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

EDS Gives SEAS \$53 Million Gift

Gift is largest recorded in UB history

Electronic Data Systems (EDS), the world's largest independent information technology services company, gave a software donation valued at \$53.5 million to SEAS as part of UB's "The Campaign for UB: Generation to Generation." The EDS gift pushed the university's campaign over its goal of \$250 million. The largest gift in UB history, the state-of-the-art software will allow engineering students to conceive, design, engineer and validate products using the same tools used by today's leading global manufacturing companies worldwide.

(continued on pg. 10)



UB President William Greiner, Hulas King, EDS Director of Global Strategic Partnerships, Venkat Krovi, Asst. Professor MAE, Dean Mark Karwan

McLernons Honored for Giving



Dean Mark Karwan, James McLernon, Jeremy Jacobs Sr. Honorary Co-Chairman, Generation to Generation Campaign, UB President William Greiner

James W. McLernon, B.S. IE '50, and his late wife, Nancy A. McLernon, were honored for their extraordinary support of the School of Engineering and Applied Sciences in a ceremony this fall that included the dedication of a kiosk in their honor. McLernon, retired chairman of the board of American Axle, pledged gifts to SEAS, bringing his total giving to UB during the "The Campaign for UB: Generation to Generation" to more than \$1 million. The gifts will support the school's Student Excellence Initiatives and its graduate and undergraduate laboratories.

McLernon also has served as chair of the SEAS campaign committee, as well as on the execu-

(continued on pg. 7)

Generation to Generation Campaign Achieves Goal

The Campaign for UB, Generation to Generation, ended in fanfare with the University reaching and surpassing its \$250 million goal. The final tally put the campaign at \$291,602,262, smashing its goal by over \$41 million. The School of Engineering and Applied Sciences was a major part of that success and once again showed that we are truly one of the leadership schools of the University at Buffalo.

The University's \$250 million goal was the sum of the goals of all the various academic and other university units. SEAS' portion was \$18 million.

In the final year of the campaign, it looked like we were going to surpass our goal comfortably when an unexpected and much appreciated gift from EDS came in that was valued at \$53+ million. This not only blew away our campaign goal, but also put the entire university's goal over the top. This package of high-end, state-of-the-art computer aided design/manufacturing/engineering (CAx) software will change the way we teach some of our engineers. We hope to leverage this software gift with other corporate friends who are interested in our students being trained in this area.

(continued on pg. 18)

FALL 2003 VOLUME IX NUMBER II

IN THIS ISSUE...

- Alumni News
- Student News
- Faculty and Staff News
- Research News
- Development News
- BEAM
- Calendar

John B. Simpson Becomes Next President of UB



John B. Simpson takes office effective January 1 as UB's 14th president. He promises to push an agenda that leaves no doubt that UB "is the premier public research university in the Northeast." Simpson comes to UB

with a distinguished 30-year career in higher education as a faculty member, researcher, and administrator.

Most recently, he was provost and executive vice chancellor at the University of California, Santa Cruz as the campus grew from less than 11,000 students to its present size of nearly 15,000 students. During that time, he instituted a number of new graduate programs, among them programs in digital arts and news media, bioinformatics, electrical engineering, politics and an innovative doctoral degree in education with San Jose State University.

Prior to joining UC Santa Cruz in 1998, he had a 23-year teaching, research and administrative career at the University of Washington in Seattle, where he served as dean of the College of Arts and Sciences from 1994-98. A native Californian and graduate of the University of California, Santa Barbara, Simpson received master's and doctoral degrees in neurobiology and behavior from Northwestern University.

Professor William Greiner, UB's 13th President, served the university since 1991 in this role and will return to the law faculty. He has been lauded for enriching student life, improving research, and expanding UB's physical facilities. During his tenure, he oversaw

(continued on pg. 12)

ALUMNI NEWS



Dear SEAS Alumni,

I am pleased to continue into 2004 as your UB Engineering Alumni Association (EAA) president.

Your EAA has been active this past semester with students and alumni in many fun-filled events. We began this fall by co-sponsoring the student picnic in September as the new school year kicked off - there were good times, hotdogs and soda.

We continued our tradition of the annual UB Bulls Football pre-game tailgate this fall for SEAS alumni, students, faculty, staff, and friends to support their UB Bulls. On September 27th we had a partial rain-out but alumni and students braved the elements for hot dogs, soda and EAA promotional items, and of course the football game, were enjoyed by all.

Events we are lining up for Spring 2004 semester include:

EAA at UB Basketball (Saturday, February 14; double header: UB Women @ 1 PM/UB Men @ 3 PM; \$5/ticket)

Co-sponsoring the SEAS Scholarship Reception awards presentation (Friday March 26, 7 PM)

Order of the Engineer/EAA Engineer of the Year (Monday, April 26)

Co-sponsoring the 2004 spring student picnic (TBA)

With regards to the Engineer of the Year award, the EAA is looking for an outstanding UB engineer who deserves a high level of recognition. EAA is seeking nominations for the 2004 Engineer of the year. Just send us a resume, and a brief write-up about the person's outstanding contributions to the engineering profession, public welfare and humanity. Submit nominations to the EAA Award Committee by January 30, 2004 to the UBEAA for presentation of the award at the Order of the Engineer Ring Ceremony on April 26, 2004. The winner will receive a Buffalo Trophy and have their name placed on a plaque in the SEAS Dean's Office, External Affairs, 415 Bonner Hall, UB Amherst Campus. Please email or send hard copy of nominations to:

School of Engineering and Applied Sciences, UBEAA; ATTN: Engineer of the Year Committee, 415 Bonner Hall, University at Buffalo, Amherst, New York 14260, Ub-eaa@eng.buffalo.edu

Alumni time and financial resources make our programs go. Please help us make the remainder of this school year a success. I ask you to:

Join us as a paying member of your EAA for 2004– your dues go towards sponsoring events and assisting SEAS student clubs.

Help us help current students by contributing to our special scholarship fund.

Come to our events.

The bad news is that our overall numbers for membership and the Board of Directors continues to dwindle. The EAA requires its past membership to renew their past commitments and support; the Board requires a rejuvenation to continue its missions. We extend an invitation to all UBEAA to join us in accomplishing our programs. We also invite you to review the EAA program posted on our Home Page: http://www.eng.buffalo.edu/Alumni/EAA/index.html

If you are interested in joining the Board, please contact us at ub-eaa@eng.buffalo.edu with a short resume addressing your engineering field and interest in joining the Board. Current EAA Board members will review all applications submitted, and new members will receive an invitation to join us as soon as they are able. Our Board requires diversity and this invitation is open to all – please consider donating your time to make our UB and EAA stronger and more effective.

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

Yours truly,

Stephen J. Golyski, P.E., CIE BS '73, MS '81 UBEAA President

2

EAA Board of Directors

Officers

Stephen J. Golyski, P.E., President

Stephen P. Buechi, Treasurer

Committee Chairs/ Members

Walter Bratek

James D. Boyle

Craig M. Forget, P.E.

John J. Jondle

Antoni Markut

Michelle Rhodes

Richard Rink

Student Representative

Malati Patil, President Engineering Clubs Council

Founding Faculty Advisor

Howard E. Strauss

Member Emeritus

Jonathan E. Kolber

Coordinator Emeritus

William W. Swenson, P.E.

SEAS Liaison

Robert E. Barnes

See calendar on last page for upcoming events.

Spring 2004 EngiNet™ Offerings

Civil, Structural and Environmental Engineering

- CIE 525 Concrete Structures
- CIE 529 Pavement Design
- CIE 531 Design and Construction of Earth Structures
- CIE 543 Water Quality Modeling
- CIE 597 Construction Safety and Health Management
- CIE 617 Advanced Finite Element Methods
- CIE 619 Structural Dynamics of Earthquake Engineering II

Computer Science and Engineering

- CSE 505 Programming System Fundamentals
- CSE 543 Language Processors
- CSE 563 Knowledge Representation
- CSE 587 Information Structures

Electrical Engineering

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

Engineering and Applied Sciences

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

Industrial Engineering

- IE 504 Facilities Design
- IE 507 Design and Analysis of Experiments I
- IE 530 Introduction to Human Factors
- IE 533 Sociotechnical Systems (Job
- Automation and Design)
- IE 541 Human Factors in Safety

Mechanical and Aerospace Engineering

- MAE 510 Fuel Cell Technology
- MAE 529 Finite Element Structural Analysis MAE 542 Engineering Applications of
- Computational Fluid Dynamics
- MAE 543 Continuous Control System MAE 549 Design of Complex Engineering
- Systems
- MAE 552 Heuristic Optimization

EngiNet[™] is principally a graduate-level distance learning program. For more information, contact **Marge Hewlett**, EngiNet[™] Administrator at the School of Engineering and Applied Sciences: 716/645-2768 x1106 or enginet@eng.buffalo.edu

All courses are subject to satisfactory enrollment.

50 Year Reunion

SEAS alumni from the years of '52, '53, and '54 gathered in June to celebrate their 50th anniversary of receiving their degrees. Joining Dean Karwan in the festivities were:



William Atkins BS EE '52, Gordon Fisher BS ME '52, Harry Guildford BS ME '52 (with wife Marie), Louis Motyka BS ME '53, Richard Ratajczak BS EE '52, MS '63 (with wife Delores), Dr. Jerry Repetski BS ME '52, MS '62, PhD '70, Robert Schiffhauer BS IE '52, MBA '66 (with wife Rita), Ray Schneider BS EE '53, Albert Seames BS ME '53 (with wife Doris), Howard Strauss MS ME '54, John Tripi BS ME '53, Albert Walck BS ME '53, Walter Wolentarski Jr. BS ME '53 (with wife Patricia).

Class Notes

Boise State Alumni Association names **Salman Akram**, MS EE '89, who earned an MBA from Boise State in 1999 as a Distinguished Alumnus. Akram is an inventor with more than 370 U.S. patents for new innovations and technologies. He also held the title of No. 1 inventor at Micron and for Idaho at large for the years 1998 through 2002. Employed by Micron Technology since 1993, Akram has completed various research and development projects in the fabrication and design of DRAM chips (dynamic random access memory).

Basil Badawiyeh, BS EE '97, was named 2004 Young Engineer of the Year award, sponsored by Pace Micro Technology, Multichannel News and the Society of Cable Telecommunications Engineers (SCTE) to annually recognize an engineering professional under age 30 for his or her outstanding contributions to the cable telecommunications industry. A video systems engineer, Badawiyeh earned the award for his success in leading Adelphia to advance new technologies that better served their customers.

Under the presidency of **Mark A. Corio**, BS EE '83, Rochester Microsystems, Inc. was recently recognized as one of Inc. Magazine's Top 500 fastest growing private companies in the USA.

Thomas J. Crowe, BS '93, MS ME '95 completed UB's Executive MBA program in June '03. He has been implementing a Six Sigma Quality program for Praxair Inc. and is currently a Staff Engineer, Six Sigma Black Belt.

Aris Docoslis, MS CE '99, Ph.D. 2000, Assistant Professor of Chemical Engineering at Queen's University has been awarded a prestigious Canada Research Chair, which is equivalent to an NSF CAREER Award for Canadian Junior Faculty. At Queen's, his research focuses on developing methods and designing tools to manipulate and organize nanoparticles, using electric fields. The creation of these microstructures could lead to new advances in fuel cell technology as an alternative energy source, as well as the development of safer, less expensive automobiles and more sensitive medical and diagnostic devices.

Robert M. Okello, Ph.D. IE 1978, writes that since graduating he has moved from Engineering, Carborundum Co. in Niagara Falls, 1975-78, to Corporate Finance, Kennecott Copper Company in NYC and Stamford, CT, 1978-1981, to Corporate Planning, AT&T, 1981-1985, and on to Africa with the United Nations since 1985. At the UN he has been involved in development of regional transport and communications networks with the UN Economic Commission for Africa based in Addis Ababa, Ethiopia (1985-1997), then in promoting policies for regional cooperation and integration in Southern Africa based in Lusaka, Zambia (1997-2003). He is back to the Headqarters of the Economic Commission for Africa in Addis Ababa as director of the Office for Policy and Programme Coordination.

Alumni Football Festivities

Alumni, students, and faculty/staff joined together this fall for two celebrations in support of the UB Bulls football team. At the Bulls' September 27th match against Akron, the Engineering Alumni Association hosted their Traditional Tailgate, featuring hotdogs, gifts, and fun before the game. Just three weeks later, the UB Alumni Association hosted a pre-game tent party, supported by SEAS, before the Bulls' Homecoming match against Marshall.



John Jondle*, Don Noell, Ralph Porter, Nancy Porter, Donna Noell



Jim Boyle*, Peter Buechi*, Steve Buechi*



Tim and Alexa Siderakis

*SEAS Alumni

Know An Outstanding Engineer Who Deserves Recognition?

Please let us know! The UB Engineering Alumni Association is seeking nominations for the 2004 Engineer of the Year. Just send us a resume, and a brief write-up about the person's outstanding contributions to the engineering profession, the public welfare, and/or human kind.

Submit nominations to the UB Engineering Alumni Association Award Committee by **January 30**, **2004** for presentation of the award at the Order of the Engineer Ring Ceremony in April 2004. The winner will receive a Buffalo Trophy, and have his/her name placed on a plaque in the SEAS Dean's Office, External Affairs, 415 Bonner Hall, UB Amherst Campus.

Please send nominations to: The University at Buffalo Engineering Alumni Association (UBEAA) 415 Bonner Hall University at Buffalo Buffalo, NY 14260

Or, e-mail nominations to: ub-eaa@eng.buffalo.edu





Rick Rink*, Jon Kolber*



Mike Madonia



SEAS freshman Joe M. Desimone with father Ernest.

Alumni Obituaries & Death Notices

David A. Baumler, BS AE '81, in his La Plata, Maryland home after a brief illness. He served as an aerospace engineer for the U.S. Naval Surface Warfare Center at Indian Head, Maryland, for more than 20 years. He is survived by his wife Barbara, his parents, Edward G. and Phyllis, two sons, a daughter, a brother, and a sister.

Also recently deceased are: **Eugene M.** Bellagamba, BS ME '49, A. F. Brayman Jr., BS ME '65, Kenneth C. Doncaster, BS ME '89, Ralph H. Freiert, BS CIE '77, Paul E. Kolb, BS ME '50, Bryan C. Mihalick, MS CE '01, Gregory C. Reming, BS CIE '72, and Mark C. Wojcik, BS CE '78.

Friends of the school who have recently passed away include: Mr. Sidney Beldon, Mr. Gerald Hahn, Mrs. Roberta Shuman, Mr. Robert Weiner.



STUDENT NEWS

Opening Day Events

At SEAS' fifth annual Opening Day event, more than 300 of the school's entering freshmen were welcomed to campus with a packed day that included meeting other entering students, faculty members, engineering student leaders. During the day, they witnessed a choreographed indoor kiting demonstration before each labgroup unit had a short time to cooperatively design, fabricate, and demonstrate a functional indoor kite from a given kit of materials. The connections established here continue into the semester as the groups continue together into their first semester labs.





Tech Job Fair

UB's 2003 Tech Job Fair offered excellent opportunities for current students to meet with prospective employers. Those interested in employing or providing internships for current students can contact Dean Millar at (716) 645-2768, ext. 1112 or via email, **dcmillar@eng.buffalo.edu**.



UB alumni and current National Grid employees Sean Kiggins (BS EE '03) and Mark Domino (BS EE '91, MBA '96) smile with current student Kelly Filipowski.

UB Talker Provides Independence

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Students in an upper-level computer software engineering class helped to solve a real-world problem—and restored a sense of independence to persons with speech and motor disabilities—by designing augmentation communication devices. The students have produced UB Talker, a laptop computer with a touch-screen interface that helps its users communicate. UB Talker comes in models for both adults and children.

The ongoing project began in March 2002 when seniors were asked by **Kris Schindler** and **Mike Buckley**, lecturers in the Department of Computer Science and Engineering, to design a speech-enhanced, computer-aided device that would allow a 43-year-old nursing home resident who had suffered a stroke 20 years ago to communicate.

"In the spring of 2003, we reassigned the project with new requirements to meet the needs of children with cerebral palsy-both those with and without reading skills. Students responded with interest, commitment, intensity and philanthropy," said Buckley.



Solar Splash

At the 10th annual Solar Splash World Championship on Hoyt Lake in Delaware Park, Blue Moon (right), skippered by **Justin Franscino**, MAE junior from Huntington, finished second in its heat in the sprint competition. UB's other Solar Splash entry,

Bullship (left), was skippered by **John Fritz**, MAE

graduate student from Conesus.



First International EngiNet[™]Grad Student Completes Degree



Recently, **Jose Lockhart** successfully defended his master's thesis, magnetic damping, in the department of Civil, Structural and Environmental Engineering. Jose completed all his required coursework via the SEAS's graduate distance learning program, EngiNet[™]. His lectures and assignments were mailed to his home in the Dominican Republic. Jose is the first internationally based SEAS graduate student to have completed his degree via distance learning.

Newest EngiNet[™] degree recipient with Andrew Whittaker, CSEE associate professor



Jose Lockhart center with, left to right: Gary Dargush, CSEE professor, son, Dean Karwan, Stuart Chen, CSEE associate professor.

Student News

Junior ME student **Adam Bienas** of Lockport, NY took leave earlier this year from his schooling as he and his fellow reservists joined the Marines in the Bravo Company, 8th Tank Battalion, 4th Marine Division in their trek from Kuwait to the Baghdad area. He has now rejoined his MAE classmates.

Nagarajan Kannan, Ph.D. student CSEE, was elected president of the northeastern region of the National Association of Graduate Professional Students, an organization representing the more than two million graduate and professional students in the United States.

Out of 20 international participants, **Mohammed Soliman**, EE Ph.D. student, won third prize in the Student Poster Session's Ph.D. group at the IEEE-PES meeting in Toronto for his poster on the My-T Acres Farm Project.

Engineering Clubs Extravaganza

Rocket launches, gooey gak, fire fighting robots, and bubbling ice cream were the highlights of the second annual Engineering Extravaganza held in the Student Union Lobby. Nine UB engineering clubs designed various interactive exhibits as basic introductions for participants of all ages into each club's respective field of expertise. One of the most popular demonstrations was UB Robotics' firefighter robot that autonomously sought out and extinguished a candle hidden in a maze. The club that made (quite literally) the loudest bang of all the clubs was the American Institute of Aeronautics and Astronautics, whose rocket launching demonstration drew many spectators.

Student Mourned

Khoi Viet Hoang, a senior in MAE, was tragically killed in a motorcycle accident on the Kensington Expressway on August 28, 2003.

MCEER (cont. from 8)

succeeds **George C. Lee**, Samuel P. Capen Professor of Engineering at UB, who will continue to serve leadership roles within MCEER and SEAS. **Dean Mark Karwan** said Bruneau's appointment "assures that MCEER will build upon the reputation for excellence that George Lee worked so hard to establish."

Filiatrault, formerly a professor of structural engineering at the University of California-San Diego, will be responsible for coordinating MCEER's nationwide research program in advanced technology applications. He also has been appointed professor of civil, structural and environmental engineering.

Lee, who served as MCEER director since 1992, will administer the center's \$10.8 million Federal Highway Administration project to improve highway-system seismic performance and reliability, and he will work to develop a school-wide focus on multiple-hazard mitigation. Lee served as dean of SEAS from 1977-95.

ub-seas@eng.buffalo.edu

Engineering Students Available for Employment

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

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

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

McLernon (cont. from pg. 1)

tive campaign steering committee during "The Campaign for UB: Generation to Generation."

A retired licensed professional engineer, McLernon credits UB with preparing him well for guiding several automotive-industry companies to success during his 50-year career. A native of Kenmore, McLernon began his career while still in college as an hourly worker in a Western New York Chevrolet engine plant. His career in the automotive industry includes nearly three decades working with General Motors before becoming president of Volkswagen Manufacturing Co. of America in the mid-70s. In the 90s, he became chairman of the board of American Axle, a company that he formed with partners through the purchase of several General Motors plants, including ones in Buffalo and Tonawanda, NY. McLernon retired as chairman in 1998. His career-long contributions to the U.S. auto industry has resulted in his induction into the Automobile Hall of Fame.

A founding member of the SEAS Dean's Advisory Council, McLernon received an honorary doctorate from the State University of New York as recommended by UB in 1998. He was named the UB Engineering Alumnus of the Year by the Engineering Alumni Association and was the first recipient, in 1978, of the school's Dean's Award.

Summer Workshops Introduced HS students to Robotics and Bioinformatics



Charles Sullivan (left), 17, from North Tonawanda High School, and Nathan Ohmit, 14, from Eden High School, battle it out with robots they designed during the workshop presented by NYSCEDII.

The animated, red, fuzzy Sesame-Street character Elmo and his interactive Sesame-Street sidekicks Big Bird and Ernie made appearances at the Summer Workshop in Scientific Visualization and Robotics sponsored by the New York State Center for Engineering Design and Industrial Innovation (NYSCEDII).

"These little toys embody some of the basic principles of robotics-using switches to sense the world, feeding this data into a microcontroller, which then governs the vibrating/laughing/moving response," said **Venkat Krovi**, assistant professor MAE, one of the workshop's instructors.

After the students watched the com-

puter processing that lets these little toys work, they worked on their own "toys"-actually small robots; teams of students received a robotics kit that they built throughout the week. The NYSCEDII workshop also provided students with an opportunity to learn basic and advanced techniques in scientific visualization and virtual reality (VR).

In another of the summer's rich offerings, nine high school students learned the basics of bioinformatics-the interface where life science meets computational science-at UB's Summer High School Workshop in Computational Science at UB's Center for Computational Research (CCR), one of the world's top 10 academic supercomputing centers.

Engineering Honors Employment Dinner

At the Fall Honors Employment Dinner, UB's gifted young engineers were able to meet with eager recruiters.



From left to right, GE Transportation Systems representatives Annick Ratsizaharimanana, BS IE '99, and Catherine Jacob, BS ME 2000, smile with current CE student Melissa Chow.



General Mills representative Cindy Massie talks with Malati Patil, President Engineering Clubs Council.

FACULTY AND STAFF NEWS

MCEER Welcomes New Director and Deputy Director



George C. Lee and Michel Bruneau.

Michel Bruneau, a leading expert on earthquake-resistant design and retrofit of buildings and infrastructure, was named director of the Multidisciplinary Center for Earthquake Engineering Research (MCEER), a National Science Foundation "Center of Excellence" headquartered at UB. He becomes the fourth director in the center's 17-year history. Andre Filiatrault, an expert on shake-table testing of structural and nonstructural building components has been named deputy director.

Bruneau, who has served as MCEER deputy director since 1998, was selected for the post after a nationwide search. He came to MCEER and UB from the University of Ottawa, where he headed that institution's Ottawa-Carleton Earthquake Engineering Research Centre. He

(continued on pg. 6)

Chung Honored for Excellence in Scholarship



Rev. Sunny Lee, Mrs. Anna Lau, Chung, and Rev. Soowon Chang.

Deborah D.L. Chung, MAE professor and Niagara Mohawk Chair of Materials Research was honored at the Ninth Annual University at Buffalo Convocation for her Excellence in Scholarship and Creative Activities as recognized by the Chancellor of the State University of New York. The convocation honors the university's most esteemed faculty and staff while setting the tone for the new academic year.

Ruckenstein Receives SUNY Chancellor's Research Recognition Award



Eli Ruckenstein, SUNY Distinguished Professor in the Department of Chemical Engineering, was honored by SUNY Chancellor Robert L. King.

Addressing the faculty recognized with the award, Chancellor King said "These award-winning faculty members have contributed to the dramatic growth in the importance and volume of research being conducted on SUNY campuses-research leading to scientific breakthroughs that will prevent or heal medical disorders and ailments, protect the environment, create new pharmaceuticals and help us understand the origins of the universe."

A UB faculty member since 1973, Ruckenstein, is the first UB professor to receive the coveted National Medal of Science and is a member of the prestigious National Academy of Engineering.

Faculty Awards and Honors

Donald Goralski, project staff associate for MCEER, received the May C. Randazzo Outstanding PR Practitioner Award.

T. Kesavadas, MAE associate professor, won the Best Technical Paper award at the Virtual Manufacturing Symposium at the ASME Winter Annual Congress in Washington, D.C. (IMECE 03) for his "Framework for Network based Manufacturing Training using Telehaptics" co-authored with his former grad student **Dhananjay Joshi**.

Monica Moshenko, senior staff assistant for the Great Lakes Program, was the co-chair for Buffalo Autism Walk, an event that took place in Delaware Park to raise support for the National Alliance for Autism Research (NAAR) which has been able to commit \$10 million in grants and fellowships to fund more than 117 autism research projects worldwide since 1997. Through her efforts, American Idol Clay Aiken both supported the event and met with her son Alex on his tenth birthday.

Chu Ryang Wie, EE Professor, received the 2003 MERLOT (Multimedia Education Resource for Learning and Online Teaching) Classics Award for Engineering for his courseware "The Semiconductor Applet Service." The website provides a large collection of simulations, animations, and tutorials on semiconductor and device physics, and semiconductor device manufacture and operation. This material includes topics ranging from crystal structure and electronic energy bands through device fabrication to circuit design and simulation. The interactivity of the applets encourages students to explore effects of changing parameters on the operation of devices.

Emeritus Faculty Luncheon



Some of SEAS' emeritus faculty met with Dean Karwan for a luncheon. From left to right, front row: Ken Kiser and Charlie Fogel; back row: Bill Rae, Howard Strauss, Mark Karwan, Don Brutvan and Tom Weber. (Not in photo: Sol Weller.)

Vladimir Mitin New Chair of Electrical Engineering

The Department of Electrical Engineering and SEAS welcome Professor **Vladimir Mitin** as the new EE chair. Along with expertise in nanoelectronic, microelectronic, and optoelectronic devices and materials, Mitin brings his Materials, Device and Circuit Simulations Laboratory with him from Wayne State University.

www.eng.buffalo.edu

Promotions

SEAS Congratulates:

Promoted to full professor: Paschalis Alexandridis (CE)

Promoted to associate professor with tenure: Stelios Andreadis (CE) Amjad Aref (CSEE) Ann Bisantz (IE) Sriram Neelamegham (CE)

Promoted to assistant to the chair: Darlene Innes (CE)

Greetings & Farewells

SEAS welcomes new professors: Andre Filiatrault, professor, CSEE and deputy director, MCEER Daniel Fischer, associate, CSE Abhijit Gosavi, assistant, IE Vladimir Mitin, professor and chair, EE E. Manolis Tzanakakis, assistant, CE Xin Wang, assistant, CSE Guizhen Yang, assistant, CSE

SEAS welcomes new staff: Juanita Earl, Project Manager, TCIE Deanie Hedrick, Staff Assistant, SEAS **External Affairs** Carole Naab, Clerk 2, MAE Jodi Reiner, Graduate Secretary, CSE Nancy Schimenti, Keyboard Specialist, SEAS Undergraduate Student Services Marianne Sullivan, Executive Officer, CSE

SEAS says goodbye to faculty: Ramakrishna Akella, IE Ashim Garg, CSE Peyman Givi, MAE Nihar Mahapatra, CSE **Christopher Rump**, IE **Eliot Winer, NYSCEDII**

SEAS says goodbye to staff members: Judy Balcerzak, BEAM Suzanne Batt, MAE to CCR Jennifer Braswell, CSE Marcie Hill, TCIE Dave Hollen, TCIE MaryAnn Petrillo, CSE Dorothy Tao, MCEER

SEAS Service Awards



Jim Keptner, Robert Barnes, JoAnn Glinski, Dean Karwan, Marty Fye. Front Row: Cheryl Rance and Helene Kershner



Colin Drury, Chair IE, with Dean Karwan

The following SEAS faculty and staff were recognized for the years of service to UB-40 Years: John Medige, MAE. 30 Years: Colin Drury, IE; JoAnn Glinski, CSE; and Cheryl Rance, EE. 20 Years: Robert Barnes, Dean's Office; Marty Fye, NYSCEDII; and Helene Kershner, CSE. 10 Years: Thomas Hill, deceased, IE; Jim Keptner, Electronics Shop; and Cyrus Madnia, MAE.

Faculty and Staff Obituaries

Richard Cizdziel, senior research support specialist in MCEER, passed away earlier this year. He was an MCEER staff member from 1994 until February 2003, and an employee in Civil Engineering from 1992 to 1998. He is survived by his wife Catherine, their three sons, and four granddaughters.

Thomas D. Hill Sr., Ph.D. IE '94, died July 3 at his farm in the Town of Salem in Washington County. A native of Cedar Rapids, Iowa, Hill was a descendant of Mayflower Pilgrims, as well as a Revolutionary War veteran. He earned a BS AE from the University of Colorado in 1956. He joined the Air Force and served in Vietnam as a navigator. He received a master's degree from the Air Force Institute of Technology in 1965 and retired from service as a lieutenant colonel in 1977. During his service, he was awarded the Distinguished Flying Cross and Air Medal with oak leaf clusters. Following the military, Hill joined Xerox in Rochester. He then became a lecturer in the UB Department of Industrial Engineering, teaching introductory computer programming and statistical methods for engineers, as well as supervising an IE internship program. He was honored three times as Teacher of the Year by the student chapter of the Institute of Industrial Engineers before retiring in 2002.

Industrial Engineers Receive Two Awards from International Ergonomics Association

The work of the Department of Industrial Engineering was recognized with two awards at the International Ergonomics Association (IEA) Congress held in Seoul, South Korea. Department Chair Colin Drury, UB Distinguished Professor, was named an IEA fellow for his outstanding contributions to the fields of ergonomics and human factors engineering. One of only 44 IEA fellows throughout the world, Drury is an expert on aircraft inspection and safety, and heads the Federal Aviation Administration research group at UB that is working with the FAA to improve the reliability of civil aircraft.

Also honored at the IEA Congress was UB alumnus Colin Drury, Chair IE, at the Seung-Kweon Hong, Ph.D. IE '03, who received the International Ergonomics Association IEA's student paper prize for his dissertation on optimal Congress. policies for visual inspection of aircraft. His research



Seung-Kweon Hong, Ph.D. IE '03 with

examined how aircraft inspectors simultaneously search for multiple defects, such as cracks and corrosion. UB alumna Caren Wenner, B.S. IE '92, Ph.D., '00, won this prize in 2000.

Chemical Engineering - Department of Chemical and Biological Engineering

To reflect its educational and research activities and priorities, the Department of Chemical Engineering has changed its name to the Department of Chemical and Biological Engineering. The department will foster even greater inter-disciplinary interactions between engineering, medicine, the health sciences, chemical sciences and biological sciences, embracing diversification into the biochemical, biomedical and bioengineering areas. This move taps into the already existing strengths both in the department and UB which has been adding exciting capabilities in bioinformatics, drug design and discovery. In future issues, the department will be abbreviated as CBE.



RESEARCH NEW

New UB Center Will Tailor Unique Biometric Systems for Homeland Security, Public Health

The University at Buffalo established the Center for Unified Biometrics and Sensors (CUBS) a new, cross-disciplinary center that takes a unique approach to developing technologies in biometrics, the science of identifying individuals based on their physical, chemical or behavioral characteristics. Physical biometrics, such as an individual's height, weight, the shape of the iris in the eye, vein structure and hand geometry, have become increasingly important for security applications because they cannot be faked easily.

With initial funding from the National Science Foundation, the New York State Office of Science, Technology and Academic Research (NYSTAR), the UB Office of the Vice President for Research and several companies, most of them located in Western New York, SEAS Dean Mark Karwan said that CUBS positions UB to play a key role in growing homeland security efforts. "CUBS leverages a number of UB's researchers with excellent reputations in their own fields to form a multidisciplinary team to address some of our country's most critical security needs," he said.

"What we are going after at CUBS are specialized applications where we get involved in developing both the sensor itself-how the information is gathered-and the informatics-what is done with the data once it's in hand," explained Alexander Cartwright, EE associate professor, a CUBS founding member and director of the lasers and photonics division at UB's Institute for Lasers, Photonics and **Biophotonics**.

(continued on pg. 11)

Developing Smaller, Faster and More Reliable Electronic Devices



Some of the world's most advanced research in micro- and nanoelectronic-packaging reliability is taking place in SEAS' Electronic Packaging Laboratory. UB engineers are addressing critical problems confronting the electronics industry as it attempts to make electronic packages- the bundles of circuits, connections and bonds within electronic devices-much smaller and more reliable. Their research is helping to reduce the size and increase the speed and life span of electronic devices, and is opening the door for the creation of new devices.

Currently, Intel is using the lab's research to develop the next-generation packaging for its Pentium processor. The UB researchers also are working to break industry bottlenecks impeding development of revolutionary systems and products, such as lead-free packages, nanoscale computers and even implantable bio-electronic devices-including cell phones and electronic eyes that work within the body and communicate directly with the brain's auditory and optical nerves. "No one else in the world is doing what we're doing," says Cemal Basaran, director of UB's Electronics Packaging Laboratory and CSEE associate professor.

Basaran and lab co-director Alexander Cartwright, EE associate professor, are revolutionizing the design of solder joints that connect circuits to electrical boards within a device. High electrical-current density and heat produced by the circuits over time breaks down solder joints, leading to system failure.

Reaching Through the Net to Touch

Researchers announced they have developed a system that lets one person experience the sense of touch felt by another, allowing them to transmit the sensation across the Internet. "As far as we know, our technology is the only way a person can communicate to another person the sense of touch he feels when he does something," said Thenkurussi Kesavadas, MAE associate professor, director of UB's Virtual Reality Lab. "We have added an important dimension to communication of touch sensations."

Kesavadas and his team have successfully transmitted the sensation of touching a soft or hard object. They also have transmitted the ability to feel the contour of particular shapes from one person to another over the Internet. His work belongs to the growing domain of haptic, or sense-of-touch, technologies.

Linking computer scientists with life scientists to develop computational tools that will help draw a far more complete picture of the causes behind complex diseases like cancer, multiple sclerosis and coronary artery disease is the goal of UB researchers working under two major federal grants. It is the kind of comprehensive approach that many say is critical if significant research progress on these diseases is going to be made.

A grant from the National Institutes of Health will establish a Planning Center for Biomedical Computing, where biomedical scientists and clinicians will work alongside computational scientists, developing "realworld" techniques for storing, managing, analyzing, modeling and visualizing multidimensional data sets that describe complex diseases. The second grant from the National Science Foundation, will fund use of computational methods to integrate relevant genomic data into the many different kinds of clinical data that exist on thousands of patients diagnosed with cancer, heart disease, MS and other chronic conditions.

"These grants are about clinical bioinformatics," said Aidong Zhang, CSE professor and principal investigator on the two grants. "Our goal is to develop computational and visualization tools to integrate data from population studies and clinical data, such as results of lab tests, MRI tests and others with patternanalysis results on the genomic data, allowing medical scientists to more easily discover the meaningful connections between the two."

EDS (cont. from pg. 1)

Dean Mark H. Karwan said the software will help the school continue to attract top-notch students and prepare them for career success. "This gives our students the ability to master the world's most cutting-edge design software, used by major-industry sectors," Karwan said. "It enhances our reputation as a leading source of engineering talent."

The EDS software included product lifecycle management tools for computer-aided design (CAD), computer-aided manufacturing (CAM), computer-aided engineering (CAE), visualization and collaborative product development. The comprehensive portfolio of software will be used by undergraduate and graduate students, primarily in the departments of Mechanical and Aerospace and Industrial Engineering.

UB team employs high-tech tools to study volcanic flows



When officials communicate the dangers of volcanic hazards to local populations, one picture may be worth a thousand words. A UB group, which includes computational scientists, mechanical and aerospace engineers, mathematicians, geologists, and geographers, stands out as one of the most multidisciplinary-and ambitious-teams in the world working on volcanic hazard mitigation.

"With our immersive or VR visualizations, people can 'fly over' the terrain from different angles so that they can observe the flow occurring in real time or even faster," explained **Thenkurussi Kesavadas**, director of UB's Virtual Reality Lab and MAE associate professor.

In the process, the scientists developed a computer code, called Titan2D, for simulating geophysical flows that is several times more efficient in terms of computer time than prevailing methods. "We designed our code to run as efficiently from a laptop as it can from UB's 600-node Dell supercomputing cluster," said **Abani Patra**, MAE associate professor and principal investigator on the National Science Foundation project. Titan2D now is available publicly from the UB team.

Research and Conference on Ergonomic Engineering

Victor Paquet watches workers work—over and over again. An expert on ergonomic job analysis and workplace injury prevention, the IE assistant professor is looking for patterns of repetitive movement that may cause injury to workers on the job. From his observations and analysis, Paquet is developing guidelines and strategies for a safer workplace—especially within the auto industry and other self-paced assembly industries, where repetitive movements are the cause of many injuries every year.

In support of Paquet's goals, the American Society of Safety Engineers (ASSE) awarded him a research fellowship at the Liberty Mutual Research Institute for Safety. He spent six weeks there analyzing data he obtained from observing autoworkers at a Western New York facility—research supported by a grant from the National Institute for Occupational Safety and Health.

Paquet also hosted the 43rd Lucien Brouha Work Physiology Symposium at UB this fall. This conference allowed researchers and practitioners the opportunity to talk about important issues in physical ergonomics.

Silicon Chip Mimics Function of Octopus Retina



Called the o-retina, the chip one day may give sight to autonomous robots used in space and undersea exploration or could be used in hazardous environments, like a nuclear reactor or underground pipe, says creator **Albert H. Titus**, EE assistant professor. His research is already seeing quite a bit of interest with articles in the New York Times and Christian Science Monitor in addition to being featured on national radio by the American Association for the Advancement of Science as a "Science Update."

Titus's o-retina chip sees the world very much like an octopus-using brightness, size, orientation and shape to distinguish objects. Like the octopus, the chip cannot distinguish between diagonally orient-

ed, horizontally mirrored images, such as the letter "X." Future implementations of the chip will include polarization sensitivity-the ability to see polarized light, particularly underwater-an important aspect of the octopus visual system.

Titus's goal is to build a complete artificial vision system capable of performing multiple visual functions. His chips use analog circuitry, which require far less operational power than digital circuitry. Low power consumption makes the chips ideal for use in autonomous robots or other exploration devices that would have long run times.



Finding Leaks in the International Space Station



A new software system designed by **John L. Crassidis,** MAE associate professor, will help NASA detect and find air leaks in the International Space Station. The software will be installed in NASA's mission control when the manned space station is expanded from its current eight-module configuration to its final 15-module configuration.

Crassidis developed the software with UB aerospace engineering graduate student **Jong-Woo Kim** and Adam L. Dershowitz, an engineer with United Space Alliance. Their work was funded by a grant from NASA. The software continuously monitors the space station for leaks and in less than a minute can plot possible leak locations on a diagram of the space station. In some cases, the software can show the exact location of a leak within a module, in others it will suggest two or three possible locations.

CUBS (cont. from pg. 10)

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

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

Virtual Reality Used to Treat Car-Accident Survivors

Researchers have developed a virtual-reality driving simulator that may help car-accident survivors recover from post-traumatic stress disorder (PTSD)—a prevalent, but commonly untreated, condition associated with serious car accidents.

Eliot H. Winer, former deputy director of UB's New York State Center for Engineering Design and Industrial Innovation, and his research team designed a two-seat simulator in collaboration with renowned PTSD researcher J. Gayle Beck, professor of psychology in the UB College of Arts and Sciences.

The UB simulator and treatment system present the patient with a steering wheel, rear-view mirror and gas and brake pedals in a full 3-D world. The "car" is mounted on a motion platform that simulates the sensation of turning, braking and traveling up or downhill. "As the simulation progresses, the entire driving environment is generated on the fly," says Winer, who led a team of UB students in development of the simulator. "We developed this automatic-generation capability to efficiently store all scene information so that patient and therapist can choose to return to a previously visited location that may be critical to a patient's treatment."

Simpson (cont. from pg. 1)

the development of modern, on-campus housing for students and brought the UB sports program to the NCAA Division 1A level. Funding for research increased dramatically, rising to record levels of \$239.7 million for fiscal year 2002. Considerable improvements to UB's Amherst and Main Street campuses during his presidency will also leave a lasting mark.

Recognition has also been given to Prof. Greiner's wife, Carol Morrissey Greiner, who has been a dynamic leader in her own right and an active champion of the university.

Prescriptions on Digital Paper



Illegible prescriptions scrawled on physicians' notepads could become a thing of the past, thanks to two complementary technologies developed at UB and the University of Rochester that together are being licensed by mobileLexis, a digital paper solutions company based in Salt Lake City, Utah.

Digital paper, which has been in the marketplace a little over a year, functions the same as any other paper, but records, captures and sends text that users write by hand, using a specially designed, electron-

ic pen. Accuscript, the UB technology, allows for unmatched handwriting recognition on digital paper, while AuthentImage, the U of R technology, is a digital-authentication package that ensures both the security and integrity of documents on digital paper.

The Accuscript technology will translate the handwritten information into digital data and the AuthentImage technology then will secure it for transmission to the pharmacy or health-care insurance provider. Accuscript is a software program ideally suited for instantly turning handwriting on digital paper into digital data, according to its principal UB developers, **Venu Govindaraju**, MS '88, Ph.D.'92, UB CSE professor and associate director of UB's Center of Excellence for Document Analysis and Recognition (CEDAR), and **Hanhong Xue**, Ph.D. '02, now an employee of IBM.

TCIE Trains Local Suppliers in Lean Manufacturing

The Center for Industrial Effectiveness (TCIE) is administering a 20-month program to deliver lean manufacturing training and implementation support to 16 Western New York companies that are suppliers to Delphi Thermal's Plant in Lockport. Empire State Development (ESD) awarded TCIE a grant to fund the program. Lean manufacturing is a proven management approach that focuses on moving materials more rapidly through the pipeline, eliminating waste, reducing work in process and turning resources more quickly into profits.

Materials Engineer Invents Thermal Paste

Deborah Chung, MAE Niagara Mohawk Chair Professor of Materials Research, invented a new thermal paste that will help solve the problem of overheating in high-performance personal computers and other electronics. The paste, when applied between a heat sink and a heat source, can improve greatly the conduction of heat from the heat source to the heat sink.

"Heat dissipation is the most critical problem in the electronics industry because it limits the performance, speed and further miniaturization of microelectronics," Chung explained. "The invented material is superior to all other thermal pastes, including those involving exotic materials such as carbon nanotubes and diamond. It even significantly surpasses solder-the best material currently available-for improving the thermal contact between two surfaces," she says. Additional benefits of Chung's thermal paste include that it is inexpensive to produce, and that it can be used both on heat pipes-for drawing out geothermal energy-and within thermal fluid heaters for reclaiming heat indirectly produced by the heaters.

DEVELOPMENT NEWS

Letter from the Campaign Chairman



Dear Fellow Alumni and Esteemed Friends,

It is with great pride and satisfaction that I write to you on the successful completion of our campaign, The Campaign for UB: Generation to Generation. Let me first tell you just how proud I am of the outstanding effort put forth by everyone. Serving as the chairman for SEAS's campaign from the "quiet" phase in 1996 through to our successful completion in September of 2003 has been both a challenging and rewarding endeavor. Every single donor has my deepest appreciation.

From a goal that continued to grow from \$12 million to \$15 million, to the final goal of \$18 million, this effort has been quite remarkable. That SEAS was instrumental in the university-wide campaign achieving its goal is even further proof of the type of commitment that SEAS showed. I salute our faculty and emeritus faculty leadership who served on our campaign committee: Dennis Malone from current faculty and emeritus members Charlie Fogel and Howard Strauss. SEAS had a truly inspirational result from our faculty and staff. The people most closely tied to our School delivered an impressive outcome. It shouldn't come as much of a surprise that SEAS raised more funds from its faculty and staff than any other campus unit.

I also single out the great contributions from our Dean's Council. This august group of individuals graciously donated their time and talents to the improvement of our school. They also made notable financial commitments as well. I want to let our Dean's Council know how much they are appreciated. I speak for my fellow current and emeritus members of the Dean's Council when I say it continues to be a rewarding experience for my colleagues and myself.

Finally I offer a special word of gratitude to all of the alumni, friends and corporate entities that made major gifts to this campaign. These leadership gifts not only helped us to surpass our goal, but also helped to inspire others to contribute as well.

Two of the truly great aspects of this campaign are the continued relationships of valued donors of the past and the establishment of the many new relationships that developed from this effort. We are well positioned for future success as well.

My heartfelt thanks to all.

Sincerely,

arnes W. McLernon BS IE 1950, SEAS Campaign General Chairman

Letter from the Dean



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

Today is wonderful, tomorrow will be even better. That is the best way I can sum up my feelings on our just completed campaign—The Campaign for UB: Generation to Generation.

My heartfelt thanks go out to all of those who contributed to this campaign and to those who led the effort, especially Jim McLernon, Dennis Malone, Charlie Fogel and Howard Strauss. I also acknowledge current and (former) SEAS development personnel who staffed this undertaking: Tim Siderakis, Mike Madonia, Donna Linenfelser, (Jim Seng, Larry Johnson and Gail Hutton). They were a driving force who put forth a plan and then executed it with enthusiasm, discipline and energy. Everyone

involved makes SEAS a special place and you have truly made me proud and grateful.

Our campaign was an outstanding success. First and foremost, we achieved our goal and did so by a large margin. Our goal was \$18 million and we raised over \$19 million through the ending days of the campaign. A closing \$53+ million software gift from EDS, the largest gift to the campaign and to the university and school ever, pushed our total to exceed \$72 million. Impressive was the spirit of cooperation and generosity when we connected with alumni, friends and corporate partners and strengthened relationships with our longtime supporters. Our Annual Giving Campaign raised more funds than ever before with a large number of first-time donors, including many young alums who graduated after 1990. Other campaign notables included – we received our school's most gifts ever and our single, largest gift ever from an individual.

We knew our goal was ambitious and I admit the success of this campaign marks only the beginning of a very bright future. We have begun lining up a group of ambassadors to connect with our alumni worldwide.

Have a great holiday season.

With sincere appreciation,

Mark H. Karwan Dean

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\$100,000 +

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14

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Philip Fanone '74, West Seneca, NY Frank W. Farbizio '80, West Babylon, NY John F. Fassel '62, Phoenix, AZ Daniel J. Feeney '69, Vail, CO Donald R. '56 and Elfriede I. '57 Ferguson, Williamsville, NY Richard A. Ferraro '80 and Anna H. Choi '79, Washington, DC Michael J. '71 and Elizabeth Ann '89 Fesmire, Sanborn, NY Gerald John Fitzpatrick '88, North Potomac, MD David Michael Ford '91, College Station, TX Gerard R. Freddo '80, Mentor, OH Brian C. Freier '81, Lancaster, NY Alison Frey '81, Kingwood, TX Patricia J. Gaglione '84, Ridgefield, CT Sean Clifford Garrick '98, Saint Paul, MN David J. Garwood '82, Wilbraham, MA James Brandel Gensel '95, Pine City, NY Jill H. '82 and Guy H. '83 Gettys, Flemington, NJ Nicholas J. Gill '02, Lancaster, NY Brian Patrick Gillen '98, Holland, NY Maureen and Matthew W. '98 Glanville, North Chili, NY James E. Glattly '76, Houston, TX David Gerard Glista '87, Durham, NH Stephen J. '73 and Carol A. '88 Golyski, North Tonawanda, NY Edward W. Grenzig '78, Nesconset, NY William E. and Lee M. '86 Grunert, Williamsville, NY Richard S. '80 and Sue Guido, Gibsonia, PA Thomas L. Hagner '80, East Aurora, NY Linda Hall-Bovino, Kenmore, NY Paul G. Hammond '72, St. Louis, MO Wilfred Leslie Hand '66, Mountain View, CA George M. Hardy '58, Buffalo, NY Eileen Louise Hassett '00, Amherst, NY Steven G. Hayes '93, Orlando, FL James E. Heiman '61, Pinehurst, NC Marilyn F. '64 and Robert G. '69 Helenbrook, Grand Island, NY Charlene A. and Herbert Henken, Newton, MA Gary R. Henniger '80, Wayne, NJ Norma Lia Hernandez de Gatica '96 and Jorge Edgardo Gatica '89, Lakewood, OH Leonard F. Hoffman '60, Circleville, OH John K. Howell '71, Tonawanda, NY David K. Humphrey '67, Webster, NY Martin C. Hutkin '75, Woodside, NY Gary L. Innes '66, Livonia, MI Carl Donald Jacobs '95, Chesterbrook, PA David A. James '75, Durham, NC Glenn H. Johnson '50, Stow, NY John M. Johnson '64, Goodlettsvlle, TN George H. Kam '69, Tonawanda, NY Steven J. Kargatis '68, Hampstead, NH

Paul E. Parker '70, Urbana, IL Lisa Carrie Pawlak '97, Cary, NC Guru Prasad '00, San Mateo, CA Charles G. Rader '74, Grand Island, NY David John Recktenwalt '96, West Seneca, NY Paul Schaffer, Danbury, CT Albert E. '53 and Doris K. Seames, Tucson, AZ John R. Smith '76, Pittsburgh, PA Andres and Mary P. '95 Soom, Williamsville, NY Carol and Andrew T. '60 Spilsbury, Torrance, CA Kevin Eagan Sprow '89, Buffalo, NY James Edward Stevens '76, Bay Village, OH Philip A. Treventi '72, Murray Hill, NJ Hai-Lung Tsai '80, Rolla, MO Louis E. Varadi '50, Danvers, MA Ted M. Varney '68, Chadds Ford, PA Chu Ryang Wie, Amherst, NY William L. Winstrom '70, Andover, NJ Larry R. '52 and Mary Lou A. Zangerle, Dearborn, MI Jennifer Lynn '97 and Mark J. '90 Zirnheld, Buffalo, NY

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CORPORATIONS, FOUNDATIONS, AND ORGANIZATIONS

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American Chemical Society Earthquake Protection Systems, Inc. Nokia Research Center Praxair, Incorporated Sun Microsystems, Incorporated

\$10,000-\$49,999

American Heart Association, New York Finger Lakes Region Ceramics & Materials Processing, Inc. Community Foundation for Greater Buffalo Cornell University Department of Electrical Engineering Cymfony, Inc. Delphi Harrison Thermal Systems The Dow Chemical Company **E&WG** Foundation GE Fund Hewlett-Packard Company Microsoft Corporation Moog, Inc. United Engineering Foundation Xerox Corporation U.S.A. Xerox Foundation

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The listings on these pages represent those who made contributions from July 1, 2002 to June 30, 2003. While all gifts are appreciated, space only allows us to begin the list with donors who gave \$100.00 or more. We have made an effort to ensure that the listings are both complete and accurate. We ask that you contact our Development director Tim Siderakis or assistant director Mike Madonia with any questions you may have. They can be reached at 716-645-2133 or e-mailed at tsiderak@buffalo.edu or mmadonia@buffalo.edu.

James Allen McMillan '94, Bar Harbor, ME William C. Merriman '84, Carson, CA Carol A. Mester Vallett '78 and David P. Vallett '82, Fairfax, VT Adam E. Mikolay '83, Long Beach, NY Dean C. and Nancy S. '61 Millar, Williamsville, NY Gregory Minnick '81, Toms River, NJ David C. Mis '78, Arlington, VA D. Joseph and Karen M. Mook, Buffalo, NY Edward C. Morris '73, Herndon, VA Sandra D. Motley '84, Madison, NJ Paul R. Motyka '68, Acton, MA Tina M. Mrazik '87, Nisakayuna, NY Christopher Gerard Murphy '97, Hinesburg, VT Bernard T. Neu '79, Lancaster, NY George W. Neuner '65, Winchester, MA Hung Quang Ngo, Amherst, NY Aaron Michael Nickles '91, Mineola, NY David M. '94 and Tammy Jean '91 Norman, East Concord, NY J. Ronald Northrop '78, Rochester, NY George H. Norton '48, Salt Lake City, UT Daniel E. Oldman '77, Durham, NC

Century Club, \$100-\$249 (continued)

Michael C. Orlovsky '85, Baltimore, MD Sean M. O'Shea '93, Rego Park, NY Orland H. Oswald '51, Buffalo, NY Prasad Madhukar Pandit '96, Getzville, NY Richard K. Patterson '71, Richmond, VT Earl T. Pearson '55, Tucson, AZ David L. Peet '80, Willmington, DE Patricia H. '87 and Thomas E. '84 Pericak, Hamburg, NY James A. Perreault '98, Greenbelt, MD Michael R. Petroski '68, Troy, MI Catherine '80 and Michael '78 Pilarz, Buffalo, NY Ronald J. Piracci '69, Clifton Park, NY James M. Pitarresi '86, Vestal, NY Kevin John Potempa '92 and Patricia Marie Wier '92, Fairport, NY Alan J. '86 and Rebecca Rabideau, Buffalo, NY Subramani Rajaram '80, Flanders, NJ William J. Rapaport '84, East Amherst, NY Christine Mary Richardson '94, Brooklyn, NY Stanley E. Rittgers '68, Stow, OH John N. Rivara '75, Valrico, FL Kathrvn J. Rivers '85, Rochester, NY Lance E. Robson '66, Lancaster, PA

Steven O. Rosen '70, Portland, OR Patrick J. Ross '86, Houston, TX Brian Maurice '87 and Michele B. '88 Rothery, Bellmore, NY Robyn Haley Rothstein '94, New York, NY James D. Ryan '71, Schenectady, NY Janet M. '91 and Barry Safier, Getzville, NY Michael Robert Sandmann '89, North Tonawanda, NY Henry L. Sandonato '78, Lewiston, NY John R. Saylor '86, Seneca, SC David E. Scesney '71, Blacksburg, VA David P. Schaffer, New York, NY James Scinta '78, Bartlesville, OK Catherine J. Scott '84, Cornwall-on-Hudson, NY Stuart C. and Caren D. Shapiro, Williamsville, NY Robert M. Sherman '77, Burtonsville, MD John E. Sherwood '73, Knoxville, TN Louis P. Sileo '67, Liverpool, NY Edward Y. '64 and Helen B. Sing, Bloomfield Hills, MI Karthikeyan Sivasubramanian '96, San Jose, CA David Thomas Skinner '94, Waterloo, NY Marven M. Smith '50, Luvedale, MS Benjamin T. Smyth '93, Rockville, MD

Alfred Paul Stancampiano '96, Pembroke Pines, FL William N. Sullivan '68, Albuquerque, NM Piotr Szewczyk '01, Poughkeepsie, NY Matthew S. Szkotak '83, Boothwyn, PA Rodney J. Tabaczynski '66, Northville, MI John C. Tang '81, Phoenix, AZ Paul W. Taylor '69, Summerfield, FL Steve Rex Tewinkle '88, Keller, TX Evan Steven Thaler '93, Stamford, CT Vincent Tomassetti '88, West Chester, OH Keith R. Tompkins '65, Chesterland, OH Janet L. Traub '83, Syracuse, NY Glenn T. Traver '85, Saugerties, NY Christopher J. Trimper, Tonawanda, NY Lieselle Enid Trinidad '00, Novi, MI Joseph Michael Tripi '02, Clarence, NY Christopher James Truskey '00, Amherst, NY Steven Tsengas '60, Mentor, OH

Century Club, \$100-\$249 (continued)

Richard F. Twardokus '68, Bloomfield, NY Eric J. Tyler '80, Pittsford, NY Thomas J. '84 and Patricia Snyder '83 Uhl, Vestal, NY Thomas D. Valentine '83, North Tonawanda, NY John L. Vanderhoef '79, Schenectady, NY Andrew Clark VanEtten '90, Silver Spring, MD John R. Vasko '72, San Diego, CA Steve J. Vekich '50, Marietta, OH Richard A. Voit '92, Amherst, NY Wayne A. Walter '64, West Chester, OH William C. Washington '93, Baldwin, NY Marc Wiatrowski '96, Durham, NC Gordon J. Wilson '49, Hamburg, NY Pongdet P. Wipasuramonton '85, Rochester, MI William J. Wirth '64, East Aurora, NY Erez Wolf '92, Ponte Vedra, FL Mark B. Wolfe '82, Miami Springs, FL Mary Ellen Wolinski '80, Myrtle Beach, SC

Ta-Hsiung Wong '83, Indianapolis, IN Sailai Wong '87, Sudbury, MA Cheechiu J. Wong '72, Fairport, NY Gary W. Wood '73, Loudonville, NY George D. Woodward '85, Redding, CA Joseph D. Worobey '77, Naperville, IL Lin Yang '00, Fort Lee, NJ Kent Yen '93, Flushing, NY Lucy M. and Sheridan A. '50 Yondt, Town of Tonawanda, NY Dantong Yu '01 and Yu Sun '99, Coram, NY Harvy Zapata '01 and Andrea Gonzalez, Midlothian, VA Stephen W. '72 and Beverly Zelazny, Snyder, NY Yongshan Zhang '96, Jersey City, NJ Alan James Zylinski '94, Orchard Park, NY

The Dean's Council Convenes

The SEAS Dean's Council convened this fall in California for their semiannual meeting. The gathering was hosted by council member Hadi Makarechian (BS CIE '72) at his company's St. Regis Monarch Resort and Spa. New council chair Kenneth Manning (BS ES '74) presided over the event and welcomed new members Timothy Klein (BS EE '84), Russell Agrusa (BS EE '76), and Rajeeva Lahri (Ph.D. EE '82). Other council members in attendance included Larry Peckham (BS IE '69) and Lee Runk (BS IE '61).

Business included:

Call to order and introductory remarks-Kenneth Manning

Update on UB Presidential Search-Mark Karwan

Update on Undergraduate Education-Michael Ryan

Computing Infrastructure and Support in SEAS-**Charles Brunskill**

Generation to Generation Campaign Results-Tim Siderakis

Financial Landscape at UB-Paul Goodman

Research Updates-Mark Karwan

Strategic Planning for The Center for Industrial Effectiveness-Robert Barnes and Mark Karwan

Council's Comments and Recommendations

Special features of the meeting included:

Guest Speaker-Max Nikias (MS EE '80, Ph.D. EE '82), Dean School of Engineering, University of Southern California

A behind the scenes tour of the resort's physical facilities hosted by the Hotel Manager Reinhard Neubert.

Also supporting the meeting were Mike Madonia and Linda Bovino.







Photos from top: council chair Kenneth Manning with council member and meeting host Hadi Makarechian; Lee Runk and Larry Peckham; new member Timothy Klein; Max Nikias, USC dean and Dean Karwan; new member Russell Agrusa.





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A Request For Your Continued Support

We need your continued support to help us achieve the "margin of excellence" I have spoken about so frequently. It is through your gifts that we are able to provide the needed resources in these times of fiscal pressures on current State budgets. I am somewhat surprised when I hear from alumni and corporate partners who thought we still received most of our funding from New York State. The university, much like our fellow public research universities, derives just over 30% of its revenues from New York State. That means we need to be vigorous in our efforts to raise more funds through research grants, private support from alumni and friends and partnerships with our esteemed corporate partners. Mark H. Karwan, Dean

Campaign Achieves Goal

(cont. from pg. 1)

Just as the EDS gift is helping to shape our future in CAx teaching, the campaign, as a whole, has put our advancement and development program closer to the level we should be at for an engineering school of our size and scope.

During this campaign, more alumni and friends contributed to SEAS than at any other time in our history. Our annual giving has grown consistently in both dollars generated and number of donors who participate. More than half of the donors that gave to the school during this campaign were first time donors. We have built a "Delta Society" (donors who give us \$1000 or more in a given fiscal year) from 14 individual members in its inaugural year of 1995, to over 70 strong last year. And we fully expect to number more than 100 in the current fiscal year. We have grown our corporate Delta list during this time at an equally impressive rate. Along with this, we have built, and continue to build, many strong relationships with a small group of alumni who have made or are considering major gifts to the school that will benefit us, and our students for many years to come. We have also built strong corporate relationships for the school. Along with EDS that was mentioned on the front page, names like American Axle & Manufacturing, Dell, Delphi Thermal Systems, IBM, Lockheed Martin, Moog, Motorola, Niagara Mohawk, Praxair, SGI, United Airlines and many others, have been working with us to create a margin of excellence for our school.

We are now positioned well to go to the next level of advancement and development efforts. A more detailed account of donors for the past year is listed elsewhere in this newsletter. Please also see letters from SEAS Campaign Chairman McLernon and Dean Karwan and the development section.

If at any time you have questions, or would like to get more involved with us, we encourage you to contact **Tim Siderakis**, our assistant dean and director of development for the school, or **Mike Madonia**, our assistant director.



Announcing Three New Publications

SEAS has three new brochures: the two *Igniting Ideas* issues focus on primary research areas, Infrastructure and Environment: Engineering a Quake-Safe World and Photonics, Micro-electronics, and Nanotechnology: The Power of Light. Our special issue details some of SEAS' current research in Homeland Security.

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

www.eng.buffalo.edu/lgnitingldeas/

seas news • fall 2003

19

BEAM Senior Student Recognition Dinner and Technical Advisors

BEAM (Buffalo-area Engineering Awareness for Minorities) held its first Senior Student Recognition Dinner in September at Emerson Commons, an event sponsored by SEAS and Occidental Chemical Corporation. The students of Emerson Culinary Arts Program served students and corporate supporters. Twenty-eight BEAM high school students were honored for their outstanding high school records. Students

received their own business cards to hand out to the corporate members.

Ted Dougher, Vice-President of Engineering and Supply Systems at Praxair offered two scholarships to be presented to BEAM seniors who will be entering into an engineering curriculum in the fall. **Drexel E. Gidney,** SEAS Senior Academic Advisor and Director of Minority Engineering Programs extended an invitation to the BEAM students and offered his assistance to the many students indicating an interest in attending UB. Several of the guest speakers were BEAM alumni who spoke on the importance of BEAM to their success and to the education of Buffalo Public School children.

BEAM also held its Technical Advisors Kick-Off in October, bringing together participating companies to provide technical advisors to work with students in BEAM Clubs, which meet after school. These enrichment activities are in the form of hands-on projects designed to incorporate mathematics and science principles, related to engineering procedures.

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

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		Suggested Scholarship Co	ntribution \$5.00	(additional welcome)	+	\$				
				Total Enclosed	=	\$				
Method of Pay	ment We would be pleas	sed to accept your check, mor	ney order, or credit ca	urd.						
Check	Money Order	Master Card	🗌 Visa	Make checks payable to UB Engi	neering Alu	mni Associ	ation)			
Card Number _		=		Card Expiration Date mm/yy/						
Signature (cred	lit card only):									
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corporate member

SEAS Calendar

EAA's SEAS at UB Basketball, Saturday, February 14 Engineering Seminar & Open House, Saturday, March 13 Math Is Everywhere, Thursday & Friday, March 18 & 19, UB North Campus Natural Sciences Complex

SEAS Scholarship Reception, Friday, March 26, Center for Tomorrow

UB and SEAS Preview Day-Spring Open House, Saturday, April 17

Dean's Council Meeting, Thursday & Friday, April 22 & 23 **Order of the Engineer and EAA Engineer of the Year,** Monday, April 26, 5 p.m.

SEAS Commencement, Saturday, May 8, 1 p.m.





From top to bottom: over 400 smiling SEAS students came to kick off the new school year on September fifth. The Engineering Student Association kept the grill sizzling and the line moving as they cooked up more than 900 hot dogs and 50 veggie burgers. UBEAA President **Steve Golyski** gives a check from the Alumni Association to **Malati Patil**, the current President of the Student Association. On the right is **Mike Madonia**, Assistant Director of Development. The generous support from the alumni association helped to make the picnic a success.

Abbreviations Used in SEAS News

CE, Chemical Engineering **CSE**, Computer Science and Engineering **CSEE**, Civil, Structural and Environmental Engineering **CIE**, Civil **EE**, Electrical Engineering IE, Industrial Engineering MAE, Mechanical and Aerospace Engineering AE, Aerospace ME, Mechanical

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