

**Two SEAS Faculty Honored at 2001 Convocation**

**Mayne Named Distinguished Teaching Professor**



**Roger Mayne**

Roger W. Mayne, professor of mechanical and aerospace engineering (MAE), was named a SUNY Distinguished Teaching Professor.

A distinguished professor is the highest faculty rank in the SUNY system,

a grade above full professorship. The title recognizes Mayne's outstanding teaching at the graduate, undergraduate and professional levels.

In his 31 years at UB, Mayne has been a leading voice in curriculum development. He has frequently been acknowledged for his dedication to students at all levels of instruction. In 1992, UB's Mechanical and Aerospace Engineering Graduate Student Association named him Educator of the Year, and last year, he received the SUNY Chancellor's Award for Excellence in Teaching.

*continued on page 5*

**Lewis Receives Chancellor's Award**

Kemper E. Lewis, assistant professor of mechanical and aerospace engineering (MAE), received a 2001 Chancellor's Award for Excellence in Teaching.

The Chancellor's Award for Excellence in Teaching honors those who consistently have demonstrated superb teaching at the undergraduate, graduate and/or professional level.

After earning two bachelor's degrees from Duke University and master's and doctoral degrees from the Georgia Institute of Technology, Lewis joined the



**Kemper Lewis**

MAE faculty in 1996. He is currently director of the Design of Open Engineering Systems (DOES) Research Lab, which promotes and advances the state-of-the-art in multidisciplinary design optimization and

*continued on page 5*

**Structural Engineers Visit Ground Zero, Examine Remaining Structures**

Ten days after the terrorist attacks on the twin towers, structural engineers from UB's Department of Civil, Structural and Environmental Engineering and the Multidisciplinary Center for

Earthquake Engineering Research traveled to ground zero as part of a project funded by the



**Remains of the steel frame of One World Trade Center**

National Science Foundation.

The team consists of George C. Lee, MCEER director and Samuel P. Capen Professor of Engineering at UB, Michel Bruneau, MCEER deputy director and UB professor of civil engineering, Andrei Reinhorn and Andrew Whittaker, both UB professors of civil engineering and MCEER investigators. The NSF grant will also support several graduate students.

*continued on page 3*

**What's Inside**

**Dean's Council**  
2

**Faculty Research**  
3-5

**Generation to Generation**  
6-10

**Student News**  
12

**Alumni News**  
13



**Weitz Named NYSCEEA Co-Op Student-of-the-Year**



**Lesley Weitz**

Lesley Weitz, a senior mechanical engineering student at UB, was honored as the 2001 Co-Op Student of the Year by the New York State Cooperative and Experiential Education Association (NYSCEEA).

Weitz has been a co-op student at General Motors Power Train (GMPT) in Tonawanda. There she has held positions as Test Engineer, Process Engineer and Manufacturing Supervisor. Weitz received outstanding performance ratings from her managers on each assignment.

To give just one example of Weitz's accomplishments at GMPT, she worked on a four-person team that increased the

*continued on page 15*

**Frandinis Honored as Engineers-of-the-Year**



The UB Engineering Alumni Association selected four members of the Frandinis Family—father Philip (PE, LS BS CIE '64), sons Frank (PE, BS CIE '73, MS CIE '74) and Joseph (PE, BS CIE '77), and daughter Rosanne (PE, BS CIE '81, MBA '83)—as the 2001 "Engineers-of-the-Year."

*for complete story, see page 14*

## SPIR Projects Recognized for Spurring Economic Growth

A SPIR (Strategic Partnership for Industrial Resurgence) project done at the UB Business Alliance received the 2001 Project of the Year Award from the National Association of Management and Technical Assistance Center for its work with Quebecor World Buffalo, Inc.

SEAS professors assisted Quebecor with a number of projects during the past year. Among other things, UB chemical and industrial engineering professors

- helped the company assess the efficiency of its layout and production scheduling system and made suggestions for improving them that ultimately allowed the company not only to retain but to increase jobs.
- conducted an ergonomic study to ensure the safety and well being of the operator as well as to improve the overall efficiency of the work process.
- investigated why some of the company's books were losing their covers in storage and provided it with a solution to this problem.

SEAS' SPIR program had remarkable success stimulating economic development in Western New York during the 2000-2001 fiscal year. Below are some of its accomplishments.

Faculty/staff major projects	121
Student projects	147
Grand Total - projects	268
Companies served by faculty/staff	90
Companies served by students	89
Grand total - companies served	159
Educational projects	17
Educational participants	297
Students involved	182
Jobs created	318
Jobs retained	1,312
Increased sales to companies	\$30,000,000
Federal dollars leveraged	\$38,543,931



Dean's Council members answer questions from engineering and applied sciences students



## 2001-2002 Dean's Council

The Dean's Council met for the thirteenth time in its history this Fall to discuss issues pertaining to the University Honors Program, undergraduate scholarship and graduate fellowship programs, and the overall state of the School of Engineering and Applied Sciences.

The Council welcomed new members Rick Goerner, Ramji L. Gupta, Jeremy Isenberg, John P. Stopher and Bill Styslinger.

Mark Karwan, dean of SEAS, reviewed the state of the school. He noted that UB placed in the top fifty of American Research Universities in a recent study at the University of Florida and that, overall, the quality of students, sponsored program activity and UB and SEAS rankings are all up.

One of the central issues of this year's meeting was how to attract and retain quality students at both the undergraduate and graduate levels.

Administrative director Josephine Capuana and academic director Clyde Herreid gave a description and history of the UB Honors Program, which began in the early '80s. Currently, 155 of the 810 honors students are in SEAS. The program's growth was one of the chief reasons that UB increased its average incoming SAT scores.

Michael Ryan, associate dean of undergraduate services, and Andres Soom, associate dean of research and graduate studies, reviewed SEAS scholarships for undergraduate and graduate students. Scholarships are important to attract and retain good students. Targeted gifts for this area are an important part of the current comprehensive campaign *Generation to Generation*.

Eliot Winer, associate director of the New York State Center for Engineering Design and Industrial Innovation, and Russ Miller, director of the Center for Computational Research, discussed how they have used the resources of their centers to help UB professors attract grants.

The group of professors that visited ground zero also did a presentation on their experience (see front page).

### Dean's Council Members 2001-2002

Joseph P. Allen, Ph.D.	Kenneth A. Manning (B.S. '74, J.D. '77)
Michael J. Cadigan (B.S. '79)	James W. McLernon (B.S. '50)
Ephraim Garcia, (Ph.D. '90)	Lawrence L. Peckham (B.S. '69, M.B.A. '74)
Rick Goerner (B.S. '70)	Frederick G. Pohland, Ph.D., P.E.
Robert H. Goldsmith (B.S. '51)	Hope Reed
Ramji L. Gupta (Ph.D. '74)	Lee Runk (B.S. '62)
Jeremy Isenberg, Ph.D.	John P. Stopher (B.S. '86, Ph.D. '94)
Krishna "Kittu" Kolluri (M.S. '88)	Bill Styslinger (B.S. '69)
Steven L. Lerner, Ph.D.	Hatim A. Tyabji (M.S. '69)
Stephen E. Lubniewski	
Hadi Makarechian (B.S. '72)	

## Windows on the World of Engineering: The View from the Top

Perhaps the highlight of this year's Dean's Council meeting was an open forum at which freshman and sophomore students had the opportunity to ask members of the Council questions about their interests and experiences. Deans Mark Karwan and Michael Ryan moderated the sessions.

According to Ryan, one of the primary benefits of the forum was that it introduced students to the wide array of career options in engineering and the applied sciences. It also helped

them understand that no one achieved his or her goals without moments of anxiety and hardship.

Among other subjects, students asked questions about the skills necessary to succeed in technical fields and the relevance of a classroom education to real world labor; the apprehensions and doubts that the Council members experienced during their education and early work experiences; and what kind of impact they feel that their work has had on the everyday world.

## SEAS Faculty Successful Attracting \$Million Plus Grants

Faculty and colleagues have had remarkable success over the past year in obtaining large grants to support their research. The following is a list of grants of \$1 million or more that were received in the six month period after March 1, 2001.

- ♦Creation of UB's Node in NSF's George E. Brown, Jr., Network for Earthquake Engineering Simulation (NEES), \$10.5 Million Grants from NSF, \$6 Million from SUNY Construction Fund (Department of Civil, Structural and Environmental Engineering)
- ♦Information Processing for Integrated Observation and Simulation Based Risk Management of Geophysical Mass Flows, \$1.9 Million Grant from NSF (Department of Mechanical and Aerospace Engineering (MAE), New York State Center for Engineering Design and Industrial Innovation and The Center for Computational Research (CCR))
- ♦Biophotonics Materials and Applications, National Science Foundation Integrated Graduate Education, Research and Training (IGERT) Program, \$2.7 Million Grant from NSF

continued from front page

### Engineers Visit Ground Zero

The team visited ground zero to examine the buildings around the World Trade Center that survived the blast.

"Our immediate hope is that we can develop a better understanding as to why those buildings remain standing," said Bruneau, "while our long-term goal is to see whether earthquake engineering technologies can be married to existing technologies to achieve enhanced performance of buildings in the event of terrorist attacks."

The visit to the area revealed some surprises. For example, the floor framing systems in one of the adjacent buildings was quite rugged, allowing floors that were pierced by tons of falling debris to remain intact.

"Highly redundant ductile framing systems may provide a simple, but robust strategy for blast resistance," Whittaker said.

Their work is continuing as one of several MCEER projects funded by a \$100,000 grant from the NSF. It is the only one that includes examining structural performance of buildings from an earthquake-engineering perspective.

By 2004, UB's Department of Civil, Structural and Environmental Engineering will be home to the most versatile, high-performance structural engineering laboratory in the world. While the lab is being constructed primarily for earthquake-engineering research, Whittaker noted that the high-flow hydraulic system, high-performance actuators and reaction walls and floors are perfectly suited for blast-engineering research.

(Departments of Chemical Engineering and Chemistry)

♦New Generation Materials and Structures for Nanophotonics and Nanoelectronics, \$5 Million Grant from the US Air Force Office of Scientific Research (Departments of Electrical Engineering, Physics and Chemistry, Institute for Lasers, Photonics and Biophotonics, and Center for Advanced Photonic and Electronic Materials)

♦Multistore: A Research Infrastructure for Management, Analysis and Visualization of Large-Scale Multi-dimensional Data Sets, \$1.0 Million Grant from NSF, \$0.6 Million from University at Buffalo (Departments of Computer Science and Engineering (CSE) and Pharmaceutics, the National Center for Geographic Information and Analysis and CCR)

♦Holistic Battlespace Visualization, \$2.8 Million Grant from National Imagery and Mapping Agency and Sarnoff (Departments of Industrial Engineering, MAE and CSE, the Center for Multisource Information Fusion and CCR)

### ICAR Can Aid Crisis Communication

During the chaos of September 11, thousands of people immediately dialed friends and family on their cell phones to make sure they were safe. But as callers crowded the airwaves, cell towers were swamped and many of them found it impossible to get through.

To solve such problems, Chunming Qiao, a UB associate professor of computer science and engineering, and his colleagues have developed ICAR (integrated cellular ad-hoc relay), a miniature base station that might be no bigger than a headphone stereo.

In emergencies, cellular service providers could put ICAR devices on walls around the city, which would automatically pick up calls overflowing from congested cell towers and relay them to the nearest unburdened towers.

The low-powered relay's coverage area reaches only about 400-500 meters, one-quarter the area of a cell tower. However, several relays could work together to handle a call, which would make several transitions to reach a tower in an uncongested area, he added.

Finnish cell phone maker Nokia has granted \$25,000 a year to support the research, which has also received a grant from the National Science Foundation.

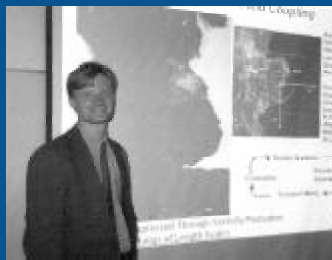


Chunming Qiao

### DesJardin Fires Up Students at Lecture as Part of Sandia Visit

Paul DesJardin, a member of the technical staff at Sandia National Labs and a UB alumnus, visited UB to lecture on numerical simulation and subgrid scale modeling for application to fire phenomena.

Part of Sandia's national security mission is numerical modeling and simulation methodologies for large scale fires. The seminar presented results on two phases of this research. The first part focused on large eddy simulation (LES) of non-reacting, helium-air, and reacting, methanol pool and methane-air plume fires; the second part discussed current efforts on water spray



Paul DesJardin

suppression modeling of large-scale fires.

Desjardin graduated from UB in 1993 with a BS in Aerospace Engineering. He went on to Purdue University where he received his Ph.D. under the guidance of Dr. Steven H. Frankel, who graduated from UB himself in 1993 with a Ph.D. in Mechanical Engineering.

He serves on the AIAA propellants and combustion and ASME combustion and fire subcommittees. He visited UB as part of the recruiting team for Sandia and spent time during his visit talking with students and faculty about employment and research collaboration opportunities with Sandia.

## UB Takes Lead in \$5 Million Department of Defense Project

The U.S. Department of Defense has selected the Institute for Lasers, Photonics and Biophotonics at the University at Buffalo to lead a world-class consortium in a five-year, \$5 million effort to develop new materials in molecular electronics, photonics and opto-electronics to form the basis of a new generation of solar-powered information technology systems.

Such systems are expected to one day supplant electronics systems, which are fast approaching their physical limits in terms of data-storage capacity and transmission speeds.

The grant provides \$2.2 million to support a multi-institutional Center for Advanced Information Technology.

Paras Prasad, Ph.D., SUNY Distinguished Professor in the Departments of Chemistry, Physics and Electrical Engineering, is executive director of the institute, which features a multi-disciplinary team of researchers from chemistry, physics and engineering.

The ability to take such a cross-disciplinary approach "has been a major driving force in obtaining this support," said Prasad. "In particular, by bringing engineers into our lab to work alongside physicists and chemists, we are going to be able to bring these emerging technologies to a new level, closer to the marketplace."

SEAS participants include Alexander Cartwright, associate professor of electrical engineering and a deputy director of the institute. The UB team is also joined by researchers who are pioneers in their fields at the University of California at Berkeley, MIT, Yale and the University of Washington.

The researchers will focus on the full range of issues involved in developing new IT materials on the molecular and nanometer scale, including theoretical modeling and chemical synthesis, characterization, device fabrication, and testing and integration of components into larger-scale systems.

The nanomaterials expected to result from this grant will be based on new solar-powered or photonic materials and structures that can dramatically increase the speed at which data are transmitted to thousands of times faster than current desktop systems. The new materials are expected to facilitate far better methods of encryption, terabit data storage and high band-width processing necessitated by the huge increases being seen in traffic on the Internet.



Alexander Cartwright



Aidong Zhang

## Computer Science Faculty Help Find Best MS Treatment

Faculty in the department of computer science and engineering (CSE) at UB have teamed up with pharmaceutical researchers to apply DNA microarray technology in studies of multiple sclerosis (MS).

The team is led by Aidong Zhang, associate professor of computer science and engineering, and Murali Ramanathan, associate professor of pharmaceutical sciences.

The application of the new method to genomic data could help researchers in the UB School of Pharmacy and Pharmaceutical Sciences, the School of Medicine and Biomedical Sciences and Buffalo General Hospital to develop and ultimately predict the best treatment strategies for MS patients based on levels of gene expression, the process by which a gene's coded information is converted into, or expressed, as proteins in cells.

Microarray technology, Ramanathan explained, can measure the expression of thousands of individual genes caused by drugs or disease. But in any given gene expression profile that results from microarray measurements, the majority of genes do not provide useful information; the challenge lies in finding those that do.

That is a job for computer scientists, or more precisely, data-mining specialists.

The focus of Zhang's group is to look at automated detection of patterns and to devise rules for interpreting that data. Using "maximum entropy," Zhang and her colleagues developed a clustering algorithm to classify the populations in Ramanathan's study as either healthy controls, untreated MS patients or MS patients treated with interferon-beta. They convert the numeric information generated in a gene expression profile into a feature model that reveals a pattern that may be different or worth highlighting. The data in those features may then be measured.

"It would be impossible for me to get this information without the good work of my colleagues in computer science," said Ramanathan, who, in addition to Zhang, works with Raj Acharya, former CSE professor at UB and a specialist in pattern recognition.

Results of the work were presented recently at the First Society for Industrial and Applied Mathematics Conference on Data Mining in Chicago. Co-authors on the paper were Shumei Jiang, Chun Tang and Li Zhang, all doctoral students in CSE.

## Tree Planted in Memorial of Benenson

In August, an oak tree was planted in honor of David Benenson, a UB professor of electrical engineering who died last year. Mark Karwan, dean of SEAS, delivered the dedication. Distinguished Service Professor Dennis Malone, interim chair of electrical engineering, and Pastor Eoin Giller also spoke at the ceremony.

A faculty member for over 35 years, Benenson was chair of the department of Electrical and Computer Engineering from 1983-89. He was also founder of the Cooperative Engineering Program, of which he served as director.



Mrs. Lydia Benenson admires the tree and stone in honor of her husband

## Obituary: Roger Smith

Roger K. Smith, a retired engineering professor at UB, died in August after a long illness. He was 89.

Born in Freeport, Ill., he graduated from the University of Wisconsin with a degree in science and then received a master's degree in engineering from Iowa State. He taught in UB's School of Engineering for 33 years, retiring in 1977.

Smith was a member of the American Society of Engineering and Ventilation and the American Society of Engineering Education. He was also an honorary member of Phi Tau Sigma engineering fraternity.

Survivors include his wife of 65 years, the former Matilda C. Hoelscher.

## NYSCEDII A National Player in VR Technology

The University at Buffalo has established a major center for scientific visualization and virtual reality designed to provide companies throughout New York State with a significant competitive advantage in high-tech product development.

The New York State Center for Engineering Design and Industrial Innovation (NYSCEDII) is the only engineering design research center in the state that utilizes virtual reality (VR) and scientific visualization.



Christina Bloebaum

Its goal is to partner with industry, conduct leading-edge research on complex engineering design and train current and future employees in the emerging technologies that will govern the design and manufacture of products in the 21st century.

Funded by an initial \$2.5 million from New York State and created through the support of New York State Assembly sponsors, NYSCEDII is one of just 20 such centers in the U.S. Expansion plans now underway could make the center one of the top five in the nation by 2003.

"NYSCEDII will provide the highest-end visualization capabilities and expertise that exist anywhere today," UB President William R. Greiner said. "It will serve as a central resource for regional industries and for businesses throughout the state."

### High Schoolers Discover Possibilities of VR in Workshop

A dozen of the Buffalo area's brightest high school students participated in an intensive workshop in scientific visualization and virtual reality this Summer. The event was cosponsored by the New York State Center for Engineering Design and Industrial Innovation (NYSCEDII) and the Center for Computational Research (CCR).

The free, two week workshop offered an introduction to the cutting-edge technologies available at UB's centers. In the past two years, the workshop spotlighted computational chemistry and the CCR, but this year's crop focused on the visualization and virtual reality technology in NYSCEDII, one of only twenty such centers in the United States.



The staff at the new center demonstrated how these innovative technologies can be integrated in business and research and then asked the students to develop and create a final project using the technologies. Eliot Winer, the associate director of NYSCEDII, noted that the workshop emphasized hands-on instruction and personal innovation.

"We'll steer them towards a project," Winer said, "[but] the ideas really come from them. It can be anything they want to do."

The students, who are predominantly high school sophomores and juniors who excel in math and science, came motivated and ready to work.

"These are kids who really want to learn about high-performance computing and high-end visualization," said Russ Miller, director of CCR. He noted that the students received no credit but were motivated instead by the ambition to succeed. A case in point: one student who attended the workshop already operates his own Web company.

A number of companies, including SGI, Inc., SUN Microsystems, Praxair, and Moog, have provided major support in the form of equipment, services and donations.

Christina Bloebaum, Ph.D., professor of mechanical and aerospace engineering and NYSCEDII director, noted that visualization and VR technology are significant aids to design engineers but that few have had access to them until now.

"Because of the major expense of the hardware and the infrastructure that the highest-end visualization capabilities require," she explained, "only the Fords and the Boeings of the world can afford to invest in this technology on their own."

The purpose of NYSCEDII is to serve the small- and medium-sized companies, as well as larger corporations that do not have access to such facilities.

Among its many capabilities, NYSCEDII offers rapid virtual prototyping, computer-aided design, sensory and haptic VR, complex, real-time simulations, animation, and immersive and high-end visualization for VR. It is equipped with a WorkWall that allows access to life-sized, immersive simulations, so that large groups of engineers or designers can work in three dimensions collaboratively. By the end of 2002, the center will have a four-wall immersive environment, and plans to have a six wall environment within the next three years.

### YAHOO! Recognizes UB, NYSCEDII in Recent Poll of Top Wired Universities

The latest Internet Life Poll ranked UB 10th among most wired universities. NYSCEDII earned a special citation for its "commitment to emergent technologies" because of its emphasis on the multidisciplinary use of virtual reality techniques.

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### Mayne Named Distinguished Teaching Professor

Mayne has also served his department as chair from 1986-89 and again from 1995-98, in addition to his active role on a number of committees at UB.

Mayne received a bachelor's degree from UB, a master's degree from the Georgia Institute of Technology and a doctorate from Pennsylvania State University. He joined the UB engineering faculty in 1970 after working as a development engineer with Eastman Kodak. His main areas of research are systems, design optimization and mechanical design.

Mayne is a fellow of the American Society of Mechanical Engineers and has consulted for numerous companies and organizations, including Moog Inc., General Electromechanical Corp. (GEMCO), the U.S. Postal Service, and the United Nations Development Program.

### Lewis Honored for Teaching Excellence

modern design theory.

Lewis has garnered recognition for both his scholarship and teaching. He received a prestigious National Science Foundation Faculty Early Career Development Grant to apply game theory to improve the manufacturing-design process. Last year, the Undergraduate Student Association recognized his teaching excellence and commitment to students with its 2001 Milton Plesur Excellence in Teaching Award.

# PRAXAIR Gift to Support a Variety of SEAS Projects

Praxair Inc., a global supplier of industrial gases that has operations in Tonawanda, has pledged \$400,000 to the School of Engineering and Applied Sciences (SEAS).

The gift will support a variety of projects, including a Praxair seminar series in several engineering departments, a seminar series in the Department of Chemistry, Industry-University Day and undergraduate student club activities.

It will also supplement a graduate-student fellowship in chemical engineering. Praxair executives hope that these activities and the fellowship, in particular, will help attract talented minorities to the engineering profession.

Of the annual sum, \$45,000 will be used to help build strength in various areas of research proficiency. The first two years of support will focus on the area of multidisciplinary optimization led by Christina L. Bloebaum, Ph.D., professor of mechanical and aerospace engineering.

Praxair has long enjoyed a close relationship with SEAS and the university-at-large. The company has sponsored Industry-University Day and faculty research, encouraged its executives to sit on the dean's advisory councils and participated in various seminar, internship and mentoring programs.

"We are pleased to continue to help the university

enhance its academic, service and teaching roles," said Steven L. Lerner, Ph.D., vice president of research and development for Praxair. "The university is a vital part of the local community, the state's outstanding higher-education system and the worldwide research community in several important areas."

Mark H. Karwan, dean of SEAS, echoed Lerner's sentiments. "Praxair is a philanthropic corporate leader that understands the importance of its role in the support of public research universities," he said. "UB values Praxair's financial and intellectual generosity and the good business sense that truly creates a win-win for all of us."

Praxair also gave \$200,000 to the School of Management, with which it has had an equally long history of support.

## Chuang Gift Establishes New SEAS Scholarship

Joe Y. Chuang of Palos Verdes Peninsula, Calif., a University at Buffalo alumnus and international businessman, has pledged \$30,000 to establish a scholarship fund for undergraduate students in UB's School of Engineering and Applied Sciences (SEAS).

Chuang is president of Delta Fine Chemicals in Los Angeles, which has controlling interest in a Chinese pharmaceutical factory that is the largest producer of natural progesterone in the world, and also is the exclusive distributor of its products worldwide, at present predominantly in Europe.

"We're proud of Joe's accomplishments and extremely grateful for his commitment," said Mark H. Karwan, dean of SEAS.

The Chuang Family Scholarship will be awarded to undergraduate engineering students based on academic merit and financial need.

Chuang, a native of Taiwan, earned his bachelor's degree

*Generation to Generation*

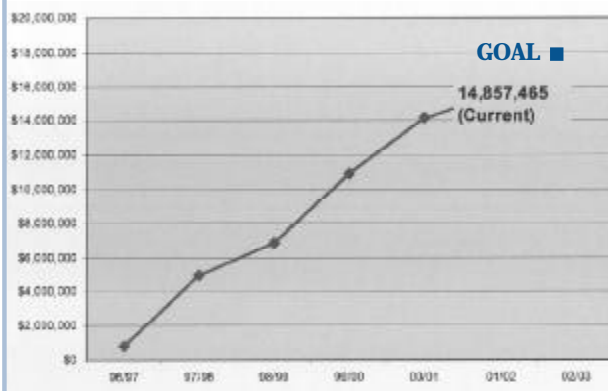
These gifts are part of UB's \$250 million campaign, the largest ever conducted by a public university in New York and New England. Although it's the fifth major fund-raising campaign conducted by UB, it's the first to be national/international, university-wide and alumni-driven with campaign volunteer leaders from all over the country. Funds raised will be used to enrich academic programs, support students ranging from undergraduates to post-doctoral students and to enhance university life. For information on how you can support SEAS and the University at Buffalo, go to: <http://www.buffalo.edu/giving>

in chemical engineering from Tunghai University in Taiwan, a Christian university established in 1955 by the United Board for Christian Higher Education in Asia. He attended the University of Florida for his master's degree before heading to Buffalo for his doctorate.

"In Buffalo you could do any type of research work you wanted," said Chuang. "I really enjoyed and prospered from the free atmosphere the program at UB provided."

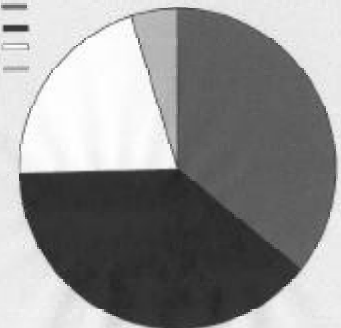
After earning his Ph.D. in chemical engineering from UB in 1972, Chuang joined the Max Planck Institute to teach and do research in Dusseldorf, Germany. In the mid-1970s, he returned to the United States, working for Armco Steel Corp. until 1979, when he left the company to pursue his own career in business.

## SEAS Cumulative Giving Total by Fiscal Year



## SEAS Campaign Breakdown by Component

Component	Funds Raised
Endowment	\$ 5,333,674
Capital	\$ 5,758,082
Educational Adv.	\$ 3,059,991
Annual Fund	\$ 705,718
<b>Total</b>	<b>\$14,857,465</b>



# Annual Development Report

Fiscal Year 2000-2001



I would like to start off by giving my sincere thanks to all of you who have given to the School of Engineering and Applied Sciences (SEAS) over this past year. Your contributions truly make a difference. It is with pride and gratitude that I take this opportunity to recognize your generosity. Your School is committed to maintaining its leadership position locally, nationally and globally by serving the educational and research needs of a changing world. Your gifts help us keep this commitment.

With our continuing need to supplement New York State funding (*which provides approximately 33% of our annual expenditures*), and with the added concerns over the State economy following the September 11<sup>th</sup> attacks, we are faced more than ever before, with a need to generate our own support from private and corporate sources. Your generosity is essential in helping to meet our academic and student needs.



Your support also helps us create stronger relationships with our corporate partners. These corporate relationships help grow our research programs and allow us to provide expanded opportunities for our students with internship and co-op programs, as well as career development and placement opportunities. Additionally, your dollars help us to attract and retain outstanding students and faculty.

In recent issues of our newsletter, we have written stories about some of our alumni and corporate friends who have stepped up and made major contributions to specific areas within the School. Although these major, targeted contributions are extremely valuable to us, please don't overlook our need for annual, flexible funds. These annual donations provide us with the ability to designate resources where they are most needed.



We are approaching the final 18 months of the largest fund raising campaign in the history of the University at Buffalo - "The Campaign for UB, Generation to Generation". Throughout the past five years, I've been doing a fair amount of traveling for the campaign. Along with my development team, I've literally been coast

to coast, meeting with our alumni and friends for support to SEAS. Please notice *the graphics at the bottom of page 6*. As you can see, we are quickly approaching \$15 million in funds raised to date. I've also included a breakdown on how the funds we received have been designated by the donors. Each of the categories referenced helps meet critical needs of the School and often provides a margin of excellence to help us maintain a leadership position in the engineering and computer science communities.



The experiences I've had with this campaign have been gratifying, and I truly cherish the relationship I've established with our alumni and friends. We greatly appreciate each gift that has been made in the fiscal year that ran from July 1, 2000 to June 30, 2001.



Again, thank you for your continuing support to UB and specifically the School of Engineering and Applied Sciences. Please continue to help us make our School the best it can be.

Sincerely,

Mark H. Karwan  
Dean, School of Engineering and Applied Sciences



# Delta Society Members

## \$50,000 Plus

John Zahorjan, Seattle, WA

## \$10,000 - 49,999

Lydia Benenson, Williamsville, NY  
 Joe Y. Chuang '72, Redondo Beach, CA  
 Robert H. '51 and Catherine H. Goldsmith,  
 Rancho Santa Fe, CA  
 Walter H. and Kathy Ratcliffe, Farmington,  
 NH  
 Henry E. '49 and Joan H. Stone, San Jose, CA  
 Kenneth O. Young '54, Potomac, MD

## \$5,000 - 9,999

Charles A. '42 and Philomena Esposito '39  
 Bauda, Boynton Beach, FL  
 Wilson Greatbatch '57, Akron, NY  
 Vladimir Hlavacek, Clarence, NY  
 Frank J. McGuire '53, Williamsville, NY  
 Hiroshi Morihara '71 and Mary McSwain,  
 Gresham, OR

## \$2,500 - 4,999

Christina L. Bloebaum, Getzville, NY  
 Robert Francis Hanley Jr. '90, Wheaton, IL  
 Norman M. Hayes '80, Sunnysvale, CA  
 Sabina L. and Mark H. Karwan, Buffalo,  
 NY  
 Krishna S. Kolluri '88, Sunnysvale, CA  
 Robert Tell and Rebecca S. Landy, Orchard  
 Park, NY

## \$1,000 - 2,499

Joseph P. Allen, Arlington, VA  
 Rajan Batta, East Amherst, NY  
 \*Jonathon Matthew Bearfield '91, Dallas  
 TX  
 Erich '52 and Renee Bloch, Washington,  
 DC  
 \*Abhay V. Borker '94, Dayton, NY  
 Mark J. DeLucia '91, San Jose, CA  
 Paul and Celia '99 Ehrlich, Lebanon, NH  
 Adly T. Fam, East Amherst, NY  
 Charles '35 and Bernice Fogel '46, Buffalo,  
 NY  
 Henry H. '51 and Rosalyn Frank,  
 Beachwood, OH  
 Ephraim '90 and Anna Marie '92 Garcia,  
 Arlington, VA  
 Dino Gomez '86, Flushing, NY

Paul S. Goodman '92 and Martha M. Harris  
 '90, Buffalo, NY  
 Irene Kovshik, Pine Brook, NJ  
 George C. and Grace S. Lee, East Amherst,  
 NY  
 Carl J. '78 and Maria C. '81 Lehman,  
 Orchard Park, NY  
 Ioannis S. Logiadis, Athens, Greece  
 Roderick G. MacKinnon '82, San Diego, CA  
 Michael G. Majdalany '76, San Francisco,  
 CA  
 Dennis P. Malone '54, Williamsville, NY  
 Kenneth '77 and Diane '97 Manning,  
 Kenmore, NY  
 James F. May '49, East Aurora, NY  
 Kyung W. Min '76, Mentor, OH

Dimitris A. Pados and Stella N. Batalama,  
 East Amherst, NY  
 Charles G. Rader '74, Grand Island, NY  
 Walter Romashko '61, Minneapolis, MN  
 Joan F. and Michael E. Ryan, Williamsville,  
 NY  
 James M. and Linda L. Seng, Pittsburgh,  
 PA  
 Winslow T. Shearman '64, Binghamton, NY  
 \*Elizabeth '91 and Tim Siderakis, Clarence  
 Center, NY  
 Tsu-Teh and Dorothy Tsai Soong, East  
 Amherst, NY  
 Donald E. Yost '51, Los Gatos, CA  
 Madeline E. Zahorjan, Orchard Park, NY  
 Stephen Zahorjan, Lincoln Park, NJ

\*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

Charles T. Brunskill '73, Williamsville, NY  
 Robert A. Burnett '81, Slingerlands, NY  
 Gary F. Dargush '87, Snyder, NY  
 John Dicky '50, North Tonawanda, NY  
 Richard T. Evans '71, Northville, MI

Shabbir and Shamima S. Hakim, Getzville,  
 NY  
 Pao-Lo Liu, East Amherst, NY  
 Dennis Menzenski '70, Bridgewater, NJ  
 Yen N. Nguyen '74, Canyon Country, CA  
 B. D. '72 and Mrs. Radhakrishnan, Phoenix,  
 AZ

Robert M. '83 and Andrea A. Rosten,  
 Harrisburg, PA  
 Gregory R. Ryan '83, Babylon, NY  
 James E. Stevens '76, Bay Village, OH  
 James J. Whalen, Clarence, NY

## Scholar's Society \$250 - 499

Mark W. '91 and Barbara J. Ackley, East  
 Aurora, NY  
 Robert E. '84 and Grace M. '84 Barnes,  
 Amherst, NY  
 M. Joseph Browne '78, Orchard Park, NY  
 Michel Bruneau, East Amherst, NY  
 John L. Burr '78, Kingston, NY  
 David N. Campbell '69, Carlisle, MA  
 Donald A. Coates '64, Canton, OH  
 John Z. Colt '49, Williamsville, NY  
 Colin G. Drury, Williamsville, NY  
 Donald R. Ferguson '56, Williamsville, NY  
 George Byron Fisher '50, Clarence Center,  
 NY  
 Albert J. Gerritz '50, Pittsford, NY  
 Mark N. Glauser '87 and Gina J. Lee-  
 Glauser '88, Manlius, NY  
 Robert E. Grace '63, Fairport, NY

William E. Grunert, Williamsville, NY  
 M. Amine Hajji '73, San Jose, CA  
 Robert G. Harrison '83, Carle Place, NY  
 Michael W. Hyer '64, Blacksburg, VA  
 Dennis M. Kasprzyk '78, Des Moines, WA  
 Jan A. Klapetzky '70, Williamson, NY  
 Artis Klavins '83, New York, NY  
 Tin Che Ko '82, New York, NY  
 Bronislaus W. Kopra Jr. '66, Mission Viejo,  
 CA  
 Lidia P. Kostyniuk '75, Brighton, MI  
 Leslie C. Kun '70, Williamsville, NY  
 Gerald W. LaWall '54, Rohrerstown, MD  
 John J. Lee '76, Middle Village, NY  
 Ernst K. H. Marburg '72, Abingdon, VA  
 Russ Miller, East Amherst, NY  
 Frank J. Notaro '85, Chicago, IL

Thomas J. Owens '76, Tucson, AZ  
 Robert P. Palatnick '80, Cold Springs  
 Harbor, NY  
 Kenneth G. Parker '82, Williamsville, NY  
 Gerald J. Quinlivan '85, Cincinnati, OH  
 Barbara Ann Sherman '97, Grand Island,  
 NY  
 James M. Smith '76, Hilton, NY  
 Andres Soom, Williamsville, NY  
 Jim Y. Tou '90 and Emilia M. Konieczna-  
 Tou '91, Lockport, NY  
 Hai-Lung Tsai '80, Rolla, MO  
 Louis E. Varadi '50, Danvers, MA  
 Jon Z. Walker '78, Falls Church, VA  
 Chauncey Weisman '49, Culver City, CA  
 Chu Ryang Wie, Amherst, NY  
 Larry R. Zangerle '52, Dearborn, MI



## Century Club \$100 - 249

- Douglas A. Adams '75, Fullerton, CA  
David N. '66 and Margaret H. '66  
Anderson, Columbia Station, OH  
Wayne A. Anderson '70, Orchard Park, NY  
Lisa A. Andruscavage '78, Hookset, NH  
Brian P. Aylward '99, Hilton, NY  
Mark J. Azzaro '80, Bridgeton, NJ  
Wallace O. Bailey '71, Lodi, NY  
Jennifer Ann Barnes '95, North  
Tonawanda, NY  
William H. Bazell '96, Findlay, OH  
James D. Becker '77, League City, TX  
Robert H. Bellman '74, Horseheads, NY  
Richard L. '78 and Penny J. '80 Blumstein,  
Edison, NJ  
Richard J. Boy '66, Rochester, NY  
Robert D. Brown '68, Los Alamos, NM  
Thaddeus F. Bryzinski '50, North  
Tonawanda, NY  
Mark Burzynski '79, Plymouth, NH  
Robin L. Buseck '91, Plymouth, MI  
Paul R. Calabrese '72, Eden, NY  
Thomas L. Casselman '82, Churchville, NY  
Bruce V. Caughell '65, Concord, NC  
Chi-Wu J. Chang '73, Cerritos, CA  
Linda L. Chattin '94, Gilbert, AZ  
Junho Choi '72, Springfield, VA  
Kenneth A. Cichocki '77, Roseville, CA  
Thomas J. Cici '52, Evansville, IN  
Charles P. Cloutier Jr. '85, Pleasant Valley,  
NY  
Gary A. Coleman '77, Binghamton, NY  
Michael C. Constantinou, Buffalo, NY  
Donald I. Cook '64, East Amherst, NY  
A. Robert Corpus '56, Kent, WA  
Francis A. Cozzarelli, Buffalo, NY  
William R. Cuthill '55, Scottsdale, AZ  
Gerald B. Dahl '73, Baldwinsville, NY  
Richard Dahler '50, Farmington Hills, MI  
Raymond G. David '66, Hamburg, NY  
Gar W. Davidson '67, Bethlehem, PA  
Michael L. '83 and Denise A. '95 Dee,  
Livonia, NY  
Arthur M. Denz '65, West Seneca, NY  
Adrian I. Derhak '83, West Hartford, CT  
John T. DeVore '91, Pinckney, MI  
Charles L. Dolpp '71, Abingdon, VA  
Arthur B. Doty '49, Dayton, OH  
John F. Drennen Jr. '76, Windsor, CT  
Robert B. '82 and Diana A. '95 Drzewiecki,  
East Amherst, NY  
Edward G. Eberl '77, Williamsville, NY  
Michael D. Eberth '84, Brownstone, MI  
Dwight B. Eldredge '78, Cornelius, NC  
Christopher M. Englert '75, Canandaigua,  
NY  
Philip Fanone '74, West Seneca, NY  
Frederick G. Fedri '70, McKinney, TX  
Daniel J. Feeney '69, Vail, CO  
Richard A. Ferraro '80, Washington, DC  
Peter A. Ferri '79, Tampa, FL  
William G. Fink '50, Sierra Madre, CA  
Jason Fong '91, Baltimore, MD  
David M. Ford '91, College Station, TX  
Gerard R. Freddo '80, Mentor, OH  
Donald E. Freyburger '76, Freeville, NY  
Jack J. Fritz '78, Silver Spring, MD  
Leon E. Gammernan, Chestnut Hill, MA  
Paul G. Gerber '97 and Ellen M. Kieran-  
Gerber '96, Ballston Spa, NY  
Guy H. '83 and Jill H. '82 Gettys,  
Flemington, NJ  
Owen J. '93 and Marianne '84 Golden,  
Austin, TX  
Brian P. Gregory '96, Columbia, MD  
Steven E. Gross '72, Yardley, PA  
Kevin J. Guarino '89, Rochester, NY  
Maurice W. Guest '68, Marcellus, NY  
Roland A. Gutmann '80, Salem, NH  
Linda Hall-Bovino, Kenmore, NY  
Susan M. Haller '95, Kenosha, WI  
Wilfred L. Hand '66, Mountain View, CA  
Thomas Harris '74, North Augusta, SC  
Paul E. Hartnett '79, Pittsburg, PA  
Eileen L. Hassett '00, Amherst, NY  
Kenneth M. Hattem '81, Fort Lee, NJ  
Todd V. Heller '73, High Ridge, MO  
Gary R. Henniger '80, Wayne, NJ  
Michael P. Hite '91, Hamburg, NY  
Dorothy L. Holmes '84, Penfield, NY  
Hsiun Philip Hsieh '76, San Ramon, CA  
David K. Humphrey '67, Webster, NY  
Steve E. Hutchinson '81, Elverson, PA  
Martin C. Hutkin '75, Woodside, NY  
Toru and Judy S. Iura, Los Angeles, CA  
Glenn H. Johnson Jr. '50, Stow, NY  
Christine M. Joyce '86, South Boston, MA  
Patrick V. Joyce '85, Keene, NH  
George H. Kam '69, Tonawanda, NY  
Raj K. Kaul, Buffalo, NY  
Richard J. Kisloski '69, Haydenville, MA  
Theresa A. Klubek, Lackawanna, NY  
Lawrence S. Kluger '81, San Francisco, CA  
Gerald M. Knapp '89, Baton Rouge, LA  
George M. Kosanovich '75, Westmont, PQ  
Richard J. Kotecki '77, Cheektowaga, NY  
Karin A. Krauss '82, East Amherst, NY  
Curtis S. Kraut '79, Bridgewater, NJ  
Gary P. LaBelle '81, Harrisburg, PA  
Adolph '98 and Margaret A. Lanza, Mount  
Pleasant, SC  
James Llinas '77, Williamsville, NY  
Betty J. Lock '86, Williamsburg, VA  
Carl R.F. Lund, Amherst, NY  
Thomas J. Lynch '76, East Amherst, NY  
Karen L. Maceachern, Newton, OH  
Ronald J. Maj '82, Owings Mills, MD  
Chris J. Maurath '81, Chicago, IL  
Roger W. Mayne '63, Williamsville, NY  
David L. Mc Laughlin '59, Kenmore, NY  
Ishaque S. Mehdi, Bellevue, WA  
Todd Mendell '75, Sacramento, CA  
Robert W. Meyers '61, Nevada City, CA  
Gregory Minnick '81, Toms River, NJ  
David J. Mortensen '78, Mission Viejo, CA  
Monica S. Moshenko, Williamsville, NY  
Sandra D. Motley '84, Madison, NJ  
Sarath Narasimhan '86, Edison, NJ  
John Narog Jr. '50, Huntington Beach, CA  
George H. Norton '48, Salt Lake City, UT  
Edward T. '69 and Elizabeth Ann '70  
Ostrowski, Chesterfield, VA  
Orland H. Oswald '51, Buffalo, NY  
Richard K. Patterson Jr. '71, Richmond, VT  
Roger L. Pawlowski '72, Rochester, NY  
Michael R. Petroski '68, Troy, MI  
Hoang Pham '89, Piscataway, NJ  
Srinivas Y. Prasad '92 and Padmavati  
Chitrapu '89, Sterling, VA  
Alan J. Rabideau '86, Buffalo, NY  
Peter J. Radesi '70, Lee Center, NY  
Raj R. Raghavan '77, Gaithersburg, MD  
Cheryl L. Rance, Buffalo, NY  
Annick N. Ratsizaharimanana '99, Erie, PA  
Kathryn J. Rivers '85, Rochester, NY  
Franklyn W. Roesch '49, Warrensville  
Heights, OH  
Christopher M. Rump, Williamsville, NY  
Leroy H. Runk '61, Orchard Lake, MI  
David E. Scesney '71, Blacksburg, VA  
Dennis R. Schrader '79, Columbia, MD  
Larry I. '73 and Bonnie J. '72 Schwartz,  
Columbia, MD  
Kevin R. Shafer '99, Olean, NY  
Stuart C. Shapiro, Williamsville, NY  
Louis P. Sileo '67, Liverpool, NY  
Kenneth L. Smith '80, Beaufort, SC  
George Smolinski '77, South Hamilton, MA  
Andrew T. Spilsbury '60, Torrance, CA  
Kevin E. Sprow '89, Buffalo, NY  
Lisa A. S. Stephens, Wilson, NY  
William P. Sturner '78, Cherry Hill, NJ  
William N. Sullivan '68, Albuquerque, NM  
Gail E. Taggart, Buffalo, NY  
John S. Tashman '86, Ithaca, NY  
Alan S. Taub '79, Lafayette, CO  
David T. Theoclitus '88, Gillette, NJ  
Philip A. Treventi '72, Murray Hill, NJ  
John P. Trunzo '59, Youngstown, NY  
Steven Tsengas '60, Mentor, OH  
Irene W. Van Dyk Pecenco '76, Ponway,  
CA  
Edward A. Varel '94, Rochester, NY  
Hung P. Vo '79, Chantilly, VA  
Eric M. Wagner '80, Cary, NC  
Wayne A. Walter '64, West Chester, OH  
Stanley S. Wehling '57, Sarasota, FL  
Joseph H. Westsik '59, Richland, WA  
William G. Wild Jr. '85, Buffalo, NY  
Gordon J. Wilson '49, Hamburg, NY  
David B. Winans III '74, Simpsonville, SC  
William J. Wirth P.E. '64, East Aurora, NY  
Darold C. '66 and Katrina S. '56 Wobschall,  
Williamsville, NY  
Walter I. Wolentarski III '85, Moorpark, CA  
Mark B. Wolfe '82, Miami Springs, FL  
Mary Ellen Wolinski '80, Myrtle Beach, SC  
David R. Woodruff and Irene F. Oehmke,  
Schnecksville, PA  
Mark T. Zabaldo '94, Kalamazoo, MI  
Stephen W. Zelazny '72, Snyder, NY

# Corporations, Foundations and Organizations

Includes Matching Gifts

## \$100,000 Plus

International Business Machines Corporation, Yorktown Heights, NY  
Silicon Graphics Computer Systems, Inc., Orchard Park, NY  
The Whitaker Foundation, Roslyn, VA

Ceramics & Materials Processing, Inc., Clarence, NY  
Delphi Harrison Thermal Systems, Lockport, NY  
Moog, Inc., East Aurora, NY

## \$50,000 - 99,999

Nokia Networks, Inc., Irving, TX  
Praxair, Incorporated, Danbury, CT  
William and Flora Hewlett Foundation, Menlo Park, CA

## \$10,000 - 49,000

Axon Shock Control Systems, Inc., Arlington, WA  
Community Foundation for Greater Buffalo, NY  
Cymfony, Inc., Williamsville, NY  
The Dow Chemical Company, Midland, MI  
GE Fund, Fairfield, CT  
Ingersoll Rand Company, Huntersville, NC  
Into Telecommunications Consulting, Inc., Pittsburgh, PA

Lockheed Martin Corporation, Oswego, NY  
Nokia Research Center, Burlington, MA  
Prentice Hall Business Publishing, Upper Saddle River, NJ  
Primex Technologies, Red Lion, PA  
Riza Dutch National Institute for Integrated Water, Siemens Corporate Research, Inc., Princeton, NJ

Sun Microsystems, Incorporated, Cohoes, NY  
Taylor Devices, Inc., North Tonawanda, NY  
Telcordia Technologies, Inc., Morristown, NJ  
TX RX Systems, Inc., Mayfield Heights, OH

## \$5,000 - 9,999

Computer Analysis Plus, Amherst, NY  
Engineering Foundation, Fisher-Price, East Aurora, NY  
Kettering University, Flint, MI  
Motorola Foundation, Elma, NY  
United Engineering Foundation, New York, NY  
US Appraisal, Inc., Buffalo, NY

## \$2,500 - 4,999

The Procter & Gamble Fund, Cincinnati, OH

## \$1,000 - 2,499

American Concrete Institute, North Tonawanda, NY  
Bristol-Myers Squibb Company, New York, NY  
PE Review Committee, Buffalo, NY

## Dean's Associates \$500 - 999

Avery Dennison Corporation, Buffalo, NY  
CSX Corporation, Washington, DC  
General Mills Foundation, Minneapolis, MN  
IBM International Foundation, Armonk, NY  
Morgan Stanley Dean Witter Foundation, New York, NY  
National Starch and Chemical Foundation, Inc., Bridgewater, NJ  
Occidental Petroleum Charitable Foundation, Inc., Los Angeles, CA  
Scholarship Foundation, Cherry Hill, NJ

## Scholar's Society \$250 - 499

The Boeing Company, Seattle, WA  
Cisco Systems Foundation, Princeton, NJ  
Corning Incorporated Foundation, Corning, NY  
Ford Motor Company Fund, Dearborn, MI  
The Hershey Foods Corporation Fund, Hershey, PA  
Mattel Children's Foundation, El Segundo, CA  
Pittway Corporation Charitable Foundation, Chicago, IL  
Raytheon Charitable Gift Fund, Boston, MA

## Century Club \$100 - 249

American Society of Civil Engineers  
Ashland Inc. Foundation, Ashland, KY  
AT&T Foundation, New York, NY  
BD Matching Gift Program, Princeton, NJ  
Borg-Warner Foundation, Inc., Chicago, IL  
The Chase Manhattan Foundation, New York, NY  
DaimlerChrysler Corporation Fund, Auburn Hills, MI  
General Motors Foundation, Detroit, MI  
IDEX Corporation, Northbrook, IL  
Johnson & Johnson, New Brunswick, NJ

The Maytag Company Foundation, Newton, IA  
MMC Matching Gifts to Education Program, Princeton, NJ  
Mobil Foundation, Inc., Princeton, NJ  
Morrison Knudsen Corporation Foundation, Inc., Boise, ID  
The Niagara Mohawk Foundation, Syracuse, NY  
Reliance Insurance Companies, Philadelphia, PA  
Sara Lee Foundation, Chicago, IL  
Schindler Elevator Corporation, Morristown, NJ  
Verizon Foundation, Buffalo, NY  
Xerox Corporation U.S.A., Stamford, CT

The School of Engineering and Applied Sciences has made every effort to create a complete list of our donors and their gifts of at least \$100. We apologize for any spelling errors or accidental name omissions. Our fiscal year closed on June 30, 2001. If we received your gift after this date, we will credit it to the FY2002 report. If we have misprinted or omitted your name, please contact Tim Siderakis, Office of Development, School of Engineering and Applied Sciences, University at Buffalo, Amherst, NY 14260-1900 or e-mail [tsiderak@buffalo.edu](mailto:tsiderak@buffalo.edu).

**Joseph Atkinson**, professor of civil, structural and environmental engineering and director of the Great Lakes Program, has co-authored a new book, "Environmental Fluid Mechanics," published by Marcel Dekker, Inc. It contains practical applications of modern fluid mechanics relevant to environmental quality, contaminant transport, global fluid flows and water quality modeling.

On Professional Secretaries Day 2001, the American flag flew over the US Capitol in honor of SEAS' own **Joan Bennett**, who has assisted faculty and students for more than thirty years. For her immense contribution to SEAS, the school has established a scholarship in her name to go to an undergraduate in the electrical engineering program.

**Ann Bisantz**, assistant professor of industrial engineering, participated in the National Academy of Engineering's Frontiers of Engineering Symposium, held in Washington, D.C. The program provides the opportunity for outstanding engineers to learn about cutting-edge developments in fields other than their own, to facilitate collaborative research.

**Peyman Givi**, professor of mechanical and aerospace engineering and classical guitarist, served as assistant director of the seventh annual Rantucci International Guitar Festival and Competition.

**Venu Govindaraju**, associate professor of computer science and engineering and associate director of the Center of Excellence for Document Analysis and Recognition at UB (CEDAR), has received the "Outstanding Young Investigator Award" from the International Conference on Document Analysis and Recognition, the largest international conference in the pattern-recognition

field. The award, given to an investigator under the age of 40, recognizes individuals who have made outstanding contributions to the field of document analysis and recognition.

**Kemper Lewis**, assistant professor of mechanical and aerospace engineering, was selected as 2001 Professor of the Year by the New York Nu chapter of Tau Beta Pi.

**Cheryl Runk**, secretary in the Department of Civil, Structural and Environmental Engineering, received the U.S. Air Force Commendation Medal for outstanding achievement as non-commissioned officer in charge of the Military Equal Opportunity Program.

**Shambu Upadhyaya**, associate professor of computer science and engineering, received a grant from IBM to conduct research on the TestBench Release 2001. Upadhyaya was also made an associate editor of IEEE Transactions on Computers, a premier journal in the area of computers that is in its 50<sup>th</sup> year of publication.

Six SEAS faculty members were selected as "innovators" in the Upstate Alliance for Innovation, a group of New York education, industry and government partners that aims to generate economic success in the western part of the state: **Paschalis Alexandridis**, associate professor of chemical engineering; **Stella Batalama**, associate professor of electrical engineering; **Christina Bloebaum**, professor of mechanical and aerospace engineering; **Deborah D.L. Chung**, Niagara Mohawk Chair of Materials Research; **Barry Lieber**, professor of mechanical and aerospace engineering; and **Aidong Zhang**, associate professor of computer science and engineering.

## Constantinou Re-appointed Chair of CSEE



Michael Constantinou has been re-appointed for another three year term as chair of the Department of Civil, Structural and Environmental Engineering (CSEE).

According to Mark Karwan, Dean of the School of Engineering and Applied Sciences, Constantinou received "overwhelming support" from his colleagues in CSEE, who praised his diligence and leadership over the past three years. "The provost and I concur and are pleased that Michael has accepted to serve another three year term," he said.



## Rae Scores With Football Study

After probing the physics of how a football travels during flight using computer simulations and the videotape of a single forward pass, William J. Rae, Distinguished Teaching Professor in the Department of Mechanical and Aerospace Engineering, tried to take his project into the end

zone this semester by quantifying the phenomenon that he has studied for the last six years.

With funding provided by Wilson Sporting Goods and the National Science Foundation, the aim of Rae's research has been to address which way a football is pushed during a forward pass and with what forces.

For his most recent experiment, Rae used a low-speed wind tunnel at Veridian Corp. and outfitted the football with a strain-gauge balance, a little motion sensor embedded in the football that measures loads, forces and torques on the football at different wind speeds.

Rae expects that his new data, in conjunction with his numerical simulations, will confirm the interesting phenomenon he first observed in 1976.

The wind tunnel tests were made possible by the Calspan-UB Research Center, a non-profit organization formed by UB and Veridian Corp., to bring together scientists and engineers from academia and private industry to conduct joint research.

## Greetings and Farewells

### Greetings to:

#### Chemical Engineering

Jeffrey Errington, assistant professor

#### Civil, Structural and Environmental Engineering

Kurt Winter, project administrator for the creation of UB's node in the NSF/George Brown, Jr. Network for Earthquake Engineering Simulation

#### Computer Science and Engineering

Margaret Evans, secretary to the chair and department  
Hung Quang Ngo and David Pierce, assistant professors

#### Electrical Engineering

Albert Titus, assistant professor

#### Industrial Engineering

Bahattin Koc, visiting assistant professor

#### Mechanical and Aerospace Engineering

Ellen Bennett, secretary to the chair  
Linda Fecio, undergraduate programs secretary

Venkat Krovi, assistant professor

Ram Shah, ATA professor working with SPIR

#### SEAS Dean's Office

Margaret Meacham and Jane Sinclair, senior academic advisors

James Michalowski, graduate enrollment manager

Michelle Sacco, assistant to the director of the EngiNet™ distance learning program

April Stahl, secretary in the Dean's Office for Student Services

### Farewell and best wishes to:

Raj Acharya is now chair of the Department of Computer Science and Engineering at Penn State University

Joan Bennett retired from the Department of Electrical Engineering

Susan Calvaneso, retired from the SEAS development office

Michael Gaus, retired from CSEE

Elenora Heffner transferred to the Institute for Regional Growth

Brenda Reed accepted a promotion in University Facilities

Eddy Rojas accepted a position at the University of Washington

Jim Seng is now senior executive director of development at the University of Pittsburgh

## New York Nu Contributes to Community, University

New York Nu, UB's chapter of the national engineering honor society Tau Beta Pi, just completed a successful food drive where it collected 1,500 food items for the City Mission in Buffalo, NY. Erika Bleyle, senior in civil engineering, chaired the event. She was assisted by president Lesley Weitz and vice president Scott Ferguson, both seniors in mechanical engineering.

In early October, New York Nu hosted an Honors Employment Dinner at the Marriott. Honor students from SEAS' six departments met individually with representatives from seventeen companies and governmental agencies at a mini-job fair and then had dinner with them. The event chair was vice president Scott Ferguson and he was assisted by president Lesley Weitz.

## Green Engineers New Cultural Experience in Japan

Morris Green, a Master's student in the Departments of Industrial Engineering and Urban Planning, spent his Summer in Japan, after receiving a National Science Foundation/Japan International Science and Technology Exchange Center Summer Institute Fellowship.



Green in Samurai dress

In Japan, he worked with the National Institute for Land and Infrastructure Management, researching ways to improve the electronic bidding and contract system of CALS/EC (Continuous Acquisition Lifecycle Support/Electronic Commerce), a public works database that uses electronic information and the Internet to create an environment for transparent contract awarding procedures for public works projects, higher efficiency through electronic delivery and more interaction between

citizens and administration through electronic communication.

In addition, he compared the Japanese and US construction processes to see if any improvements in value engineering and project management systems were needed in the Japanese construction process.

Green also learned a lot about Japanese culture, taking in Kabuki (Japanese opera) and visiting various places of worship.

## Solar Boat Makes Splash at Competition

The boat designed and raced by members of the UB chapter of the American Society of Mechanical Engineers won them recognition as the "Outstanding Rookie Team" at this year's Solar Splash competition--a five day international intercollegiate competition of solar/electric boating.

The UB team featured ASME officers Dave Howe (president), Matthew Bernfeld (vice president), Jerimiah Rouch (treasurer), and Charles Nasca (secretary) and members Parimal Patel and Stephanie Raymond. The faculty advisor for the project was William Rae, distinguished teaching professor in MAE.

Their boat was sponsored by Moog, Praxair, URS, General Motors, Rocky Bottom Boat Shop, Boat US, and Tops.



Micah Allen, who holds a master's degree in engineering from UB, received a Fulbright to study and conduct research this year in the Buildings and Energy Department of Denmark Technical University, near Copenhagen. He will take graduate courses in solar building design and focus on creating energy simulation software for residential structures.

Michael Lewandowski, graduate student in the Department of Mechanical and Aerospace Engineering, was selected as Teaching Assistant of the Year by the New York Nu Chapter of Tau Beta Pi.

Carolyn M. Zielinski was awarded the 2002 Scholarship from the Society of Women Engineers.

The ASCE Student Chapter at UB was awarded a Certificate of Commendation for its outstanding activities during 2000. The Committee on Student Activities recommended the chapter on the basis of activities recorded in its annual report.

## BEAM Presented with Award from Mayor

BEAM (Buffalo-Area Engineering Awareness for Minorities) received the Community Silver Commitment to Education 2001 Award at the Mayor's Partnership Awards Luncheon, held in October.

The Honorable Anthony M. Masiello, Mayor of the City of Buffalo, presented the award to Marilyn Helenbrook, BEAM Executive Director, and Oluwole McFoy, a past BEAM student who is now an engineer at Wendel Duchscherer and a member of the BEAM Board of Directors for their partnership with the Buffalo Public Schools.

BEAM, headquartered at SEAS, is a cooperative educational enrichment program that prepares inner city, minority, female and other under-represented students for careers in science, engineering, and technology. Some of its events for the Summer and Fall include:

- The BEAM SEAS Saturday Science and Technology Academy, in which over fifty students enrolled. These students and their parents also attended BEAM College Day, held on the south campus, where UB students Morris Green and Jennelle Cray discussed career choices with them. Many of these students also participated in Discover UB day.
- BEAM pre-collegiate summer program, in which fourteen minority junior high school students participated. This five-week program, coordinated by Drexel Gidney, senior academic advisor and director of minority engineering programs consists of math enrichment, an introduction to engineering computing, and physics. Engineering students instructed the students in math and computers.

For information about BEAM, contact Marilyn Helenbrook, Executive Director BEAM, 412 Bonner Hall, 645-3066

## BEAM Holds 4th Annual Golf Event

BEAM sponsored their 4<sup>th</sup> annual golf outing at Chestnut Hills Country Club in August.

The second annual Tony Campagna Memorial Award—presented to an individual who demonstrates outstanding loyalty and service to BEAM—went to Ted Dougher, Vice President of Global Supply Systems at Praxair.

The tournament was sponsored by WendelDuchscherer, the UB School of Engineering, Praxair, EGW Associates, Inc., URS Group Consultants, Inc., Superior Staffing/Technical Resources and Bristol-Myers Squibb. The Department of Public Works, County of Erie, held a special event at its department picnic to raise money for the BEAM golf fund-raiser.

The tournament winners were Dwight Garland, Rosalie Palamuso, Nora F. Clawson and Dave McLaughlin.



# Letter from the President



## EAA Board Officers 2000-2001



Dear SEAS Alumni –

I am pleased to be your 2001 – 2002 president.

Your Board of Directors has been busy planning and implementing a quality program for this school year.

We began this Fall by co-sponsoring the student picnic in September as the new school year kicked off – there were lots of good times, hotdogs and pop.

We were busy in October honoring the Frandina family – father Phil (BS CIE '64), sons Frank (BS CIE '73, MS CIE '74) and Joe (BS CIE '77) and daughter Rosanne (BS CIE '81) - as

our 2001 Engineers-of-the-Year. All are prominent Buffalo-area engineers who have done much for the Western New York infrastructure as well as for the profession. As a note of interest, this is the first year that the UBEEA has honored a family of engineers.

We also hosted our annual UB Bulls Football pre-game tailgate in collaboration with the UB General Alumni Association who provided the tent, tables and chairs for our tailgate cookout for the 50-plus Alumni that joined us. I would like to express a special thanks to the General Alumni for assisting us in this year's event. I am anticipating future co-sponsorship between the General Alumni and UBEEA (and possibly other alumni associations) for such events as Home Coming (for football) and similar meetings to address issues related to the school and other professions.

Events we are lining up for Spring semester 2002 include –

- SEAS Night at UB Basketball (Saturday, February 16)
- Co-sponsoring the Dean's Scholarship Reception, awards presentation and short performance by the Buffalo Chips, male acapella choir (Friday, April 5)
- Order of the Engineer (TBA)
- Co-sponsoring the Spring student picnic (TBA)

Alumni time and financial resources make our program go. Please help us make the remainder of this school year a success. I ask your consideration to—

- Join us as a paying member of your EAA for 2002 – your dues will go toward sponsoring events and assisting SEAS student clubs
- Help us help current students by contributing to our special scholarship fund
- Come to our events

At this present time the Board of Directors would like to extend an invitation to UBEEA members to join us in directly implementing our programs. If you are interested in joining the Board we will entertain and review any applications submitted from interested UBEEA members.

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  
UBEEA President

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

Stephen J. Buechi,  
Treasurer, CIE '93, MEng '95

Louis A. Picciano,  
Secretary, EE '65

James D. Boyle, CIE '78

James J. Devald, PE, CE '70

Craig M. Forget, PE, CIE '92, MS '96

John J. Jondle, EE MS '69

Ronald D. Koczaja, CE '70

Anthony Markut, IE '79

Theodore A. Myers, PE,  
Past President, CIE '81

Michelle Rhodes, CE '99

Richard Rink, PE, CIE '80

Andrew Sarantopoulos, ME '98

Allen J. Zylinski, PE, CIE '89, MEng  
'94

Jeffrey B. Mahon, EE,  
Student Liaison

William W. Swenson, PE,  
Coordinator Emeritus

Robert E. Barnes,  
SEAS Liaison, IE MS '76,  
PhD '84

## Learn More About Your

See our website at [www.eng.buffalo.edu/Alumni](http://www.eng.buffalo.edu/Alumni)

email us at [ub-eea@eng.buffalo.edu](mailto:ub-eea@eng.buffalo.edu)

Phone enquiries to (716) 645-2768 x1110

Engineering Alumni Association



## Reunion for Classes of '49, '50, '51 a Success

The UB Alumni Association hosted a reunion for the classes of '49, '50 and '51 this Summer.



The attendees went to breakfast with the deans and attended a gala champagne luncheon, held at UB's Center for Tomorrow. They also received a tour of the campus and attended lectures by prominent UB faculty from across the university, including one by SEAS' own Joseph K. Atkinson, professor of civil, structural and environmental engineering and director of the Great Lakes Program, entitled "UB and the Great Lakes."



After these presentations, engineering alumni mingled, perused memorabilia, and enjoyed refreshments at a hospitality event, sponsored by the Engineering Alumni Association, which was attended by Dean Mark Karwan and other representatives of SEAS and the EAA.



The following engineering alumni were in attendance:



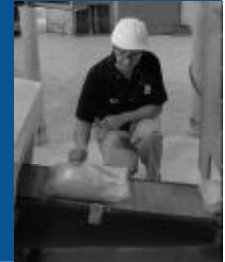
**Student Patrick Jean at Winfield Industries**

## Let Co-Op and ECI Help Your Business

SEAS would like to encourage our alumni and industrial colleagues to consider the advantages of employing UB engineering and applied sciences students through the Co-operative Engineering Educational Program and the Engineering Career Institute.

If you would like to employ one or more of these students, contact Dean C. Millar, 415 Bonner Hall at (716) 645-2768 x1112 or [dcmillar@eng.buffalo.edu](mailto:dcmillar@eng.buffalo.edu)

**Student Laura Rusinski at General Mills**



- Class of '49: Dick Freedman, Ray Haglund and Ray Wopperer
- Class of '50: Orlando Giombini, Al Massey, John Montorro (MS '63), Dr. Gordon Shahin (MBA '58), and Arthur Stefanski
- Class of '51: John Driscoll, Henry Frank, Joe Loftus, and George Richmond
- Class of '52: Bob Schultz
- Class of '55: Paul Kreppel

## Four Frandinas Named "Engineers-of-the-Year" continued from front page...

Phil, Joe, Frank and Rosanne are all prominent members of the engineering profession in Western New York. Each has served as President of the Erie-Niagara Chapter of the New York State Society of Professional Engineers (NYSSPE). Rosanne was the first woman ever to do so.

In 1988, Phil and his son Joe founded a consulting firm, Frandina Engineering, PC. Since then, they have designed several highways, bridges, and buildings, including the new IIMAK building in Amherst and the Buffalo Bills luxury suites.

Before starting Frandina Engineering, Phil held all of the engineering titles in the Erie County Department of Public Works, including Deputy Commissioner for Highways. In 1982, he was appointed Commissioner of Public Works and was responsible for all county highways, bridges and buildings. As the county's representative on the Erie Niagara Planning Board and the Niagara Frontier Transportation Committee, he approved funding for many projects, including the Buffalo-Niagara International Airport.

Phil has also served as president of the Technical Societies Council and the Buffalo section of the American Society of Civil Engineers (ASCE) and was a founder of the local chapter of the Association for Bridge Construction and Design. NYSSPE selected him as its "Engineer of the Year" in 1987, and the following year the state chapter of the American Public Works Association named him as their candidate for the "Top Ten Public Works Officials."

Before forming Frandina Engineering, Joe was employed by Nussbaumer & Clarke and URS Corporation, where he worked on such projects as the original Love Canal investigative study and the South Towns Sewerage Treatment Plant, as well as various bridge projects.

In 1995, after seven years with Frandina Engineering, Joe

took a full-time position as the Bill's Engineering Manager. He has since overseen the construction and renovation of over \$90 million worth of stadium improvements. He was recently promoted to Director of Stadium Operations.

A licensed engineer, Joe was honored as the New York State Young Engineer of the Year in 1985 and was the Erie-Niagara Chapter of the NYSSPE's Engineer of the Year in 2000.

Frank joined Hatch Associates in 1975, where his responsibilities included project management, civil and structural design and construction management for most of Hatch's and Hatch Mott MacDonald's (HMM) major transportation projects. His major projects include the Buffalo Subway and the Los Angeles Metro Red Line. Frank was also the chief engineer and project design manager for the Whiffier Tunnel in Alaska, for which he received ASCE's Outstanding Civil Achievement Award for 2001.

Frank was appointed Associate in 1984 and Vice President/Director in 1991. He is also responsible for HMM's design-build practice group and was recently appointed Manager of Engineering for all HMM's North American operations.

He is currently licensed as a Professional Civil or Structural Engineer in 19 states.

Rosanne began her career at Malcolm Pirnie before the City of Buffalo hired her in 1985, where she quickly became Director of Development. Here she supervised the design and construction of projects such as the Waterfront Village townhouses and the New Buffalo Industrial Park. Last year she left public employment to join her father at Frandina Engineering.

Rosanne has served on several civic boards including the Horizons Waterfront Commission, Friends of the Buffalo River and the Buffalo Water Board (as chair).

# Weitz Awarded Student of the Year Honors By NYSCEEA *continued from front page*

engine test acceptance rate by 40%, while decreasing scrap rate by 60%. Her faculty advisor was James Felske, professor of mechanical and aerospace engineering.

“Lesley personifies the win-win-win benefits of cooperative employment that accrue to the student, the employer and the university,” said Dean C. Millar, assistant dean of corporate relations in the School of Engineering and Applied Sciences.

Weitz has a perfect grade point average at UB. She currently serves as President of Tau Beta Pi and is a member of Gold Key and Phi Eta Sigma honor societies. Her career aspiration is to work as an engineering manager in an innovative, fast-paced field.

# EngiNet™ Graduate Distance Learning Spring 2002 Course Schedule

### Civil, Structural and Environmental Engineering

- CIE 442 Treatment Process Engineering
- CIE 516 Advanced Math for Civil Engineers
- CIE 564 Chemical Principles of Environmental Engineering
- CIE 565 Biological Principles in Environmental Engineering
- CIE 597 Construction Safety and Health Management
- CIE 619 Structural Dynamics of Earthquake Engineering II

### Electrical Engineering

- EE 519 Industrial Control Systems
- EE 529 Introduction to Electromagnetic Compatibility
- EE 540 Energy Conservation in Motor Drive Systems

### Industrial Engineering

- IE 504 Facilities Design

### Mechanical and Aerospace Engineering

- MAE 522 Heat Exchanger Design
- MAE 541 Topics in Finite Element Analysis
- MAE 442/542 Engineering Applications of Computational Fluid Dynamics

### School of Engineering and Applied Sciences

- EAS 480/580 Technical Communications for Engineers
- EAS 522 Principles of Engineering Management II
- EAS 590 Case Studies in Engineering Management

For more information about EngiNet™ and to receive course descriptions and registration materials, visit our website at [www.eng.buffalo.edu/EngiNet](http://www.eng.buffalo.edu/EngiNet) or email [enginnet@eng.buffalo.edu](mailto:enginnet@eng.buffalo.edu).  
For further questions, contact Marge Hewlett, EngiNet™ Administrator at UB's School of Engineering and Applied Sciences, at (716) 645-2769 x1106.

## The Engineering Alumni Association Invites you to attend Engineers Night at Basketball

**UB Bulls**  
vs.  
**Central Michigan**

**Saturday, February 16th at 7:00 pm**  
**Refreshments will be served**  
**Event chaired by Rick Rink**

### Tell Us About Yourself!

Let us know what you've been up to. We also welcome suggestions or new ideas for EAA events and activities

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### UB EAA Membership January 1 - December 31, 2002

Your Name (please print): \_\_\_\_\_

Your Address: \_\_\_\_\_

Your E-mail Address: \_\_\_\_\_

EAA Dues \$25.00

Scholarship Contribution (\$5 suggested) \$ \_\_\_\_\_

Total Enclosed: \$ \_\_\_\_\_

We would be pleased to accept your check or credit card for payment and process your membership and/or scholarship donation over the phone. Just call (716) 645-2768 x1110 or mail this form to **Engineering Alumni Association, University at Buffalo, 415 Bonner Hall, Buffalo, NY 14260-1900.**

CHECK (payable to UB Engineering Alumni Association) \_\_\_\_\_

MONEY ORDER \_\_\_\_\_ VISA \_\_\_\_\_ MASTERCARD \_\_\_\_\_ DISCOVER \_\_\_\_\_

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Expiration Date: \_\_\_\_\_ / \_\_\_\_\_

Signature: \_\_\_\_\_



**Fall**



**Picnic**



Students, alumni, faculty and staff kicked off a new semester with the traditional Fall Picnic, sponsored by the Engineering Alumni Association, the Engineering Student Association, and SEAS. Hotdogs were served by the hundreds as students enjoyed lively conversation with faculty and one another.

Kites without wind? International Indoor Kite Champion Lam Hoac demonstrates his craft (left) at the annual Engineering "Opening Day." New students worked in cooperative teams to build and test fly their own designs (center) while getting to know one another (right).



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## SEAS Spring 2002 Calendar

**February**

16 SEAS Night at Basketball  
17-23 National Engineers Week

**April**

5 Dean's Scholarship Reception  
25-6 Dean's Council

**May**

11 SEAS Commencement

**TBA**

Order of the Engineer Student Spring Picnic

**Join Us !!!**

This is a publication of the School of Engineering and Applied Sciences--External Affairs and the Engineering Alumni Association, University at Buffalo. Robert E. Barnes, Ph.D., editor; Lee F. Kahan, associate editor; Maria Drozda, editorial assistant. Other contributions: the UB Reporter and the UB Office of Publications. Anyone wishing further information on the articles contained herein may call External Affairs at (716) 645-2768 x1110, Fax (716) 645-2495, or email [ub-eea@eng.buffalo.edu](mailto:ub-eea@eng.buffalo.edu).