporation, Amherst, NY  
Alcoa Foundation, Pittsburgh, PA  
AT&T Foundation, New York, NY  
Azerty Incorporated, Orchard Park, NY  
BD Matching Gift Program, Princeton, NJ  
The Boeing Company, Seattle, WA  
BWXT Y-12. L.L.C., Oak Ridge, TN  
Con Edison, New York, NY  
ConocoPhillips Corporation, Bartlesville, OK  
Harris Foundation, Melbourne, FL  
Household International, Incorporated, Prospect Heights, IL  
IDEX Corporation, Northbrook, IL  
International Paper Company Foundation, Stamford, CT  
Kennametal Foundation, Lathrobe, PA  
Marathon Oil Foundation, Inc., Findlay, OH  
Merrill Lynch & Co. Foundation, Inc., New York, NY  
Michael Baker Corporation, Moon Township, PA  
Microsoft Corporation, Berkley Heights, NJ  
MMC Matching Gifts to Education Program, Princeton, NJ  
Northrop Grumman Foundation, Los Angeles, CA  
Pfizer Foundation, Princeton, NJ  
Public Service Electric & Gas Company, Newark, NJ  
The Hershey Foods Corporation Fund, Hershey, PA  
Walt Disney Company Foundation, Burbank, CA  
Xerox Corporation U.S.A., Webster, NY

*The listings on these pages represent those who made contributions from July 1, 2003 to June 30, 2004. While all gifts are appreciated, space only allows us to begin the list with donors who gave \$100.00 or more. We have made an effort to ensure that the listings are both complete and accurate. We ask that you contact Tim Siderakis or Mike Madonia with any questions you may have. They can be reached at 716-645-2133 or e-mailed at [tsiderak@buffalo.edu](mailto:tsiderak@buffalo.edu) or [mmadonia@buffalo.edu](mailto:mmadonia@buffalo.edu).*

## Century Club, \$100–\$249 (continued)

Timothy J. Kelleher '78, Ashburn, VA  
Kimberly C. Kern '94, Cresskill, NJ  
Hanif G. Khalak '94, Montgomery Village, MD  
Kathryn C. Kien '00, Cincinnati, OH  
Paul C. Kim '87, Novi, MI  
Richard J. Kisloski '69, Haydenville, MA  
Jan A. Klapetzky '70, Williamson, NY  
Artis Klavins '83, New York, NY  
Theresa A. Klubek, Lackawanna, NY  
Gerald M. Knapp '89, Baton Rouge, LA  
Paul C. Knibloe '61, Hamburg, NY  
Brenda Ball Knight '92, Columbia, MD  
Tin Che Ko '82, New York, NY  
James S. Kockler '97, Prattville, AL  
James P. Kois '63, Knoxville, TN  
Andrew R. Komarek '85, Fairport, NY  
Joseph P. Kopchik '83, Littleton, CO  
Richard D. Kosmerl '72, Arcade, NY  
John M. Kravec '68, Manhattan Beach, CA  
James W. Kroder '85, Ellicott City, MD  
John J. Lanahan '80, Lenoir City, TN  
Joseph S. Laraiso '74, Lancaster, NY  
Jason R. Lasker '03, Lancaster, NY

Fai Lau '00, Bronx, NY  
Dar Shyang Lee '95, Union City, CA  
John J. Lee '76, Middle Village, NY  
Jack M. Leo '74, Williamsville, NY  
Jing Li '96, San Jose, CA  
Daan Liang '01, Woodside, NY  
Nan Jae Lin '75, Burlington, MA  
Kevin C. Lindquist '98, Albany, CA  
Ronald F. Lochock Jr. '88, Ypsilanti, MI  
John A. Lordi '68, Williamsville, NY  
Gerard T. Loughran '81, Dix Hills, NY  
Patrick Garvie MacDiarmid Jr. '93, Williamsville, NY  
Roger M. Madigan '89, Irwin, PA  
Mark E. Mahlmeister '82, Unadilla, NY  
Ronald J. Maj '82, Owings Mills, MD  
Ernst K. H. Marburg '72, Abingdon, VA  
Jeffrey K. Marshall '85, Dansville, NY  
Richard W. Martin '92, Crofton, MD  
Alton A. '50 and Anna Massey  
Alok Mathur '74, Westport, CT  
Chris J. Maurath '81, Chicago, IL  
Roger W. Mayne '63, Williamsville, NY  
Paul E. McAnany '77, Hornell, NY

Norman R. McCombs '68, Tonawanda, NY  
Brian J. McGee '96, San Jose, CA  
Martin T. McGrath Jr. '85, Palm Bay, FL  
James A. McMillan '94, Bar Harbor, ME  
Kelly R. Meredith '01, Owego, NY  
Dean C. Millar, Williamsville, NY  
Gregory Minnick '81, Toms River, NJ  
David C. Mis '78  
Vladimir Mitin, Buffalo, NY  
Theodore Moran '86, East Amherst, NY  
Tracy A. Morgan '89, Towson, MD  
Paul R. Motyka '68, Acton, MA  
Gregory E. Munk '79, Framingham, MA  
Christopher Gerard Murphy '97, Hinesburg, VT  
M. Laurie Murphy '74, Topanga, CA  
Cathleen F. Muscarella, Grand Island, NY  
Richard S. Muscato '86, Waldorf, MD  
Ramesh C. Nagabushnam '94, Heathrow, FL  
Kristina W. Nancollas '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



## Century Club, \$100–\$249 (continued)

Bernard T. Neu '79, Lancaster, NY  
 George W. Neuner '65, Winchester, MA  
 Huy X. Nguyen '77, Midlothian, VA  
 Craig D. Norberg '77, Beacon, NY  
 George H. Norton '48, Salt Lake City, UT  
 Margaret S. Odoi '99, Simpsonville, SC  
 Orland H. Oswald '51, Buffalo, NY  
 Thomas A. Pagliuco '77, East Brunswick, NJ  
 Prasad M. Pandit '96, Getzville, NY  
 Michael N. Parasch '92, Penfield, NY  
 Bipin S. Parekh '77, Chelmsford, MA  
 Kevin J. Parker '76, Rochester, NY  
 Howard E. Parks Jr. '64, Phoenix, AZ  
 Richard K. Patterson Jr. '71, Richmond, VT  
 Craig W. Pawlewski '90, East Amherst, NY  
 Earl T. Pearson '55, Tucson, AZ  
 David L. Peet '80, Wilmington, DE  
 Robert A. Peters '03, Amherst, NY  
 Daniel B. Phillips '79, Rochester, NY  
 Dino Piccione '73, Dumfries, VA  
 Ronald J. Piracci '69, Clifton Park, NY  
 James M. Pitarresi '86, Vestal, NY  
 Kevin J. Potempa '92, Fairport, NY  
 Guru Prasad '00, Karnataka, India  
 Alan J. Rabideau '86, Buffalo, NY  
 Subramani Rajaram '80, Flanders, NJ  
 William J. Rapaport '84, East Amherst, NY  
 Judith A. Rath '88, Milwaukee, WI  
 David J. Recktenwalt '96, West Seneca, NY  
 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  
 Timothy Allen '80 and Karen A. '80 Rock, Howell, NJ  
 John W. Rodell '72, Littleton, CO

Patrick J. Ross '86, Houston, TX  
 Robyn H. Rothstein '94, New York, NY  
 Thomas G. Ruby '83, Commack, NY  
 Ralph Rugen '88, Port Jefferson Station, NY  
 Kevin T. Russell '97, Syracuse, NY  
 James D. Ryan '71, Schenectady, NY  
 George J. Sabini '95, Havertown, PA  
 Mark A. Santoro '79, Pasadena, CA  
 Gregory J. Schaffer '93, Christiana, TN  
 Herbert R. Schaub '82, East Amherst, NY  
 Peter J. Schlaue '81, Grand Island, NY  
 James Scinta '78, Bartlesville, OK  
 Catherine J. Scott '84, Cornwall-on-Hudson, NY  
 Stuart C. Shapiro, Williamsville, NY  
 John E. Sherwood '73, Knoxville, TN  
 Edward Y. Sing '64, Bloomfield Hills, MI  
 Luis Ramon Solano '92, Prospect Heights, IL  
 Jason L. Sollecito '01, Kenmore, NY  
 Gary S. Sovinsky '84, Kings Mills, OH  
 Laurie C. Spiegel '77, Florham Park, NJ  
 Andrew T. '60 and Carol Spilbury, Torrance, CA  
 Narendra R. Srivatsa '87, Ramsey, NJ  
 Donald L. Starkey '67, Beaufort, SC  
 William N. Sullivan '68, Albuquerque, NM  
 Bruce C. Sutter '96, Fiskdale, MA  
 Peter W. Szustak '98, Londonderry, NH  
 Thomas Tagliente Jr. '71, West Caldwell, NJ  
 John C. Tang '81, Phoenix, AZ  
 Keith R. Tompkins '65, Chesterland, OH  
 Donald E. Tranquillo '92, Mamaroneck, NY  
 Michael P. Treanor '89, Scotia, NY  
 Philip A. Treventi '72, Murray Hill, NJ  
 Christopher J. Trimper, Amherst, NY  
 Dorian L. Truong '88, Westborough, MA  
 Christopher J. Truskey '00, Amherst, NY

Steven Tsengas '60, Mentor, OH  
 Eric J. Tyler '80, Pittsford, NY  
 Thomas J. Uhl '84, Vestal, NY  
 Scott A. Underhill '93, Rexford, NY  
 Thaveesinn Vasavakul '93, Scotts Valley, CA  
 John R. Vasko Jr. '72, San Diego, CA  
 Venkat K. Venkataraman '83, Morgantown, WV  
 Richard A. Voit '92, Amherst, NY  
 Manohar M. Wagle '81, Williamsville, NY  
 Richard P. Walker '87, Houston, TX  
 Eugene Yeou-Geng Wang '74, Sugarland, TX  
 Robert C. Wang '88, Redmond, WA  
 Daniel L. Warren '92, White Plains, NY  
 Norman J. Warren '59, North Tonawanda, NY  
 Chu Ryang Wie, Williamsville, NY  
 Graham D. Wightman '55, Corning, NY  
 Richard A. Williams '94, Allentown, PA  
 Gordon J. Wilson '49, Hamburg, NY  
 David B. Winans III '74, Simpsonville, SC  
 Robert Bruce Winslow '92, Allen, TX  
 William J. Wirth P.E. '64, East Aurora, NY  
 Darold C. Wobshell '66, Williamsville, NY  
 Michael F. Wohlman '99, Mountain View, CA  
 Karl A. Wolf '50, Norman, OK  
 Mark B. Wolfe '82, Miami Springs, FL  
 Mary Ellen Wolinski '80, Myrtle Beach, SC  
 Sailai Wong '87, Sudbury, MA  
 Gary W. Wood '73, Loudonville, NY  
 Scott H. Woodward '01, Akron, NY  
 Lin Yang '00, Fort Lee, NJ  
 Peter Sunway Yao '69, El Segundo, CA  
 Randall T. Yoshida '88, Belleville, MI  
 Edward H. Zander '72, Indian Shores, FL  
 Harvy Zapata '01, Midlothian, VA

### Ruckenstein (cont. from pg. 1)

Widely seen as one of the world's most influential chemical engineers, Ruckenstein is the first UB professor to receive the coveted National Medal of Science, considered the US equivalent to the Nobel Prize.

Ruckenstein conducts both theoretical and experimental research that not only has changed scientists' understanding of the fundamental phenomena of chemical processes, but also has led to the development of enhanced research methods and new materials. He has made groundbreaking contributions in areas including transport phenomena, the stability of nano-sized liquid and solid films and thermodynamics of complex systems. He pioneered the theoretical and experimental treatment of the stability of supported metal catalysts, developed the first kinetic theory of nucleation, theories for colloidal forces and theories in molecular thermodynamics. He also invented new synthetic methods for preparing polymeric membranes and polymeric catalytic particles. He has published more than 800 papers.

### Simpson (cont. from pg. 1)

the enterprise that has always devoted itself to the creation, transmission and application of knowledge—for leadership and expertise."

He also pointed out that the economic impact of the research university upon its regional communities will increase significantly during this century. "All in all, the modern public research university is critically engaging with its communities—regional, statewide, national and global—in new ways that are serving to redefine its intellectual, cultural and economic impact for the 21st century," he said.

### NEES (cont. from pg. 1)



Photo by T. Mineo

#### Demonstrating the power of NEES' new shake tables.

shake tables which can easily be repositioned within the lab, for real-time seismic testing of structures up to 120 feet in length and 30 feet in height. The shake tables' versatility will enable earthquake engineers to conduct real-time dynamic hybrid testing—a form of testing being pioneered by UB researchers that sets new standards in earthquake-engineering research. This testing combines shake-table testing of portions of a structure with real-time computer simulations of the remainder of the structure. It will provide researchers with a more complete picture of how powerful earthquakes affect very large structures, including bridges and buildings, without having to test an entire structure. The UB NEES Principal Investigators are CSEE Professors **Andrei Reinhorn** and **Michel Bruneau**; Co-Principal Investigators are CSEE Professors **Michael Constantinou**, **Andrew Whittaker**, and **Sabayanagam Thevanayagam**.

Studies at the UB NEES facility will focus primarily on how very large structures behave during earthquakes, providing researchers with the first opportunity to obtain very accurate results on how monumental buildings, bridges and other structures will react to all kinds of seismic activity. UB researchers will also study ways to make structures more resistant to terrorist attack.



Photo by T. Mineo

#### NEES Grand Opening assembly.

(cont. from pg. 13)

### What we do...

One of the best parts of our job is traveling around the country, often with the dean, meeting our alumni and friends to build relationships that help our school. As you can imagine, our alumni have done some remarkable things and have achieved very distinguished careers. Meeting these individuals is truly a thrill for us. These alumni can be instrumental in the future of our school. The bottom line is we look to the generosity of our alumni and friends to help address student, faculty, and school needs.

In order to grow, the university requires an increase in individual private support, government and corporate research grants and corporate philanthropy. We are committed to building the right relationships to make this happen.

### Currently...

Campaigns come and go, but our fund raising never stops. We continue to build our Delta Society (our \$1000 annual gift club), which is now over 70 individual members with another 40 corporate members. This group has shown consistent growth and retention over the past nine years since its inception when it began with 13 members. Another impressive fact about this group is that 25% of them are "Delta Golds," giving over \$5,000 annually. This money, often designated to the dean for use at his discretion, is allocated towards student services, faculty development, or equipment costs that are required to match corporate or government grants. While these are only some of the possibilities, you can see the importance of these discretionary dollars to SEAS.

Our number one goal is increased participation from our alumni. Here are some statistics from our last annual fund drive that show that we are moving toward our goal.

- 72% of those donating \$1-\$99 from the year before renewed again this year.
- 77% of those donating \$100 and above from the year before renewed again this year.
- 23% of all pledges were over the \$100 level.
- The average pledge amount grew from \$66 to \$77.
- Approximately 30% of all pledges came from those who never made a donation or had not done so for at least 5 years.
- The average pledge received from those that are friends (non alumni) including parents of students was \$106.



### • Average pledges by years of graduation:

1995-1999	\$91.59	1965-1969	\$73.67
1980-1984	\$86.48	2000-2004	\$69.84
1960-1964	\$79.11	1990-1994	\$68.33
1970-1974	\$76.90	1975-1979	\$68.10
1985-1989	\$76.87	1955-1959	\$64.08
1945-1949	\$75.57	1950-1964	\$60.91

What is most encouraging to us is that we continue to build our donor base. Also, one can see that a culture of giving is starting to emerge. Some of our youngest alumni are our largest supporters of the annual fund. This is not uncommon for a young program like ours. It takes time for the program and culture to mature where our alumni, like those at many other major public institutions, consider their alma mater a regular part of their annual philanthropic support.

### What else...

In addition to building the overall donor base of annual supporters, we focus much of our attention on a group of key alumni and friends that we work with on "major gifts." Major gifts are transformational gifts to the school, funding endowed chairs, supporting scholarships and fellowships, enabling major lab rehabs, naming opportunities, sponsoring a certain area of research focus, etc. Unlike annual gifts, major gifts tend to be designated to a certain area. We work with our donors to find the right area for them. Now don't get us wrong — if someone wants to give us a million dollars unrestricted to the school, we'll take it, but for the most part, we look to connect donors with an area within the school where we could use the support.



**New Donor Wall commemorating the successful Campaign for UB: Generation to Generation with SEAS Donor representation.**

### Dean Mark Karwan presents the James W. and Nancy A. McLernon Superior Student Awards at the Annual SEAS Scholarship Reception.

Major gifts range from \$25,000 to multi-million dollar investments. They can be given in one lump sum or over a multi-year period. Many are immediate impact cash gifts; others are part of estate plans or bequest expectancies; while others are a spin off of an investment. We also get major gifts of equipment ("gifts in kind"). Sometimes alumni are key people in getting major gift support from their companies. We try to establish a giving scenario that works best for each donor — to accomplish the goals of both the donor and the school.

### Conclusion...

We are committed to building and fostering philanthropic involvement by providing opportunities for meaningful and enduring engagement between SEAS' supporters and communities. Our doors are always open to our alumni and friends. Please feel free to communicate with us at any time and through any means. You can call us toll free at 1-888-205-2609 and ask for Tim or Mike. Say hi to Donna when you call, she'll usually be the one answering the phone. If you prefer email, reach us at (Tim) [tsiderak@buffalo.edu](mailto:tsiderak@buffalo.edu) or (Mike) [mmadonia@buffalo.edu](mailto:mmadonia@buffalo.edu). We do hope you'll be in touch.

We all support noble causes with our philanthropic gifts. We trust that you will consider the School of Engineering and Applied Sciences a worthy cause for some of that support.

We list our donors from July 1, 2003 to June 30, 2004 with gratitude on adjacent pages. While every gift is appreciated, space only allows us to begin the list with donors who gave \$100 or more. We have made every effort to ensure that the listings are accurate and complete.

We wish you and your families our best during this holiday season and throughout the New Year.

*Tim and Mike*

# Dean's Council Fall Meeting

With a lively two-day series of meetings, the Dean's Council convened its fall meeting in Buffalo. Council Chairman **Kenneth Manning**, BS EngSci '72, directed the proceedings, which began with a morning principally focused on students. The council heard from **Bill Wild**, BS IE '83, MS '87, director of Student Excellence Initiatives, and then devoted a session to meeting with sophomore engineering students from several disciplines.



Council members Paul McNamara and Russel Agrusa talk with sophomore engineers.

discussing recently established companies that have grown out of their research—**Christina Bloebaum**, MAE professor for Competitive Product and Process Design and director of New York State Center for Design and Industrial Innovation, **Rohini Srihari**, associate professor of CSE, on Cymfony, Inc., and **Sargur Srihari**, SUNY Distinguished Professor of CSE, on CedarTech.

Dinner gave the Dean's Council and WAG an opportunity to meet and hear from UB's new provost **Satish Tripathi**.



Council member Joseph Allen speaks with students.

The Dean's Council and SEAS invited the Washington Advisory Group (WAG), a well known national consultant, to comment on the school's strategic objectives. **Erich Bloch**, BS EE '52 and a director of WAG, lead the consulting team which met with the council and independently with a number of people over two days.

The afternoon focused on research with **Venu Govindaraju**, professor of CSE and director of the Center for Unified Biometrics and Sensors, addressing the council. Intellectual property was addressed by Robert Genco, interim vice president for research and director of the Office of Science, Technology and Economic Outreach. The afternoon was rounded out with faculty

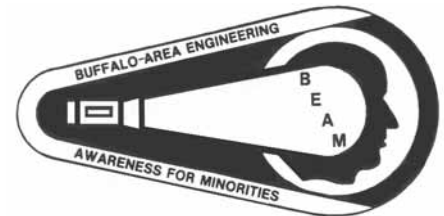


The Washington Advisory Group team from left to right: Linda Katehi, Erich Bloch, Duncan Moore, and Micki Leder.

Before delivering their recommendations on their second day of deliberation, the council was updated on the school's involvement in study-abroad programs by **D. Joseph Mook**, assistant dean and chair of MAE, who reported that SEAS ranks among the top four US sending and receiving institutions for exchanging engineering students through Global Engineering Education Exchange, which is the largest engineering student exchange organization of its type in the world.

Dean's Council members in attendance joining Manning included **Russel Agrusa**, BS EE '76, **Joseph Allen**, **Michael Cadigan**, BS ME '79, **Ephraim Garcia**, BS AE '85, MS '88, Ph.D. '90, **Rajeeva Lahri**, Ph.D. ECE '82, **Larry Peckham**, BS IE '69, **Paul McNamara**, and **Lee Runk**, BS IE '62.

## BEAM Buffalo-area Engineering Awareness for Minorities



## BEAM Senior Student Recognition & More



Ashly Rias

BEAM held its second annual Senior Student Recognition Dinner at Emerson Commons. The students of Emerson Culinary Arts Program served over 150 students and corporate supporters. Thirty-two BEAM high school students were honored for their outstanding high-school records and received their own business cards to hand out to the corporate members.

Ted Dougher, vice-president of Engineering and Supply Systems at Praxair, offered two scholarships to be presented to BEAM seniors who will be entering into an engineering curriculum in the fall. **Drexel Gidney**, SEAS senior academic advisor and director of Minority Engineering Programs, extended an invitation to the BEAM students to attend the UB Open House and have engineering students take them on a tour of the labs. Past BEAM scholarship winners **Garrett Cunningham** and **Brittany Fletcher**, junior and freshman UB engineering students, thanked BEAM for their introduction to the engineering profession and the encouragement and enrichment classes enabling them to succeed.



Evanette Veira



Da'von L. McCune

BEAM's Technical Advisors Kick-Off brought together companies that provide technical advisors to work after school with high-school students in BEAM Clubs. These enrichment activities are hands-on projects designed to incorporate mathematics and science principles related to engineering procedures.

Finally, ten minority high school students participated in the BEAM pre-collegiate summer program, a five-week curriculum coordinated by Gidney. SEAS students instructed the students in math enrichment, introduction to engineering, computing, and physics.

For information on BEAM and volunteer opportunities contact **Marilyn Helenbrook**, executive director BEAM 206 Fronczak Hall, 716/645-3066 or email [helenbrk@eng.buffalo.edu](mailto:helenbrk@eng.buffalo.edu)

# SEAS Calendar

**EASAA's SEAS at UB Basketball**, Saturday, February 12, Noon

**Math is Everywhere**, tba

**SEAS Scholarship Reception**, April 1

**UB and SEAS Preview Day**, Saturday, April 2

**CSE Distinguished Speaker David Farber on "The Impact of the Real All-Optical Networks on Future Computer/Software Systems,"** Friday, April 8, 330 Student Union, 3:30-4 p.m.

**Dean's Council Meeting**, April 21 & 22

**Order of the Engineer and EASAA Engineer/Applied Scientist of the Year**, tba

**SEAS Commencement**, Saturday, May 14



Getting a first taste of the SEAS community are smiling Freshmen (from left to right) Shajan Thomas, Matthew Hamlet, Amy Bird, Bonnie Bielec, Sharon Greenfield, and (front) Christina Yacoub.



Hot work grilling up dogs for the hungry crowds



EE Ph.D. students Shahrukh Khan and Nafess Kabir sit with Cathy Muscarella, EE Graduate Programs Secretary



## Student Welcome Picnic

The diversity of SEAS was on display at this year's Welcome Picnic. Freshmen, international students, graduate students, staff, and faculty all enjoyed grilled hot dogs and veggie burgers on a beautiful September day.



## 2004

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 **School of Engineering and Applied Sciences**  
University at Buffalo The State University of New York

External Affairs  
SEAS Dean's Office  
415 Bonner Hall  
University at Buffalo  
Buffalo, NY 14260

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