

Greatbatch Presented with Russ Award

Wilson Greatbatch (MS EE '57) was co-recipient of the 2001 Russ Prize presented at this year's National Academy of Engineering Awards Dinner.

The award recognizes outstanding achievement in an engineering field that is currently of critical importance and that contributes to the advancement of science and engineering, as well as improves quality of life through its widespread application or use.

Greatbatch's major contribution was the invention of the implantable pacemaker. Fittingly, he shared the award with Earl Bakken, the co-founder of Medtronic who developed the first wearable, external, battery-powered, transistorized pacemaker. The two received medals of recognition and split a \$500,000 prize.

Greatbatch served as assistant professor at the University of Buffalo from 1953 to 1957, when he left to become a division manager at Taber Instrument Corporation in North Tonawanda, NY. It was here that he first began work on the implantable pacemaker. Using his own savings, he hand-built fifty pacemakers, ten of which were implanted into humans. In order to dedicate all of his time to the development of pacemakers, he left Taber to found Wilson Greatbatch, Incorporated, in 1960.

His pacemaker was licensed to Medtronic, Incorporated and achieved quick clinical acceptance in the medical world. He sold the patent to Medtronic

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Greatbatch



Stone



Tyabji

2001 Commencement: Stone Receives Dean's Award

The Dean's Award for Engineering Achievement was given to Henry Stone (BS ME '49) at this year's commencement.

Each year the School of Engineering and Applied Sciences gives this, its highest honor, to a person who has made an exceptional contribution to the practice of engineering or has had an exceptional professional career.

Mr. Stone immigrated to the United States with his parents from Germany in the pre-WWII era. He completed his American high school education at night, while working, and went on to serve as a member of the U.S. Army Corps of Engineers in the South Pacific during WWII. He then returned to Buffalo and enrolled in what was then called the University of Buffalo, from whence he graduated summa cum laude.

 [Commencement stories continued on page 5](#) 

Tyabji Made Dr. of Humane Letters

Hatim A. Tyabji (MS EE '69), an internationally recognized pioneer in the field of wireless data technology, was awarded a State University of New York Doctor of Humane Letters.

Tyabji has amassed over 25 years as a business leader. During this time, he has combined his extensive engineering and business knowledge and experience to serve in a number of transformative management positions. After 13 years leading manufacturing initiatives at Sperry Corporation, he shepherded the small-scale company, VeriFone, to international prominence. Under his guidance, VeriFone not only came to define the global standard for transaction automation, but also became famous as a model of progressive, humanitarian business operations. In 1997, as chairman, president and CEO, he negotiated VeriFone's sale to Hewlett Packard for \$1.2 billion.

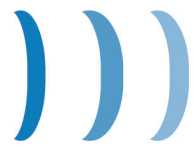
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Carey and Marrone Honored with Alumni Awards

Van P. Carey (MS ME '76, PhD '81) and Paul V. Marrone were both recognized for their achievements with Alumni Awards.

Carey received this year's Clifford C. Furnas Memorial Award. The award is presented annually to a graduate of the UB School of Engineering and Applied Sciences or within the disciplines of natural sciences and mathematics in the College of Arts and

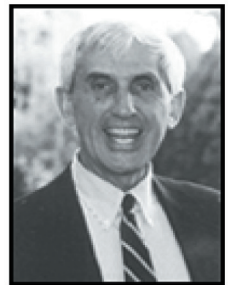
Sciences who has brought honor to the university by distinguishing himself or herself in a field of science.

Soon after graduating from UB, Carey began working on experimental refrigerants and on heating, ventilation and air-conditioning designs at Harrison Radiator. Since that time, he has become internationally recognized as a leader in the field of heat

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Carey



Marrone

Former UB Professor Remembered Through \$260,000 Endowment

John Zahorjan (PhD IE '79), a Fisher-Price industrial engineering executive who "retired" to his first love of teaching at the University at Buffalo, has been remembered by his family through a \$260,000 pledge to UB's School of Engineering and Applied Sciences.

His son, John Zahorjan, established the Dr. John Zahorjan Student Scholarship Fund to support students in the Department of Industrial Engineering who are pursuing a master's degree in engineering management with a concentration in production management.

"My father's enjoyment of life came from helping others," a feeling reciprocated by "the scores of former students, fellow faculty, professional associates and friends who offered condolences and contributions" following his father's death, Zahorjan said. "That I have the great and unusual fortune to possess the means and the desire to create this lasting shadow of my father is due entirely to the man he was, and so in a very real sense it is he himself reaching out."

Proud of her son and his desire to create a lasting memory of his father through the scholarship, Madeline Zahorjan noted, "My husband loved teaching and helping the students discover their own worth. John always felt that education was the best inheritance anyone could give to a young person."

The endowment will provide \$12,000 per year to help with tuition and fees for the master's program, enough to fund more than one scholarship winner annually.

Mark H. Karwan, dean of the School of Engineering and Applied Sciences, praised Zahorjan. "This

is a wonderful way to honor a much-beloved teacher. While a gift like this certainly can't replace the leadership, mentorship, and humor of our colleague, it can help us carry on his legacy of excellence and his patient pursuit of making engineering a practical and daily part of manufacturing management."

Zahorjan, an adjunct professor of industrial engineering at the time of his death in 1999, received the Dean's Award for Engineering Achievement that same year, in recognition of his career, teaching and dedication to advising students in the practice of engineering.

Zahorjan began his career in 1950 at RCA, and subsequently moved on to Magnavox, to F.W. Sickles Co., to Phillips Control Corp. and to the John Oster Co., part of Sunbeam Corp. In 1964, he joined Fisher-Price Toys as the company's first licensed professional engineer and was responsible for modernizing quality control. Rising through the executive ranks to oversee major expansions in plant operations, Zahorjan still found time to earn his doctorate from UB in 1979.

In 1983, he retired as vice president of operations at Fisher-Price and began an extensive career as a consultant and a faculty member at UB. In addition to teaching, Zahorjan ran the internship program for undergraduates in industrial engineering. He also used his management and consulting expertise to help create The Center for Industrial Effectiveness (TCIE) at UB. Under his guidance, TCIE received "Project of the Year" awards in 1989 and 1991 from the National Association of Management and Technical Assistance Centers.

Madeline Zahorjan lives in Orchard Park and her son is a professor in the Department of Computer Science and Engineering at the University of Washington.

Friends and former students of John Zahorjan who wish to contribute to the scholarship fund may contact the SEAS Development Office at 1-888-205-2609 or Jim Seng at seng@buffalo.edu.



John Zahorjan

Lee Family Honors Son, UB Alumnus Through Memorial Fund

It's a matter of honor for the family of **Yong H. Lee**, which has remembered the 1981 University at Buffalo graduate with an endowed scholarship in UB's School of Engineering and Applied Sciences.

The Lee family has given more than \$43,000, bringing the total in the fund to \$50,000 and completing what classmates and friends began as a memorial fund for the helicopter pilot who died in 1996 in a crash during the initial test flight of a military helicopter bound for the presidential fleet.

"My brother was a very special individual, who brought out the best in everyone," said Gina Lee-Glauser, Lee's sister, who graduated from UB with a bachelor's degree in 1982 and a master's degree in mechanical and aerospace engineering in 1988. "Yong loved UB and the friends he made. He never came home on holidays without a friend or two or three. This is how we, his siblings, got to know UB."

Mark H. Karwan, Dean of the School of

Engineering and Applied Sciences, thanked the family, praising Lee as "an outstanding graduate of our school and a leader on campus, as well as in his career." Karwan added that "the family's generous gift demonstrates a confidence in our school and a level of financial support that is vital to our program, providing us with the ability to increase our margin of excellence by attracting or retaining students with superior qualifications."

The Yong H. Lee Endowed Scholarship Fund will assist a student in UB's Mechanical and Aerospace Engineering Department during his or her junior and senior year. The two-year scholarship will be given every two years to a student based on factors including financial need.



Yong Lee

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Generation to Generation

Generation to Generation

Two Years and \$4.4 Million to Go

The comprehensive campaign for the School of Engineering and Applied Sciences (SEAS) set a goal of \$18 million back at the start of the public phase of the campaign for UB, which was officially announced on October 20, 2000. I'm thrilled with what we've accomplished thus far, but our work is still cut out for us. We need to continue to identify and work with our alumni and friends, along with industry to accomplish the remainder of our goal. We need a higher rate of participation from our alumni and we need to get closer with businesses that have an interest in engineering. Our school is the largest and most comprehensive public school of engineering in New York State and this is the first time the School of Engineering has appealed to its alumni and friends for support on this scale. It's our time to give back and help our school gain in stature and quality. The university has been able to operate the school on the funding provided by the state of NY for many years, but times have changed.

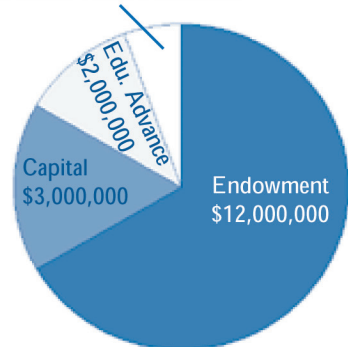


James McLernon

What was once 90% of our operating budget, is now only about 33%. The need for private funding and the building of our endowment is greater than ever. I would like to draw your attention to the box on this page titled "Case For Giving". This nicely summarizes how your contributions will benefit the School of Engineering and Applied Sciences.

Here is a quick update on our work so far. As previously stated, we started with an \$18 million goal and we have \$13.6 million in gifts and commitments secured to date. The pie chart here shows the allocation breakdown of the money being raised. As you can see, the lion's share (66%) of the \$18 million goal is to help build our endowment. The building of our endowment will be instrumental to the mission of SEAS, which is to provide effective and high-quality engineering education at the undergraduate, graduate and continuing education levels.

Annual Fund \$1,000,000



\$18 Million SEAS Goal

I urge you all, my fellow alumni, to help us at this time in reaching our goal and realizing our mission. I know not all of us can give major gifts, but every little bit helps and together we can help our alma mater a great deal. I am proud to be involved with this campaign that has such an impact on the students, faculty and alumni of UB's School of Engineering. I hope you can feel the same pride and help us in this campaign as I have.

Sincerely,

James W. McLernon, BS IE 1950
Campaign General Chairman

Case For Giving

To help realize its mission, the School of Engineering and Applied Science has embarked on an \$18 million comprehensive campaign to raise funds, in order to:

- I. Recruit a talented and diverse undergraduate and graduate student population.
- II. Attract and retain a talented and diverse faculty and staff.
- III. Obtain and maintain state of the art teaching and research facilities.
- IV. Create strong partnerships with industry.

For information on how you can help us reach these goals, contact Jim Seng, Director of Development, or Tim Siderakis, Development Officer, at 1-888-205-2609. You can also reach them by e-mail at seng@buffalo.edu or tsiderak@buffalo.edu.



Lewis and Zirnheld Receive Plesur Awards

Kemper Lewis, assistant professor of mechanical and aerospace engineering, and **Jennifer Zirnheld**, a lecturer in the Department of Electrical Engineering, have both received a 2001 Milton Plesur Excellence in Teaching Award from the Undergraduate Student Association.

A UB faculty member since 1996, Lewis is 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 modern design theory. He has recently received a prestigious National Science Foundation Faculty Early Career Development grant to apply game



Zirnheld and Lewis

theory to improve the manufacturing design process.

Zirnheld is a doctoral student in electrical engineering and has taught in the department since 1996. She has been the Bergquist Doctoral Fellow in Energy Systems since 1998, before which she was the James Clerk Maxwell Primex Doctoral Fellow and the James Clerk Maxwell Olin Doctoral Fellow.

The awards, which honor teaching excellence and commitment to students, are given in memory of Milton Plesur, a UB faculty member who delighted generations of students with entertaining lectures that mixed erudition with warmth and humor. Plesur died in 1987. Recipients of the award are student-nominated and selected.

Carey and Marrone Receive Alumni Awards

continued from page 1

transfer.

His industrial work became the basis for his university research, which has led to patents that have impacted the design of many of today's heating, ventilation and air-conditioning systems. Carey is currently professor of mechanical engineering at the University of California-Berkeley.

The Walter P. Cooke Award was presented to Marrone, retired vice president of Veridian Engineering— formerly Cornell Aeronautical Laboratory (CAL) and Calspan — in Cheektowaga.

The Cooke Award is given to a non-alumnus who has made notable and meritorious contributions that have influenced the university's growth and improvement, and stimulated others to show an active interest in and give material support to UB.

Marrone is recognized for giving his time and expertise to assist the Multidisciplinary Center for Earthquake Engineering Research procure funding from the National Science Foundation. He is also active with the School's Technical Communications program.

He joined CAL after receiving an undergraduate degree in aeronautical engineering from the University of Notre Dame, and graduate degrees from Princeton University and the University of Toronto.

Greatbatch Receives Prestigious Russ Award

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in 1961, but he continued to improve and refine the pacemaker's power source, adding, in the early 70's, a battery with a lithium anode, an iodide cathode, and a solid-state, self-healing electrolyte. In 1963, Mennen-Greatbatch Electronics, Incorporated was formed to commercialize the astronaut physiological instrumentation that he built for the first U.S. monkey space shots. Mennen-Greatbatch later purchased the assets of Wilson Greatbatch Ltd., but the company was revived to manufacture, market and license the lithium iodide battery to the pacemaker community. The battery soon became used in more than 90% of the world's pacemakers.

In 1985, Greatbatch formed Greatbatch Gen-Aid, Ltd., to provide genetic assistance to medical and agricultural professions. He then founded Greatbatch Enterprises, Incorporated in 1999 to pursue nuclear power generation through the nuclear fusion of helium-3 ions and to consider the design of a MRI compatible pacemaker.

Obituary: John C. Huddleston

John C. Huddleston, professor emeritus of civil, structural and environmental engineering, passed away in February at 73.

Huddleston received his Ph.D. from Columbia University and joined the Department of Civil Engineering at UB, where he had a distinguished twenty-seven year career. Huddleston was widely published, with books in the areas of engineering mechanics, computer programming, computer languages, and elasticity. He was particularly well known for his love of teaching. His caring manner endeared him to students and colleagues alike.

John is survived by his wife, Martha Hendry Huddleston, and three children: James B. Huddleston, Nancy S. (Charles D. Stenger) Huddleston and Amy A. Huddleston.

Safiuddin Wins IEEE Award



Mohammed Safiuddin, Advanced Technology Applications Professor in the Department of Electrical Engineering, was awarded IEEE's Meritorious Achievement Award in Continuing Education.

Safiuddin is a frequent presenter in the School of Engineering and Applied Science's EngiNet distance learning program.

Stone Receives Dean's Award

In 1950, Stone started in the then new GE affiliate Knolls Atomic Power Laboratory (KAPL) in Niskayuna, NY, which designed, built and tested nuclear power plants for the U.S. Navy, operated prototype plants and trained Navy personnel. Rising through the ranks, Mr. Stone was appointed KAPL General Manager in 1968.

In 1974, Mr. Stone began work as the Engineering Manager in GE's San Jose commercial reactor operation where he was elevated to a GE Vice President. He retired from GE in 1987 after an exemplary 38-year career.

Stone received a master's degree in engineering from Union College in 1955. He is a member of the national engineering honors society, Tau Beta Pi, the American Nuclear Society and the American Society of Mechanical Engineers. He was elected to the prestigious National Academy of Engineering in 1981.

Since his retirement, Stone has consulted with various utilities and U.S. Department of Energy facilities. He continues to lend his expertise to electric power utilities.

Through the years, Mr. Stone has remained a loyal alumnus. He has given the School a gift to benefit an engineering student who is a minority or an immigrant like himself.

Mr. Stone resides with his wife of 53-years, Mrs. Joan Stone, in San Jose, CA; they have four children and four grandchildren.

Xin Hu Recognized for Chancellor's Award

Student **Xin Hu** was recognized at this year's commencement ceremony for winning a Chancellor's Award for Excellence.

As a member of the University Honors Program, Hu was awarded the Distinguished Honors Scholarship, which is given to the top fifteen students who enter

UB as a freshman in a class of 2,500. She also received a Quaker Chemical Foundation Scholarship and the School of Engineering Gregory B. Jarvis Memorial Scholarship.



Xin Hu

During her academic career at UB, Hu has been awarded the Grace W. Capen Academic Award for Excellence as well as a National Science Foundation grant for research experience in Applied Spectroscopic Evaluation.

Hu graduated with B.S. degrees in Computer Engineering and Electrical Engineering.

Tyabji Given Humane Doctorate

In 1998, Mr. Tyabji launched Saraide, as a joint venture with Nortel Networks, Microcell Telecommunications, Omni Communications and GSM Capital. The company was designed to drive the convergence of the Internet and wireless communications. A year later he negotiated its sale to InfoSpace.com. Presently, he is chairman of the plastic card giant DataCard and he also serves on the board of directors of Ariba, Best Buy, eFunds, Impresse, Infineer and SmartDisk.

A naturalized U.S. citizen, Mr. Tyabji was born in Bombay, India in 1945 and received a BS EE from the College of Engineering in Poona, India. He came to the U.S. in 1967, and subsequently earned his MS in electrical engineering from the University at Buffalo. In addition, he holds an MBA in international finance from Syracuse University and is a graduate of the Stanford Executive Program.

Mr. Tyabji remains one of UB's most devoted and energetic alumni. He is a member of the Engineering Dean's Council and a past recipient of the UB Engineering Dean's Award. Recently, he funded an endowed professorship of computer science and engineering at UB's School of Engineering and Applied Sciences to honor his wife, Durriya.

Mr. Tyabji and his wife live in Los Alto Hills, CA; they have two sons, Salim and Abizer.

Commencement

At this year's Engineering Commencement, President William Greiner and Dean Mark Karwan presided. David Warren (ME), President of Tau Beta Pi, gave the Student Address; Stephen Kornienko (IE) was the Banner Carrier; Anill Rupan (ASE) delivered the Salutation; and Janine Horn (CE) gave the Farewell.

Engineering Distinction
Mark Robert Andrews, EE
Jeffrey Richard Balikowski, ME
Phillip Lee Barbee, IE
Benjamin Paul Beardsley, CIE
Mark Adam Bednasz, EE
Michael Brodfuehrer, EE
Kok Keong Chain, CE
Jie Ling Jane Chiu, EE
Sami Memet Cirpili, ME
Gordon McNabb Clarke II, CE
Alan Francis Cote, ME
Joshua Elijah Davis, EE
Michael John DeGrave, ME
Jason Lawrence De Vore, EE
Gregory Kermit Dietz, ME
David Vito Gallo, ME/ASE
David Donald Givone, CEN
Matthew Benjamin Goodyear, EE
Yie Meng Hoi, ME/ASE
Xin Hu, EE/CEN
Nicholas Michael Kania, ME
Stephen Robert Kornienko, IE
Michael Anthony Lewandowski, ME
Choon Giap Lim, ASE
Andres Eduardo Losada, IE
Justin Kenneth Markunas, EE
Andrew John Mills, ME
Jessica Lynn Munch, IE
Eng Bee Ngu, EE
Michael Christopher Pollino, CIE
Christopher Joseph Rauscher, ME
Victor W. Reyes, EE

Andrew Stephen Roaldi, EE
Cory Allen Robinson, CE
Charles Kurt Rottner, IE
Tung King See, ASE
Scott David Schmitz, EE
David Shih, EE
Kok-Keong Soh, IE
Jitti Sukontasup, EE
David Cory Warren, ME
Howard Joseph West, CE
Tracey Louise Whitmire, EE
Jason James Williams, CIE
Michael Edward Winter, ME
Helen Yan, EE
Tung Yuan Yang, CIE
Jian Hang Yu, CE
Tau Beta Pi Graduates
Eu Jin Ang
Michael J Astrella
Jeffrey Richard Balikowski
Mark Adam Bednasz
Patrick David Brady
Michael Robert Castellani
Kok Keong Chain
Jeu Jye Cheong
Gregory K. Chu
Tung-Chin Chung
Gary Allen Ciccone
Joseph Michael Deangelis
Michael DeGrave
Jason L DeVore
David Donald Givone
Matthew Benjamin Goodyear
Tom M Hanselman

Yiemeng Hoi
Xin Hu
Ivan Lathrop Itchkawich
Nicholas Michael Kania
Shahrukh Akbar Khan
Stephen Kornienko
Koklam Lai
Fui Ken Liew
Samson ChoonGiap Lim
Andres Eduardo Losada
Justin Kenneth Markunas
Brian Christopher McHale
Andrew J Mills
Kuniesun Mori
Jessica Lynn Munch
Carla Aparecida Ng
Engbee Ngu
Yuji Nozaki
Christopher Michael Parrag
Michael Christopher Pollino
Chris J Rauscher
Victor Reyes
Tung-King See
David Shih
Mark J Soda
Kok-Keong Soh
Jitti Sukontasup
David Cory Warren
Tracey Louise Whitmire
Scott G Winseman
Michael Edward Winter
Helen Yan
Ken-Tye Yong
Stephen John Zielinski

Business Alliance Marks Success at Grand Reception

UB Business Alliance celebrated its numerous contributions to local industry at its 2001 Grand Reception, held in February.

Its major achievements during the past 18 months include the retention of more than 8,000 jobs and the creation of more than 600 new ones through the Strategic Partnership for Industrial Resurgence (SPIR).

The UB Business Alliance has assisted nearly 60 companies in the past year and a half, including:

- Technicor, a biotech start-up that received assistance from UB's Department of Chemical Engineering professors **Sriram Neelamegham** and **Paschalis Alexandridis**.
- The Depew plant of Quebecor, which got help with its \$15 million expansion from **Li Lin**, UB associate professor of industrial engineering.
- Chemical manufacturer Carborundum: **Rakesh Nagi**, associate professor in the UB Department of Industrial Engineering, and **Chunming Qiao**, associate professor in the UB Department of Computer Science and Engineering, helped automate their scheduling system.

Other recent achievements of the UB Business Alliance include a \$600,000 federally funded National Science Foundation project to bring jobs and technologies to the region; new licensing agreements, including one in which the Australian postal service will employ a handwriting-recognition technology developed at UB; and instant access to UB's resources for business through a brand-new Web site (<http://www.uballiance.buffalo.edu>), with a searchable database of UB technologies available for licensing.

Business Alliance Bids Farewell to Mattulke

Timothy Mattulke, the project manager for the Strategic Partnership for Industrial Resurgence (SPIR), has left UB to join a new start-up company. In his work with SPIR, a part of the UB Business Alliance, Tim was involved in product and process development for improved industrial competitiveness. He did a great job of interfacing Western New York companies and SEAS faculty and staff for successful project outcomes. SEAS wishes Tim well in his future endeavors.

Lee Family Honors Son and UB Alumnus Through Endowment

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While at UB, Lee was active with the Korean Student Association and helped start a festival that featured Tae Kwon Do demonstrations, traditional Korean fan dances and Korean food tasting.

After graduation, Lee became a Marine and went through flight school. He received the rank of captain before transferring to the U.S. Navy in 1989 and becoming a lieutenant commander. During his time in the Navy, Lee served in the Gulf and later flew helicopter relief missions for Kurdish refugees. He also authored several maintenance manuals for military personnel on the CH-53E model.

In 1994, Lee was stationed in Italy when Sikorsky, a company that manufactures

CEDAR Makes Life Harder for Criminals

Kidnappers and forgers beware. There's a new investigator in town, and his name is ... CEDAR?

That's right. Computer science and engineering professors affiliated with the Center for Document Analysis and Recognition (CEDAR) have turned super-sleuths. With funding from the National Institute of Justice (NIJ), they have developed a computer program that is 98 percent effective in determining authorship of handwritten documents, which could prove instrumental in criminal cases involving ransom notes, forged checks or other "anonymous" documents.

CEDAR, the world's largest university-based research center devoted to new technologies that can recognize and read handwriting, attracted the interest of the NIJ through its work on systems that can read and interpret handwritten addresses on envelopes for the U.S. Postal Service.

The UB software is the first that can identify who wrote a particular document based on purely scientific criteria.

"A human expert may put in his or her own bias even unconsciously," said **Sargur Srihari**, SUNY Distinguished Professor in the Department of Computer Science and Engineering and the director of CEDAR. "We have built the foundation for a handwriting analysis system that will quantify performance and increase confidence in determining a writer's identity."

The scientific approach that Srihari and his colleagues are developing also may be useful in establishing individuality (such as with DNA, fingerprints or facial features) in the emerging field of biometrics, the automated identification of a person based on precise measurements of physiological or behavioral characteristics.



Sargur Srihari,
director of CEDAR



The Lees, with Dean Mark Karwan (l) at the 2001 Scholarship Reception

and tests helicopters for the U.S. Armed Forces, identified him as a perfect candidate to become a prestigious test pilot. Lee-Glauser said her brother took the job because "it gave him the opportunity to assist the designers in making the aircraft safer and more efficient for military use, and it would bring him closer to home and family." Yong was one of four persons killed when a brand-new CH-53E crashed during its test flight on May 9, 1996, in Connecticut.

Classmates and friends wishing to donate to the Lee endowment fund can call the SEAS Development Office at 1-888-205-2609 or contact Jim Seng at seng@buffalo.edu.

New Grant Money Will Help CSEE Revolutionize Earthquake Research

The Department of Civil, Structural and Environmental Engineering has been awarded \$16.5 million in federal and state funding to develop the world's most versatile earthquake engineering research facility.

The new funding will be used to construct testing capabilities that will revolutionize the understanding of how structures behave during earthquakes. It includes two grants from the National Science Foundation (NSF): one for \$4.38 million to build a large-scale, high-performance testing facility and one for \$6.16 million to construct versatile, high-performance shake tables.

It also includes \$6 million from the State University of New York construction fund for a new infrastructure to house the new equipment, which will include an addition to Ketter Hall on the UB North (Amherst) Campus that will quadruple the size of the facility. The equipment will include: A new six-degree-of-freedom shake table situated on tracks that can be rapidly re-positioned to be immediately next to the existing shake table, or as far as 120 feet away; an upgrade of the existing shake table to a six-degree-of-freedom table; new dynamic and static actuators that provide a total capacity of 1.7 million pounds of force, and

major power capacity to conduct high-speed, high-load dynamic testing; and high-definition television equipment to instantly transmit to other engineering laboratories both physical and computational results of UB tests for a fully integrated, nationwide collaboratory.

The NSF grants to UB are a critical piece of the George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES). NEES is an \$81.9 million NSF special project designed to usher in a new era in earthquake engineering research in the U.S. According to NSF, this network will act as a catalyst to "transform earthquake-engineering research from its current reliance on physical experiments to investigations based on integrated models, databases and model-based simulation." By installing new technological infrastructure, NEES will make it possible for engineers to more quickly translate research findings into technologies that can make structures safer during earthquakes.

Professors **Michel Bruneau, Andrei M. Reinhorn, Michael C. Constantinou, Sabanayagam Thevanayagam and Eddy Rojas** are co-principal investigators on the two NSF grants.

Student Work Experience Programs Continue to Succeed!

Our Engineering Student Work Experience Programs have continued to grow and receive enthusiastic responses from both students and employers. At this time some students are still available for employment this Summer. If you have need in your workplace for the assistance of competent engineering students, please contact Dean C. Millar, Assistant Dean at the Engineering Career Institute (415 Bonner Hall North Campus) at 645-2768 x1112, Fax 645-2495. For more information, visit our website at [www. eng-intern.buffalo.edu](http://www.eng-intern.buffalo.edu)

An SGI-supplied supercomputing cluster based on the Linux operating system that provides high performance at low-cost and takes up comparatively little floor space has been installed at the University at Buffalo's Center for Computational Research (CCR), the only academic beta-test site for the cluster in the world.

The SGI cluster for Linux is CCR's most powerful machine, packing 150 Gigaflops (150 billion floating operations per second) versus the 64 billion of existing supercomputers. But for all its power, the SGI cluster for Linux, made up of 76 1-3/4 inch-high machines, each containing two Pentium III chips, takes up only about 16 square feet of floor space in the machine room. By comparison, the 128 processor SGI Origin 2000 server, which delivers 64 Gigaflops, takes up almost three times that much.

"This is a 'rack 'em, stack 'em' supercomputer," said **Russ Miller**, CCR director and UB professor of computer science and engineering. "It's one-third the size of some of our other supercomputers, and three times as powerful. That makes these machines an order of magnitude more efficient in those situations where space is critical."

Miller said the cost-effectiveness of a cluster lies in the

fact that its component parts, typically commodity processors from companies like Intel and AMD, are relatively inexpensive due to the large penetration in the marketplace.

"The price of supercomputing is tumbling," said Miller. "And we believe that the SGI cluster is at the forefront of cost-effective supercomputing."

Staff at the UB center put the cluster together for approximately one-fifth the cost of some of their other supercomputers. Since this machine is approximately 2-3 times as powerful as those machines for certain applications, this is a highly cost-effective means to support many high-end applications.

According to Miller, the SGI cluster for Linux was up and running at CCR within days of its installation, solving important problems in computational chemistry, biology and crystallography.

CSE Bolstered by New "Rack 'em Stack 'em" Supercomputer

The 16th Annual Dean's Scholarship Reception



Richard E. Dollinger
Energy Systems
Institute Scholarships



Lockheed-Martin
Scholarships



Senior Scholar Awards



Gregory B. Jarvis
Scholarships



E&WG Foundation
Undergraduate
Scholarship



Tyco Power Systems
Doctoral
Fellowship



EE Graduate Research
Scholarship in Memory of
Dr. David M. Benenson
(with Mrs. Lydia
Benenson)



Robert B. Kleinschmidt
Memorial Scholarship



J.W. McLernon Superior
Student Awards



Engineering Undergraduate Fellowships
(with Dean Mark Karwan and Mike Ryan)



Elbridge N. and
Stephana R. Townsend
Scholarship (with Bill
Townsend, donor)



Michael J. Bauda
Scholarship Award

The School of Engineering and Applied Sciences and the Engineering Alumni Association hosted their 16th annual scholarship reception for UB engineering students who received awards this year for academic excellence and leadership skills. Dean Karwan presided. See the Student News section below for a complete list of winners.

At the Dean's Scholarship Reception, Engineering Alumni Association Awards went to **Jean Balent**, **David Howe**, **Anill "Rick" Rupan**, **David Warren**, and **Carolyn Zielinski**; Senior Scholar Awards to **Michael Astrella**, **Jason Buneo**, **Chan Toong Foong**, **Samuela Franceschini**, **Kok-Lam Lai**, **Nicholas Kania**, **Jessica Munch**, and **Michael Pollino**; J.W. McLernon Superior Student Awards to **Elvis Alvarez**, **Moises Atilas**, and **Sarah Schaub**; Lockheed-Martin Undergraduate Scholarship Awards to **Koelli Bhattacharjee** and **Pascal Cohen**; OxyChem Scholarship Awards to **Sarah Karl** and **Carol Schuster**; the Michael J. Bauda Scholarship Award to **Jennifer Taranto**; Engineering Undergraduate Fellowships to **Joseph Holloway**, **Robyn Liverpool**, **Tanya Randolph**, and **Behanzin Reid**; the Robert B. Kleinschmidt Memorial Award to **Kathryn Nowicki**; the EE Graduate Reserach Scholarship in memory of Dr. David M. Benenson to **George Karystinos**; the E&WG Foundation Undergraduate Scholarship to **Jason Buneo**; the Tyco Power Systems Doctoral Fellowship went to **Kevin Burke**; the Richard E. Dollinger Energy Systems Institute Scholarships to **Jason Buneo** and **John Tursi**; the Elbridge N. and Stephana R. Townsend Scholarship to **Daniel Quirino**; Gregory B. Jarvis Scholarships to **Aaron Beechler**, **Steven Kieffer**, **Matthew Mandiak** and **Lisa Murawski**; and the Robert H. and Katherine Goldsmith Fellowship to **Matthew Gersley**. In other student news, **Christopher Egert**, a graduate student in the Department of Computer Science and Engineering, was awarded an Excellence in Teaching Award.

UB Hosts Institute of Industrial Engineers Regional Conference

Industrial engineering faculty and students at the University at Buffalo hosted the 2001 Institute of Industrial Engineers Conference in the Spring.

The conference was attended by over fifty students from universities across the Northeast, including Rutgers, the University of Pittsburgh, Penn State, the New Jersey Institute of Technology, RIT, and Northeastern. It included presentations from academia and industry on topics ranging from lean thinking to human factors. The keynote speaker was Francis Ritzenhaller, who helped undergraduates appreciate the value of an industrial engineering degree.

According to **Gregory Stark**, the Regional Conference Chairman, the event was "a huge success ... which cannot be attributed to one person but to a team of individuals that gave their time and effort to come together as one." He cited the assistance provided by **Sheila Radicella**, **Stephen Kornienko**, **Andres Losada**, **Joe Wilson**, **Larry Herbst**, **Melinda Tryon**, **Dana Laper** and **Professors Thomas Hill** and **Li Lin**.

Next year, the conference will be hosted by the New Jersey Institute of Technology.



FROM THE EAA PRESIDENT

Engineering Alumni Association Board of Directors



Ted Myers

Greetings Fellow Alums:

Please join me in congratulating and welcoming our newest members of the UB Engineering and Applied Sciences Class of 2001.

You are all invited to participate in the Engineering Alumni Association and remain connected to the University at Buffalo whether you graduated this year or many years ago.

Over the years, I have noted that practicing engineers, perhaps more often than any other group, are willing to openly exchange new ideas with young engineers while maintaining a hold on

traditional engineering principles and values. This mix of experience, tradition, creativity and new ideas, combined with a willingness to listen and participate, has helped the engineering profession grow.

This mix of qualities is also beneficial to the UB School of Engineering and Applied Sciences and the Engineering Alumni Association. We have maintained a program of traditional activities such as football tailgate parties, basketball nights, the annual Dean's Scholarship Reception, and sponsorship of student events.

We plan to continue these traditional events; however, we are considering new formats in which to undertake them. For instance, we are looking into participating in the UB General Alumni Association's homecoming event on October 13th, rather than holding our own separate event as we've done in the past. We are also looking at new ways to conduct our awards event. I ask for your continued support and participation in our program even though it may come with some changes in format.

Please watch for details on UB Engineering Alumni Association events in our newsletter, "EAA Today," in your mail, or at our web site- www.eng.buffalo.edu/alumni. As always, we look for your input on these potential changes and all aspects of our program. Please do not hesitate to let us know what you think of our events, and to suggest other events which you would like us to sponsor.

Thank you for the opportunity to serve as your President. As is our custom, Andy Sarantapoulas will become President on July 1st. I ask that you continue to support Andy as you have supported me over the past year.

Thank you to all who have supported our program this year, especially my wife, Debbie; the university staff; our Board of Directors; fellow alums; and students. Special thanks go to Peter Buechi, Joe Testa and Jon Kolber, who are "retiring" from our Board, for all their years of service.

Have a safe summer, and I hope to see you in the Fall.

Yours for UB Engineering,

Theodore A Myers (PE BS CIE '81), President

- Theodore A. Myers, PE, Pres., CIE '81
- Andy Sarantapoulas, VP, ME '98
- Louis A. Picciano, Sec., EE '65
- Stephen J. Buechi, Treas., CIE '93, MEng '95
- Robert E. Barnes, School Liaison, IE MS '76, PhD '84
- Howard E. Strauss, PE, EAA Faculty Advisor Emeritus, ME MS '54
- William W. Swenson, PE, EAA Coordinator Emeritus
- Peter J. Buechi, PE, CIE '68, MS '70
- James D. Boyle, CIE '78
- James J. Devald, PE, CE '70
- Craig M. Forget, PE, CIE '92, MS '96
- Stephen J. Golyski, PE, CIE '92, MS '96
- John J. Jondle, EE MS '69
- Ronald D. Koczaja, CE '70
- Jonathan E. Kolber, PE, CIE '72, MS '74
- Anthony Markut, IE '79
- Fred Meli, PE, CIE '76
- Michelle Rhodes, CE '99
- Richard Rink, PE, CIE '80
- Joseph S. Testa, EE '57
- Allen J. Zylinski, PE, CIE '89, MEng '94

Nominations for Engineer of the Year

The EAA invites nominations of alumni for the next "Engineer of the Year" award. Nominees should be UB Engineering Alumni who show evidence of distinguished service in community, business and professional activities.

To nominate someone, submit the following information to the Engineering Alumni Association, 415 Bonner Hall, Buffalo, NY 14260-1900 (Fax: 716-645-2495):
 Nominee's name
 Year and Degree(s) from UB
 Current address, phone number, and email
 Current resume/vitae

50th Reunion

The Reunion for the Class of 1951, as well as for the Classes of 1949 and 1950, will be held June 14-15 at the Center for Tomorrow on the North Campus. To register, call the General Alumni Office at (716) 829-2608.

For Information on EAA Events and More
 VISIT OUR NEW WEBSITE AT
www.eng.buffalo.edu/alumni

The Order of the Engineer

The Order of the Engineer ceremony pledged graduating senior engineering students to the highest ideals of the profession. Each of the engineers pledged to "practice integrity and fair dealing, tolerance and respect; and to uphold devotion to the standards and the dignity of my profession, conscious always that my skill carries with it the obligation to serve humanity by making the best use of Earth's precious wealth." The engineering students who took this pledge are pictured below.



EAA "Leaders in Excellence" Scholarships

At this year's 16th Annual Dean's Scholarship Reception, jointly sponsored by the Engineering Alumni Association and the School of Engineering, six scholarships were awarded to engineering students who have proven themselves to be "Leaders in Excellence." The awards also encourage students to develop an "Engineering Spirit" and a sense of loyalty to the School.

This year the association had its largest number of applicants ever. The 2001 winners are (first row, from left, except where noted):



- ◆ **David C. Warren**, Mechanical Engineering (2001)
- ◆ **Jean M. Balent**, Environmental Engineering (2001)
- ◆ **David Thomas Howe**, Aerospace and Mechanical Engineering (2003)
- ◆ **Anill "Rick Rupan**, Aerospace and Mechanical Engineering (2001) (back row, right)
- ◆ **Carolyn M. Zielinski**, Mechanical Engineering (2002)
- ◆ **Andrew J. Mills**, Mechanical Engineering (2001) (Not pictured)

The winners are pictured with (second row, from left) **Dean Mark Karwan** and EAA Board Members **Jonathan Kolber**, **Craig Forget**, **John Jondle** and **Michelle Rhodes** (front row, right).

These scholarships are made possible by the generous contributions of the EAA membership.

Alumnus Wins CAREER, Young Investigator Awards

UB Alumnus **Farhad Jaberi** (PhD ME '96) received double honors this year, winning both the 2001 Office of Naval Research (ONR) Young Investigator Award and the National Science Foundation's CAREER Award.

In his doctoral work at UB, Jaberi worked with Professors **Peyman Givi** and **Cyrus Madnia**. He is currently an Associate Professor of Mechanical Engineering at the Michigan State University.



Farhad Jaberri

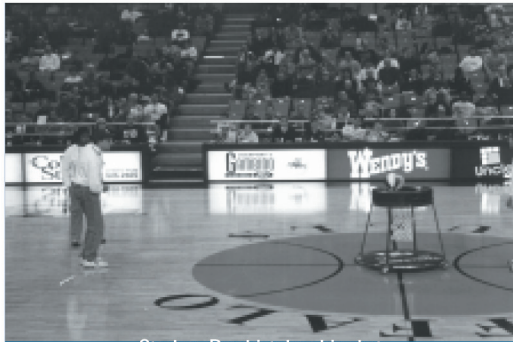
Jaberri's general research interests and expertise are in the areas of turbulence, combustion and computational analysis of transport phenomena, with a particular emphasis on large scale/high performance computing and theoretical-stochastic modeling. His current research is concerned with developing advanced computational models for "realistic" simulations of engineering and physical systems involving turbulent reacting flows.

TAKE ME OUT TO THE BULLS GAME ...

The Engineering Alumni Association presents its members with two special discounts for all UB home football games. Offer #1: Present your EAA membership card at the athletics box office and receive \$2 off a \$10 football ticket. Offer #2: Buy one field goal level ticket at \$50 and receive all additional field goal tickets for \$35. To order, call the UB Athletics Office at (716) 645-6666.

2001 Home Football Schedule		
8/30	Rutgers	7:30
9/29	Central Michigan	7:00
10/13	Marshall	1:00
11/3	Ohio	1:00
11/10	Akron	1:00

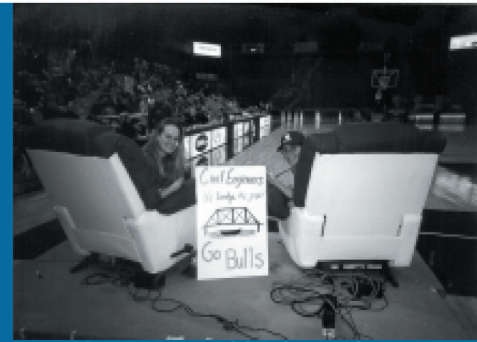
AT A SPECIAL DISCOUNTED PRICE!!!



Stephen Buechi takes his shot

Engineer's Night at Basketball was held in February. Both the men's and women's teams won their games--a direct result of the vocal support of all the Engineering Alumni present.

The EAA is pleased to announce that this year's winner of the Engineering Spirit Award went to the student chapter of the American Society of Civil Engineers. The group received a \$100 check from the EAA and had its name engraved on a plaque in 415 Bonner Hall.



Members of the ASCE Student Chapter

ENGINEERS' NIGHT AT BASKETBALL

Twenty-five minority middle school students participated in the BEAM (Buffalo-Area Engineering Awareness for Minorities) SEAS Saturday Science and Technology Academy. 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.

The middle school students competed in a Lego competition, and in the building of rockets, a space station and card bridges. Volunteer engineers from the U.S. Army Corps of Engineers, West Valley Nuclear Services, Parsons Brinckerhoff, Inc. and General Motors Powertrain worked with the students on their projects and also gave career advice on their particular field of expertise.

The BEAM Awards Breakfast took place on February 15, 2001 at Emerson High School Culinary Arts Center. The Charles Campbell, Sr. Outstanding Service Award went to Kenneth J. Nies of the Buffalo Public Schools. The Special Achievement Award went to Robert G. Helenbrook of ATSI, Inc. The Educational Achievement Award went to Patricia Wier of the Phelps-Clifton Springs Central School District. The Faculty Advisor Award was given to Susan Walko of School #63

Campus North. Two Technical Advisor Awards were presented to Charles Traylor and Dwight Garland of West Valley Nuclear Services Co., Inc. An Industry Award was presented to URS Corporation. The keynote speaker was Maria Lehman, Commissioner of Public Works, Erie County Department of Public Works. She spoke to 100 members of BEAM, highlighting the behavior and principles they must continue to instill in their students as future engineers. **Helenbrook, Wier and Lehman** are all graduates of UB Engineering.

BEAM summer programs for students from the post 7th grade through the post 12th grade will begin on July 9, 2001 at Daemen College, Canisius College, Erie Community College, Buffalo State College, the University at Buffalo and the UAW/GM Center for Human Resources.

A golf tournament fund-raiser established to support the BEAM summer programs will be held on Tuesday, August 7, 2001 at Chestnut Hills Country Club.

Information on the Golf Outing and BEAM programs may be obtained through Marilyn Helenbrook, Executive Director of BEAM, 412 Bonner Hall, 716-645-3066.

Fall 2001 Course Offerings

EngiNettm

School of Engineering and Applied Sciences

EAS 480/580	Technical Communications for Engineers
Civil, Structural and Environmental Engineering	
CIE 516	Advanced Math for Civil Engineers
CIE 525	Concrete Structures
CIE 531	Design and Construction of Earth Structures
CIE 535	Geoenvironmental Engineering
CIE 550	Hydrologic Engineering
CIE 621	Elasticity I
Chemical Engineering	
CE 561	Applied Chemical Kinetics I
Electrical Engineering	
EE 519	Industrial Control Systems

EE 529	Introduction to Electromagnetic Compatibility
EE 540	Energy Conservation in Motor Drive Systems
Industrial Engineering	
IE 505	Production, Planning and Control
IE 530	Introduction to Human Factors
Mechanical and Aerospace Engineering	
MAE 522	Heat Exchanger Design
MAE 524	Elasticity I
MAE 550	Optimization in Engineering Design
MAE 558	Tribology
SYS 535	Continuous Control Systems
SYS 574	Nonlinear Control

For more information and to receive course descriptions and registration materials, contact Marge Hewlett, EngiNet Administrator, at (716) 645-2768 ext. 1106 or mhewlett@eng.buffalo.edu. You may also visit us at www.eng.buffalo.edu/EngiNet

Attention EAA Members: Register for EngiNet classes and receive 10% off your tuition!



Students, faculty and staff enjoyed a sunny Spring day at this year's Spring Picnic, sponsored by the Engineering Alumni Association, the Engineering Student Association and UB Engineering. Hotdogs were served by the hundreds (top left) as students enjoyed lively conversations with faculty like William Rae, SUNY Distinguished Teaching Professor (top right), and with one another. Members of the Society of Automotive Engineers also displayed their prize winning clean snowmobile (bottom left), which took third place overall in this year's Clean Snowmobile Challenge and first in the Blue Sky competition for lowest emissions.

- June
14-15 Reunion for the classes of '49, '50 and '51
- August
26 Welcoming Day for Freshmen
- September
7 Fall Picnic
- October
1 Honors Employment Dinner
2 Job Fair
13 Homecoming Football Game
25-6 Dean's Council

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 in this newsletter may call External Affairs at (716) 645-2768 x1110, fax (716) 645-2495, or email ub-aaa@eng.buffalo.edu.

Corrections From Last Issue:
Page 22: Ramesh K Shah (not Shaw) won the Heat Transer Memorial Award.
Page 16: Caren Wenner is pictured with Thomas J. Smith (not Martin Helander) and Ian Noy.