



BUFFALOENGINEER

FALL 2008

UBAA Honors

- Greatbatch
- Nikias
- Buckley

2008 Dean's Award

- McCombs

Students Claim National Honors

Student Excellence Initiatives: 10th Anniversary

Trailers Fade Away



◀ Hui Meng

Aidong Zhang ▶

◀ Susan Z. Hua

◀ Esther Takeuchi

Launching Biomedical Engineering

Jack Davis' Unparalleled Contribution



◀ The Future Look of UB Engineering





I am pleased to share news regarding two major topics of importance to our school.

The first is – The School of Engineering has received its largest individual donation ever, from **Jack Davis** (BS IE '55). Jack is founder and owner of I Squared R Element Company Inc., an Akron, New York-based manufacturer of commercial heating elements. His gift is an expression of gratitude to UB Engineering for the fine education he received here, which became the underpinning of his successful career. We thank him for this extraordinary donation that will have a profound and lasting impact on UB Engineering, and will recognize it by the naming of the “Clean Room” in our planned building, (to be built on the site of the former trailer complex).

The second concerns the launch of a department of Biomedical Engineering at UB. The program will be a joint effort between the School of Medicine and Biomedical Sciences, led by Dean Michael Cain, and the School of Engineering. The work of establishing the department will be the result of collaborations, in the truest sense, between the deans, faculty, and researchers of both schools, and began with the recognition that significant investigator-initiated collaborations already existed between our faculty teams. Dean Cain and I formed a task force of faculty and research administrators who provided recommendations about designing the department. Some of the task force members are now addressing a host of issues concerning its establishment. We wish to acknowledge generous funding to this project by the John R. Oishei Foundation.

In addition to adding a department, the school is also growing aggressively through state, university, and private funding, with a significant increase of 117% in philanthropic commitments, which will go toward offsetting new building expenditures. It is growing in size, through a 30 percent space increase available in the new building, and the numbers speak for themselves: in the past academic year, we have made great strides in growth, as seen in an overall increase in degree production, with an increase in graduate degrees (masters degrees granted are up 18.3%; PhD degrees granted are up 3.2%), and a slight decrease in undergraduate degrees (down 2.0%). SAT scores of our incoming undergraduates were up 25 points this year and a total of 47 points over the past two years. This improved quality, coupled with our Student Excellence retention program, will have an extraordinary impact on our retention and graduation rates. We look forward to sharing news of our continued progress in upcoming issues of *Buffalo Engineer*.

Sincerely,

Dean Harvey G. Stenger, Jr.

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Join **UB Believers** and help create the future of our communities—at the university, local and state levels. UB Believers is an advocacy group that supports the University at Buffalo's 2020 growth plan. Your voice will be part of a growing chorus dedicated to strengthening Western New York's economy and quality of life. To learn more, please visit: ubbelievers.buffalo.edu/ubbelievers/home.

Launching Biomedical Engineering

Biomedical engineering (BME) has been a longstanding specialty at UB Engineering, and now the focus is taking form, completing a metamorphosis from individual faculty researchers to a program with department status.

The project is the result of a collaboration between the School of Engineering's **Dean Harvey Stenger** and the School of Medicine's Dean Michael Cain. Together they organized a task force that elevates BME and launches the department, which will pinpoint UB 2020 research strategies of Molecular Recognition and Bioinformatics; and Health and Wellness Across the Life Span. The task force represents faculty from the engineering departments of CBE, CSE, EE, and MAE and from the medical school. The group was tasked with outlining a budget and schedule that includes recruitment and hiring of a department chair and core faculty, and designing the curriculum, among other basic needs.

Deans Stenger and Cain also directed the formulation of a proposal that resulted in a grant from the John R. Oishei Foundation. It will support the initiative with \$2 million. Oishei will also provide another million dollars in matching funds.

Applications to grant both bachelors and graduate degrees have been made and are awaiting approval.

BME Will Highlight Four Fields of Emphasis:

- 1) Molecular-cellular, cell and tissue engineering, which uses engineering tools and principles of cell and molecular biology to develop novel therapeutics, including tissue engineering for organ replacement, and cell-based devices for drug and gene delivery.
- 2) Computational engineering and modeling, which uses mathematical principles and computers to model complex biological systems and networks, such as those that help us simulate how cells talk to one another or how electrical impulses spread from one chamber of the heart to another.
- 3) Biomedical sensors, instrumentation and diagnostics, which involves developing devices for implantation that indicate warnings of early disease.
- 4) Medical imaging and analysis, for new technologies that more precisely image the human body and its biological systems — key to the clinical evaluation and treatment of patients.

Continued on page 13

Faculty research to make major contributions to new BME effort

Esther Takeuchi (EE and CBE)

*Greatbatch Professor of Advanced Power Sources
Co-Director, UB Center for Advanced Biomedical and
Bioengineering Technology (UB CAT)
Takeuchi Advanced Power Sources Research Group*



A National Association of Engineering (NAE) member and inaugural Astellas awardee, Takeuchi's work will be important to the BME department. Over the past 25 years, Takeuchi has garnered renown for her numerous patents and her work in developing tiny batteries that have helped make implantable cardiac pacemakers, defibrillators, and other medical devices a

Professor Hui Meng (MAE)

*Research Professor of Neurosurgery
Co-Director, Hemodynamics Division, UB's Toshiba Stroke
Research Center
Director, Hemodynamics Laboratory
TSRC Director, Laser Flow Diagnostics Lab*



Meng is developing innovative methods for diagnosis and treatment of diseases and injuries. She studies the relationship between blood flow and brain aneurysms, which can lead to the most severe form of stroke when they rupture. By studying these blood flow dynamics, Dr. Meng and collaborators are

Professor Aidong Zhang (CSE)

Zhang leads the CSE Database and Multimedia group that is researching bioinformatics, data mining, client server multimedia presentation systems, and content based image retrieval systems. One such project involves a multidisciplinary team of UB pharmaceuticals and computer-science researchers developing a method for interpreting the massive amount of information resulting from the use of DNA microarray technology in studies of multiple sclerosis. Zhang's awards include the NSF CAREER Award; a UB Exceptional



Associate Professor Susan Zonglu Hua (MAE)

Hua was among the researchers involved in developing a microfluidic device that rapidly tests live cells for responses to any stimulus by using electrical resistance to measure changes in cell volume. Together with Frederick Sachs, Anthony Auerbach, Stephen Besch and Philip Gottlieb (all Physiology and Biophysics) and **Harsh Deep Chopra** (MAE), she developed the Microfabricated Device for Monitoring Cell Volume, which Reichert, Inc. licensed. Hua was recognized as a "Visionary Innovator" of UB; as a "Promising Inventor" by



BME Faculty Research continued on page 13



*Jack Davis (center), with UB Engineering's Senior Development Director, Tim Siderakis (l), and Dean Stenger (r).
Photo: NJ Parisi.*

Davis Gift Unparalleled

Local industrialist, I Squared R founder and principal **John R. "Jack" Davis** (BS IE '55), has given \$1.5 million to the School of Engineering, the largest single contribution by an individual in the School's 62-year history. His gift recognized the "excellent education" he received here, which he said helped him to be a successful entrepreneur both technically and "in human relations and all the other areas that allow a business to succeed."

The donation will support construction of a 5,000-square-foot clean room on the first floor of the new engineering building on North (Amherst) Campus. Large windows will allow a view to researchers working in the fields of nanotechnology, electronics, biomedical engineering and other fields. *Continued on page 16*

Engineering Alumni Rewarded



The annual UB Alumni Association (UBAA) awards recognize individuals with exemplary service to UB and their communities.

UB engineers received the following UBAA awards (pictured from left to right):

Wilson Greatbatch (MS EE '57, Hon ScD '84): Samuel P. Capen Award: the UBAA's highest honor, which recognizes alumni contributions to the university that influence UB's growth and stimulate others to participate to actively support the university. Greatbatch is responsible for the conceptualization, refinement, and production of the battery-operated, implantable cardiac pacemaker.

Chrysostomos L. Max Nikias (MS '80, PhD '82 EE): Clifford C. Furnas Award, presented to distinguished engineering, natural sciences, or mathematics alumni. Nikias, Provost of the University of Southern California and former dean of its Viterbi School of Engineering, was recently elected into the National Academy of Engineering for his "contributions to the development and diverse applications of adaptive signal processing, and for leadership in engineering education."

CSE Lecturer **Michael Buckley** (BS EE '78): Richard T. Sarkin Award for Excellence in Teaching, for introducing students to socially relevant computing applications, including the UB Talker, a device that allows those with speech impairments to communicate with others. For more, please see the article on page 12.

Norman R. McCombs Receives Dean's Award for Achievement



Stenger with McCombs (l)

UB Engineering gave its highest honor, the Dean's Award for Achievement, to **Norman R. McCombs** (BS ME '68), Senior Vice President of AirSep Corporation, in recognition of his innovative contributions to medical technology, most notably in Pressure Swing Adsorption (PSA) and the invention of the first portable oxygen concentrator. As a direct result of McCombs' contributions, the technology has become a viable, safe, and affordable part of the long-term oxygen therapy necessary for patients with chronic obstructive pulmonary disease (COPD), which includes chronic bronchitis, emphysema, and other lung diseases. He

succeeded in refining the system and its design from weighing over 200 pounds to 45 pounds, and most recently, to an ambulatory device weighing only 4.4 pounds, small and safe enough that the Federal Aviation Administration has approved its use on airlines, allowing plane travel for hundreds of thousands of people for whom it was previously not possible. Beyond the medical uses of PSA oxygen systems, they have been applied to a variety of uses worldwide, including metal cutting, wastewater treatment, fish farming, gold mining, and glass processing.

He currently resides in Tonawanda, New York with his wife of 47 years, Grace (Seitz). He founded NRM Development Corporation and, later, Xorbox Corporation, which evolved into AirSep Corporation in 1986. To learn more, please visit: www.eng.buffalo.edu/Commencement/2008/deans_award/mccombs.pdf.

The UB Engineering Alumni Association welcomes its 2008 Board of Directors

| | |
|------------------------------|-----------------|
| Jim Boyle, president | Steve Golyski |
| Peter Buechi | John Kociela |
| Steve Buechi, treasurer | Anthony Markut |
| Michael Dray, secretary | Brian Peer |
| Jeff Dudek | Michelle Rhodes |
| Joe Frandina, vice president | Rick Rink |

The Annual Pillars Society Luncheon with the class of '58, featuring a speaker of special recognition, will be held Friday, October 17th, 2008. The Pillars Society honors the 50-year class and all classes celebrating 50 years or more.

In Memoriam

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

Alfred C. Barmasse, BS ME '49
 Theodore L. Battle, BS EE '64
 Robert L. Bloomquist, BS ME '63
 David E. Clune, BS EE '83
 Charles A. Daniel, BS ME '50
 John T. Daniels, BS ME '50
 Herbert A. Drexelius, BS ME '50
 William B. Gould, BS EE '67
 Walter M. Lewicki, BS EE '49
 Vincent F. Link, MS Eng '72
 Jerry Nelson Linneman, BS ME '53
 William Joseph Lyons, MS EE '79
 David H. Manka, MS CE '82
 Herbert Pfoetsch, BS ME '57
 Trevor C. Poole, BS Eng '82, MS ME '96
 John P. Pytlak, BS EE '70
 Ned Rogers, BS ME '49
 Raymond G. Tessmer, BS ME '52
 Nicholas A. Valvo, BS EE '50
 William H. Werschin, BS ME '54

Partnering with Dresser-Rand, Globally

Dresser-Rand, a leading global supplier of turbo machinery and products for oil and gas services and industries, has worked closely with UB Engineering in recent years, affording important working opportunities to graduating students, both here in Olean, New York, and in Kuala Lumpur, Malaysia.

The firm has hired 10 UB engineers in 2008 alone, three of whom were hired by participating in the Engineering Coop Internship (ECI) program.

Also, recently Dresser-Rand Malaysia convened a reception for 21 UB alumni in Kuala Lumpur, many of whom had graduated as engineers (photo).

Dresser-Rand Olean has targeted UB Engineering as a primary source for hiring technical talent. To bring Dresser-Rand and UB Engineering closer, both organizations are identifying strategies to increase research and recruitment efforts.



Trailer Demolition Clears Building Way

In 1988, UB erected 10 trailers between Ketter and Jarvis halls for its growing engineering program. Now, twenty years later, the Engineering Trailer Complex has been demolished. **Dean Stenger** took the initial swipe with a sledgehammer (see photo on page 2), breaking ground for UB Engineering's new building expected to open in 2011. The project has received generous funding from New York State and from private and corporate donors; fundraising continues.

The 130,000-square-foot building will house outstanding researchers from the CSE and EE departments, who will produce valuable new research, and educate a highly skilled workforce benefitting the region. It will boast a "clean room" for intricate work with nano-devices; a "cybertorium" with sophisticated communications devices and smart technology; and flexible research labs, classrooms, and meeting areas for interdisciplinary work.

The School intends to grow both enrollment and faculty by 60 percent over the next 10 years.

The demolition garnered comments from UB Engineering alumni, including: "As a PhD student in 1989 when the trailers were first installed, I was there when **Dr. Hlavacek's** group moved into them. Actually they were very open and great for a theoretical group to sit together. I have fond memories of installing the first Sun Workstation there and also playing hours and hours of 3D Tetris. I also held office hours there as a TA." From another: "I have memories of conversing with TAs in the trailers during my undergrad years in the late 80s and early 90s. I also remember we used to hold meetings there for one of the engineering clubs. As a student assistant for CIT, I also remember installing the first data network there. Nice to see them finally going away, but on the other hand they're a part of UB Engineering culture!"

To learn more please visit: <http://www.eng.buffalo.edu/newbuilding/trailers/>. To see more Trailer Tales, click the Construction Progress tab in the sidebar.



Hire UB Engineering Co-op and Intern Students

We encourage our alumni and industrial partners to consider employing UB Engineering students through our Co-operating Engineering Education Program.

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

Internships are also available.

Please consider employing one or more of these students.

For more information, contact:

Dean C. Millar, Assistant Dean

412 Bonner Hall, (716) 645-2768 x1112

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

Since the early 1990s, the **UB Engineering Alumni Association** has carried on a tradition of giving scholarships to deserving undergraduate students through the **UB Engineering Alumni Association Scholarship Fund**. Please consider continuing this tradition with your own donations, which are essential to supporting the fund. Together, we can all work to promote UB Engineering's excellence.

Checks should be addressed to the **UB Foundation** and sent to:

**External Affairs
UB Engineering Office
412 Bonner Hall
University at Buffalo
Buffalo, NY 14260-1900**

UB Engineering Students Earn Top National Awards

Three UB Engineering students received prestigious national awards, and one received an honorable mention.

Barry M. Goldwater Scholarship

Awarded to sophomores and juniors intending to pursue advanced degrees in mathematics, the natural sciences, or engineering.

Honors Scholar **Bradley Cheetham** (MAE) received the Goldwater Scholarship. Brad is president and co-founder of the UB chapter of Students for the Exploration and Development of Space and the vice president of UB's Tau Beta Pi chapter. He participated in the prestigious NASA Academy at Goddard Space Flight Center and received a NASA



(L to R): Stacy Pustulka, Kelly Miller, Aaron Krolkowski (PolSci/EnvStud), Bradley Cheetham.

Fresh Pursuits

Honors student **Kelly Miller** (BS EnvE '08) pursued an interest in water treatment solutions for developing countries at UB Engineering's EnvEng program. Her studies, grounded in a belief in the right to clean water, have given her opportunities to attend national sustainability conferences, do research in Honduras, and to meet former Vice President Gore and New York State Governor Paterson. She has helped research the Bio-sand and Mor-sand filtration systems.



Space Grant Fellowship to research engineering problems associated with returning to the moon.

Jacob Weiner (CBE): Goldwater Scholarship Honorable Mention.

Two NSF Graduate Research Fellowships (GRF) Awarded

Provides a stipend and tuition allowance for three years of graduate study in mathematical, physical, biological engineering, or behavioral and social sciences, including the history of science.

Kelly Miller (BS EnvE '08), 2007 Morris K. Udall Scholarship recipient, won the 2008 NSF GRF. (see **Fresh Pursuits**, above, for Kelly's research interests). Kelly served with the World Water Forum and was co-founder of Engineers for a Sustainable World-UB; she was New York Water Environment Federation representative for UB's

Environmental Engineering & Science club; co-organizer, UB's Students United for Progress; and a Student Association assemblyperson. Kelly will begin graduate study at MIT in 2009.

Stacy Pustulka (BS CE '08). Stacy's research centers on tissue engineering and metabolic engineering. She served as an officer in UB's Student Chapter of the American Institute of Chemical Engineers (AIChE), and was the first Chair of the Society for Biological Engineering here. These leadership roles and her academic accomplishments earned her the AIChE's 2006 Donald F. and Mildred Topp Othmer National Scholarship and the 2007 Outstanding Senior Award from AIChE's Buffalo chapter. She received a Dean's Fellowship and a James C. Meade Graduate Fellowship from Carnegie Mellon, where she will continue her research and studies.

Several UB Engineering students were honored at this year's Pillars of Leadership Award Ceremony, presented by the Center for Student Leadership and the Office of Alumni Relations and Student Constituency Relations. The ceremony recognizes students who have made an exceptional difference to the campus community.

Engineering students recognized: **Chris Llop** (EE), Emerging Leader; **Michael Nasca** (EE), Student Association Outstanding Staff; **Rahul Ramaswamy** (EE), UB Leadership Certificate (UBLC); **Shruthi Srivatsan** (EE), UBLC; **Andrew Willis** (ISE/Spanish), RHA Senator of the Year; **Christina Yacooob** (CBE/Math), Exemplary Leadership and SUNY Chancellor's Awards.

Pillars of Leadership Award Ceremony



ASCE Students Excel in Regional Contests

The UB student chapter of the American Society of Civil Engineers (ASCE) did notably well in three competitions. While one ASCE team had a strong showing in the 2008 National Timber Bridge Design Contest, in two other contests at the 2008 regional ASCE conference UB ASCE teams placed second: one team in the concrete canoe competition, and a third team for their scale model of a functional steel bridge.

At the conference, hosted by the U.S. Military Academy at West Point, UB competed against engineering teams from Rensselaer Polytechnic Institute and Rochester Institute of Technology, among others.

The competitions provide engineering students with fun, hands-on practical experience in engineering construction and design, and call upon students to use their creativity and athleticism, as well.



UB's ASCE conference participants were **Raymond Cestaro, Justin Darling, Lenore Dunnah, David Hastings, Joseph Kasperski, Trisha Miazga, Antonio Miceli, Alexander Niederbuhl, Melissa Norlund, Timothy O'Donoghue, Miranda Robinson, Timothy Savery, Timothy Sugrue, Joseph Wetzel, Robert Wurstner, and Walter Zitz.** Timber Bridge design team members were **Trisha Miazga, Ian Eller, Dave Brugger, and Matt Alboum.** CSEE instructor **Todd Snyder** is the UB-ASCE faculty advisor.

The steel bridge team took first place in the categories of stiffness and efficiency, earning a chance to compete nationally at the 2008 National Student Steel Bridge Competition in Gainesville, Florida, while the concrete canoe team took first place in the women's sprints category.

CSEE Professor and Chair **A. Scott Weber** noted that the UB's ASCE teamwork highlights the exceptional quality of UB's CE program and its students' commitment to excellence.

UB-ASCE and CSEE will host the 2009 regional ASCE conference next April.

Building a Better Burger

UB Team places third in burger building contest named for late cartoonist Rube Goldberg

UB Engineers placed third in their first time competing in the national Rube Goldberg competition at Purdue University. The annual meet, sponsored by Phi Chapter of Theta Tau fraternity, asks contestants to build machines that most effectively combine creativity with inefficiency and complexity. This year's task: a machine that assembles a hamburger in 20 or more steps. The

UB team of **Jimmy Jin (ME), Sharon Greenfield (ME), Martha Spokane (AE), Tom Fernekes (MAE), Doug Thomas (MAE), and Abraham Ramos (CBE)** demonstrated their burger-building contraption at several local events.

Photo right: The colorful machine has been demonstrated at several UB events

Photo far right: Front row: Jimmy Jin and Sharon Greenfield hold third-place trophy. Back row: Martha Spokane, Tom Fernekes (holding burger), Doug Thomas, and Abraham Ramos.



Engineering Commencement

Provost **Satish Tripathi** conferred degrees to UB Engineering graduates. **Dean Stenger** read an encouraging letter he had sent his graduating daughter that same morning. The Banner Carrier was **Thomas Leach (AE).** **Matthew Bell (EE)** gave the Salutation; **Kurt Cavalieri (AE)** gave the Student Address; **Jessica James (CE/MBA)** gave the Farewell; **Christina Yacoob (CE)** received the Chancellor's Award.





Tau Beta Pi Recognition



2008 Professor of the Year, Jennifer Zirnheld, Deputy Director, Energy Systems Institute, Assistant Professor (EE) and 2008 TA of the Year, Adam Halstead (EE)



Eminent Engineers (L to R): Professor Rajan Batta (IE) and Professor Tarunraj Singh (MAE)



Graduate Student Inductees (L to R): Michelle L. Tinsley, Hassan Masoud, Christopher J. Drucker (not pictured).

Tau Beta Pi is the only engineering honor society representing the entire engineering profession. It is the nation's second-oldest honor society, founded at Lehigh University in 1885 to recognize students of distinguished scholarship and exemplary character. There are now collegiate chapters at 241 US colleges and universities, active alumnus chapters in 16 districts across the country, and a total initiated membership of 497,894.

The New York Nu chapter was formed at the UB School of Engineering and Applied Sciences in 1967. Family and friends of the NY Nu chapter of Tau Beta Pi congratulated the initiates honored at an induction ceremony and dinner.



Undergraduate Student Inductees (L to R) (Front): Eric A. Musuta, Ari I. Fogel, Luoni Huang, Rohan Sood, Christopher D. Martin. (Rear): Geoffrey M. Hohn, Alexander C. Poworoznek, Matthew J. Swasey, Thomas J. Hartnett, Mark E. Tjersland, Jonathan N. Bapst, Matthew R. Kinne



2008-2009 Tau Beta Pi NY Nu Officers (L to R): Adriane Wotawa-Bergen, recording secretary; Bradley Cheetham, vice president of internal affairs; Daniel Muffoletto, president; Andrew Gaeta, vice president of external affairs; Christopher Hughes, corresponding secretary.

Celebration of Academic Excellence

Undergraduate Research and Scholarship Projects

This poster session celebrated undergraduates engaged in innovative work and scholarly research. The following engineering students were recognized:

CE: Zachary Fowler; Donghui Jing; Lye Theng Lock; Hao Fan Peng; Pradeep Nagaraja; Haofan Peng; Tai Boon Tan

CompE: Dennis J. Bowah; Jun Gene Cheng; Shea Lerk Ng; Andrew Paluch; Ali Seyed, Jesse Thompson

CompE & EE: Rishi Sharma, Varun Chopra

CIE: Eben Piazza

EE: Hidab Hamwi; Christos Kelshis; Wing Cheung Law; Claire Lochner (EE)

Eng: Daniel Loscalzo

EnvE: Kelly Miller

IE: John B. Coles

ME and AE: Taiq Abuhaimad; Ankur Baheti; Brandon Brown; Nick Catalano; Bradley Cheetham; Jemin George; Seungjin Han; Srikanth Kanna; Amrish Kumar; Chuangang Lin; Richard Linares; Jonathon Missel; Ryan Norris; Dan Snitzer; Govindaraja Srimathveeralii; Chinpei Tang; Daojun Wang

BETA Award

Karthik Kathiresan (CSE)

won in the Student category of the Buffalo Niagara Emerging Technology Awards (BETA) InfoTech Awards. He expects to pursue a career in business development with

a focus on financial services and corporate strategy. He has worked with the Fortune 50 companies GE, Microsoft, IBM and Google.



23rd Annual Scholarship Reception

The UB School of Engineering and the Engineering Alumni Association (EAA) congratulate the exceptional students recognized at the 23rd Annual Scholarship Reception. For each picture, awardee names are listed in alphabetical order.

We are grateful to the generous donors whose commitments support the scholarships and to the UB EAA for co-sponsoring the event and donating flowers.

Dean Stenger gave the Introductory Remarks and presented the awards with **Professor VanBenschoten** (CSEE), Associate Dean for Undergraduate Education and **Associate Professor Victor Paquet** (ISE), Director of Graduate Studies.

To learn about becoming involved, please contact the Engineering Development officers at 645-2133 and ask for Tim Siderakis, Mike Madonia or Jenine Trzewieczynski.



Robert P. Apmann Award
Karl Bandilla CSEE (pictured),
Kelly Miller CSEE



Association of Old Crows (AOC) Scholarships
Russell Manzella CSE
Roman Solomonyuk EE (pictured)



Babcock and Wilcox Scholarship
David Manchester MAE



Chemical and Biological Engineering Academic Excellence Awards
Carlos Buitrago CBE
Andrea Morrill CBE
Jacob Weiner CBE (pictured)



Electrical Engineering Chair's Recognition Award
Brian McSkimming EE



Energy Systems Institute Graduate Scholarship
Eric Kozarsky EE



Yong H. Lee Scholarship In memory of Yong H. Lee (BS AE '81),
Jonathan Missel MAE



Joseph Markle Dinner Memorial #4 and Watts Engineering and Architecture Minority Scholarship
Brianna Clark EE



S.P. Prawel Award
John Veith CSEE



R. R. Rumer Award
Joseph Rocks CSEE



R. P. Shaw Award
Kar Him Chiu CSEE



Schomburg Fellowship
Shola Olabisi EE



Thomas/Karwan Industrial Engineering Undergraduate School
Matthew Henchey ISE,
Andrew Widjaja ISE (pictured)



Xerox/SHPE Scholarship Award
Carlos Gonzalez CBE
DeJuan Laguerre ISE (pictured)
Angela Nunez MAE



John Zahorjan Memorial Scholarship
David Payne ISE
Karan Kumar Vaidya ISE (pictured)



Zimmer Special Project
Mrynal D'Arcangelo MAE

Awards Not Pictured:

American Society of Civil Engineers (ASCE) Student of the Year Award
Lenore Dunnah CSEE

Matthew R. Grappone Memorial Scholarship
Andrew Muraco CSE

Institute of Industrial Engineers Senior of the Year David Myers ISE

Robert B. Kleinschmidt Memorial Award
Marcia Torrico EE

Dean Paul E. Mohn Memorial Book Award
Brian Markin ISE

Moog Graduate Fellowship
Erich Devendorf MAE, Jason Luce MAE, Matthew McGurn MAE, Bryan Mesmer MAE, Shola Olabisi EE

Senior Scholar Awards, John W. Danforth Company Noah Bednowitz ISE, Matthew Henchey ISE, John Veith CSEE

Frederick Thomas Award John Coles ISE, Megan Hannigan ISE, Devon McMaster ISE

Thomas G. Wilde Family Scholarship
Min Ping Xie ISE



Beth Cheshire Moran Award
Linda Jules CSE, Jamie Travale, CSE



CSX Transportation Scholarship
Robert Colorafi EE, Steven Jean-Julien EE



Engineering Cooperative Society Award
Earl Manning EE



Robert H. and Catherine H. Goldsmith Fellowship Ashish Chitalia MAE, Eric Kozarsky EE (pictured), Laura Przybylski CSEE (pictured), Kevin Tanzil CBE, Kwong-Voon Wong MAE



Mechanical and Aerospace Engineering Award Michael Bonarski MAE



Silent Hoist and Crane Materials Handling Prize Noah Bednowitz ISE, Margaret Devendorf ISE (pictured), Matthew Henchey ISE, Jamie Jackson ISE, Brian Literman MAE, David Myers ISE, Thomas Szalkowski ISE, Andrew Widjaja ISE (pictured), Andrew Willis ISE, Jasmine Worthy ISE

23rd Annual Scholarship Reception *continued from page 9*



American Institute of Chemical Engineers (AIChE) Awards

Outstanding Junior Award: Kevin Pustulka CBE

Outstanding Senior Award: Ellen Cardone CBE



Civil, Structural and Environmental Engineering Chair's Graduate and Undergraduate Recognition Awards

Graduate: Saeed Fathali CSEE,

Undergraduate: Melissa Norlund CSEE



Dean's Scholars

Ivie Aifuwa CBE, Michael Allen SEAS, John Bantle SEAS, Adam Baugher EE, Colin Conner CSEE, Peter Cormier MAE, Kathleen Gajewski MAE (pictured), David Galuski CBE, Grady Gambrel EE, Lindsey Garay MAE, John Gerber EE, Ajay Iyer CSE, Jonathan Jones MAE, Steven Kapturowski MAE, Jasmine Lawrence SEAS, Garth Lester SEAS, Grace Leung SEAS, Daniel Padgett CSE, Steven Powell MAE, Evangeline Rauch MAE, Luke Scannell CSEE (pictured), Colton Steiner SEAS, Brandon Tarney EE, Andrew Wise MAE



Honorary Senior Scholar Awards

Christopher Beres CSEE (pictured), William Cuthbert EE, (pictured) Robert Fuller MAE, Josiah Johnson CSEE, Adam Kraus EE (pictured), Shajan Thomas MAE



American Society of Civil Engineers (ASCE)

Julian Snyder Endowment Fund Scholarship

Edward Bradfuhrer CSEE, Nathaniel Martin CSEE



NSF Bridges to the Doctorate Graduate Fellowship

Jahmil Campbell EE, Daniel Gavahi CIE, Barnard Onyenucheya EE, Epaphrodite Uwinama IE, Keith Ward IE, Christine Wingo IE



Dean's Fellows Paul Berglund ISE, Li-Hsin Chien EE, Lei Ding EE, Pierre

Fouche CSEE, Chi Lo CBE, Jungsun Oh CSEE, Lei Xu CSE



Engineering Alumni Association Scholarships Kurt A. Cavalieri MAE,

Michael DiNezza EE, Christina Yacoob CBE (center three)



Felix Smist Scholarship Kenneth Dawley MAE, Kristina Kolp CBE, Rachel

Styn EE, Charles Tabone MAE



Joseph and Adele Augustyn Memorial Book Award

Chris Beres CSEE, Tai Boon Tan CBE



NASA Fellowship Bradley Cheetham MAE, Michael

DiNezza EE, Andrew Gaeta EE (not pictured), Jonathan Missel MAE



Presidential Fellowships Zakery Carr MAE, Michael

Bonarski MAE, Brandon Brown MAE, Pierre Fouche CSEE, Eray Gunel CSEE, Nathan Russell CSE, Scott Settembre CSE, Stephen Uurtamo CSE



Bhaw D. Shukla Scholarship Kurt A. Cavalieri MAE,

Thomas Heidinger EE



United Illuminating Company Scholarship

Christopher Hughes EE (center)



Michael Bauda Memorial Scholarship Kelly Duval CSEE, Kevin Pustulka CBE, Matt Widay CSEE, Christina Yacoob CBE, Xi Zhang CSE



David M. Benenson Memorial Scholarship Frederick Arnold EE, Raphael McKirchy EE, Jenna Mertowski EE, Romanch Mistry CSE, Andrea Morrill CBE, Michael Rausch MAE, William Cuthbert EE



Joan G. Bennett Memorial Scholarship Moses Farley EE, Earl Manning EE, Katie Konesky EE



D. Richard Ferguson Memorial Scholarship Jason Cieri EE, Brianna Clark EE (center two)



Matthew R. Grappone Book Awards Katherine Byrnes EE, Panya Chanawangsa CSE, Aggrey Jacobs CSE, Ka Man Ng CSE



Senior Scholar Awards Applied Sciences Group Jiangqiao, Zhu CSE (second from right)



Irving H. Shames Outstanding Teaching Assistant Award Jeffrey Gardiner CSEE, Laura Przybylski CSEE, Nadine Roberts CSEE, Joseph Wetzel CSEE



UB Engineering Graduate School Ambassador Award Hima Bindu Arumbakar Mohan Ram EE, Pooja Choudhary EE, Saeed Fathali CSEE, Pitfee Jao EE, Caroline Joseph ISE, Shilpa Patil CBE, Eric Hao Fan Peng CBE, Anuj Prakash ISE, Bing Qu CSEE, Nadine Roberts CSEE, Thomas Rosch CBE, Sebastian Schafer MAE, Govindarajan Srimathveeravalli MAE, Huina Xu EE, Zhendan Xue MAE



James W. and Nancy A. McLernon Sarah Ajaeb MAE, Joe Chemler CBE, Ryan Coppolo CSE, Nicholas Fortenbery ISE, Carrie Hinners CSEE, Steven Jean-Julien EE, Katie Konesky EE, Demian Lessa CSE, Corey Lown ISE, Jason Luce MAE, Nathaniel Martin CSEE, Lucas Mesmer MAE, Ryan Miller MAE, Shola Olabisi EE, Andrew Paluch CBE, Andrew Prok ISE, Rohan Sood MAE, John Veith CSEE



Senior Scholarship Awards, UB Engineering John Amend Jr. MAE, Kurt A. Cavalieri MAE, Ellen Cardone CBE, Kar Him Chiu CSEE, Everett Comfort EE, Vaishali Kochavara CSE/EE, Jonathan Missel MAE, Andrew Paluch CBE



Gustav and Greta Zimmer Research Scholar Awards John Amend Jr. MAE, Kamran Arjomand MAE, Kurt A. Cavalieri MAE, Zakery Carr MAE, Geoffrey Hohn MAE, Mark Huntington MAE, Thomas Leach MAE, Jeremy Marschke MAE, Jonathan Missel MAE, Chris Nebelecky MAE, Michael Rodgers MAE, Rohan Sood MAE, Souleymane Sow MAE, Shajan Thomas MAE, Ryan Norris MAE, Kelvin Suhendra MAE

Decade Anniversary of Student Excellence Initiatives Translates to Success



Bill Wild (kneeling, in blue) assists students participating in Small Groups.

Rajaey Kased (BS ME '02) remembers two things vividly about his college experience: studying for exams, and the Student Excellence Initiatives, "through which I was able to learn the fundamental principles about learning."

Kased, now an engineer at Delphi, is a classic example of the match between student potential and a supportive educational environment, says **William G. Wild Jr.**, (BS '83, MS '87 IE). Wild was selected to direct the Initiatives in 1998 by then-**Dean Karwan** (ISE) and then-Associate Dean **Michael Ryan** (CBE). Under Wild's direction, the special program has become a systemic student retention project that, since its inception, has seen

graduation rates at UB Engineering rise by a factor of over one third.

Wild works with **Richard Dutton** (MS IE '93) and Dean of Undergraduate Education **John Van Benschoten** (CSEE) to implement that supportive environment through the Initiatives. All told, several thousand students have participated in some aspect of them, including "Small Groups"; "Opening Day"; and the "Faculty Mentor program." A new pilot program engages students to do real-life problem solving for "Engineering Impact on Society." Some Initiatives run behind the scenes: collaboration with the departments of Math, Chemistry, and Physics on analysis and design of exams; and an innovative admissions model, recently featured in an article by Catherine Rampell in *The Chronicle of Higher Education*.

A recent outreach invites graduates to "Reach/Back" to the Initiatives, either monetarily or through interaction with current students.

Please contact Bill Wild at wgwild@eng.buffalo.edu to learn more. Donations can be made directly online by completing the form at: www.eng.buffalo.edu/donate.



Richard Dutton

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TALKER Methods and Projects Speak Volumes

CSE Lecturer **Michael Buckley** (BS '78 EE) is a founder and chief scientist of the 15-year-old Cheektowaga-based company Applied Sciences Group Inc. (ASG), which creates an array of high-technology solutions, including the UB Talker, a socially-relevant assistive technology that has received national attention. Buckley is leading the "computing for a cause" movement, or socially relevant computing, to change the way computer science is taught in college, and he is doing it to great effect.

UB Talker, adapted for use on touchscreen portable computers by both adults and children, is the result of his teaching and work. Created by Buckley with his students over several years, UB Talker empowers users with communication-related limitations caused by autism, cerebral palsy (CP), Lou Gehrig's disease or other causes, by allowing them to produce computer-made words.

A 43-year-old stroke patient communicated with the device for the first time in 20 years while another user with CP, 11-year-old David, called his mom for the first time in his life.

The technology uses voice synthesis and a touch-screen laptop computer to allow for natural, two-way conversations, and has already

been approved by Medicaid, Medicare, and Independent Health.

Buckley is joined in the Assistive Technology Laboratory by CSE teaching assistant professor **Kris D. Schindler** (BS '93 MS '96 PhD '01 EE). Together their students have designed and developed more than 20 socially valuable technologies, several of which have been licensed to companies and are being introduced to the marketplace.

And with the support of Microsoft, ASG, and colleagues at Rice University, Buckley developed www.sociallyrelevantcomputing.org, to make it easier for computer science departments at other institutions to start courses in socially relevant computing. More about the innovative technologies created in the Assistive Technology Lab can also be found at the web site.

"Creating practical solutions to socially relevant problems focuses incredible philanthropic and creative energy," said Buckley. His students' projects speak for themselves.



Michael Buckley



(R to L) Wilson Greatbatch and Tim Klein.

Accomplished Alums Speak on Entrepreneurialism at ECI Lecture

Engineering Career Institute (ECI) students were treated to lectures on

entrepreneurialism by **Tim Klein** (BS EE '84), ATTO Technology, Inc. founder and president, and world-class inventor **Wilson Greatbatch** (MS EE '57, ScD (Hon) '84). Chief and perhaps best known among Greatbatch's many great inventions is the battery-operated implantable cardiac pacemaker. Participating ECI students gain invaluable first-person information from these and the many other pillars of industrial success who lectured at ECI's "Experts from Industry" week. Please see note on Tim Klein and ATTO in Class Notes, on the inside back cover of this issue.

BME Faculty Research *continued from page 3*

Esther Takeuchi (EE and CBE)

life-saving reality for millions of patients. With her lithium battery research, she's credited with, among other accomplishments, leading the development of an efficient battery for the implantable defibrillator, the device that shocks the heart back to normal rhythm during a heart attack. Her current research focuses on energy storage; portable power sources; synthesis and characterization of electrochemically active materials; micro-power sources; nanomaterials and nanostructured materials. Takeuchi is one of only about 100 female NAE members. She is considered to have more patents than any other woman, about 140.

Professor Hui Meng (MAE)

building models that can be used to improve the treatment of patients undergoing surgery or neurointerventions for this condition. The "K25" Career Award she received from the National Institutes of Health allows Meng to direct her career focus to biomedical research. In their present work, Meng and her UB colleagues are developing a complete platform for virtual intervention in which computer models will demonstrate to clinicians how the insertion of stents, coils and other devices through catheters into the brain's blood vessels will affect each patient's blood flow, and therefore the clinical outcome.

Professor Aidong Zhang (CSE)

Scholar Achievement Award; a SUNY Chancellor's Research Recognition Award; and selection as an "innovator" by the Upstate Alliance for Innovation.

Associate Professor Susan Zonglu Hua (MAE)

the SUNY Chancellor's Office; as a top-20 nanotechnology researcher (2002) by the Forbes/Wolfe Nanotech Report; and her work in nanoscience was listed by NSF as a 2002 top breakthrough.

Ecosystem Restoration Conference

Professionals attending the annual "Engineering for Ecosystem Restoration" workshop series, sponsored by the UB Great Lakes Program, visited and studied the complex ecological networks at several locations, including Beaver Meadow and Lake Erie. Program director and professor **Joseph Atkinson** (CSEE), said that "a number of stream restoration projects" in this region "are models of how to do it right," including Cattaraugus Creek and Eighteen Mile Creek, a major fishing destination.



The restoration projects at these locations and others demonstrate how to prevent erosion and improve habitat and sustainability for recreation and other uses.

UB has been working with the Army Corps, which is responsible for many of the stream projects, to help train new specialists in "ecosystem engineering," to learn how best to work with natural processes to restore system function.

The workshop featured nationally known engineers and scientists, including UB and Buffalo State College professors, and scientists from the U.S. National Sedimentation Laboratory and others.

For more information about the Great Lakes Program, please visit: <http://www.eng.buffalo.edu/glp/>

If you're energized by UB Engineering's excellence, and wish to participate in the school's dynamic and continued growth, please consider a gift to the Engineering School. The Engineering Development Staff can be contacted anytime at 1.888.205.2609 or directly, below.

Thank you! We appreciate your involvement.

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BME Launch *continued from page 3*

BME: A Tiger with NYSTAR's UB CAT

The work of the New York State Office of Science, Technology and Academic Research's (NYSTAR) UB Center for Advanced Biomedical and Bioengineering Technology (UB CAT) will dovetail with the BME department's focus areas, as the Center's specialty lies in coordinating funding and research for biomedical technology or bioengineering devices,

with applications in the medical field that can enhance clinical patient care or aid in medical personnel training. UB CAT is fueling continued growth in promising technologies and in important sectors of the state's economy. One of just 15 CATs in New York State, the center and the department are integral to the continuing development of a regional bio-based economy. UB CAT is co-directed by **Esther Takeuchi** (CBE and EE) and Bruce A. Holm, Executive Director of the CoE and UB Senior Vice Provost.

Faculty & Staff



Michael Buckley



Colin Drury



Anne Meyer



Moises Sudit



Mark Swihart



Dale Taulbee

Fellowships and Awards

Lecturer **Michael Buckley** (CSE) won the Milton Plesur Excellence in Teaching Award, a university-wide award of the Student Association.

Distinguished Professor **Colin Drury** (ISE) was nominated UK Ergonomics Society Honorary Fellow, in recognition of contributions to the Society and its aims. Honorary Fellows are elected by members of the Society on the nomination of Council. The Ergonomics Society is the only professional society in the UK dedicated to ergonomists and those interested in ergonomics.

Anne Meyer, director of the Industry/University Center for Biosurfaces (IUCB)'s Buffalo site, was named a fellow in biomaterials science and engineering by the International Union of Societies for Biomaterials Science and Engineering (IUSBSE).

Fellows are recognized for excellence in the field of biomaterials science and engineering. Of the approximately 200 fellows worldwide, fewer than 20 are women.

Moises Sudit, adjunct associate professor (ISE), won the prestigious IBM Faculty Award, which fosters collaboration between researchers at leading universities worldwide and those in IBM research, development, and services organizations. The award promotes courseware and curriculum innovation to stimulate growth in disciplines and geographies that are strategic to IBM.

Mark Swihart, associate professor, (CBE) was one of 100 participants invited to the NAE Frontiers of Engineering Symposium.

Professor **Dale Taulbee** (MAE) won the Milton Plesur Excellence in Teaching Award, a university-wide award of the Student Association.

Department Chair Appointments

A. Scott Weber has accepted a second three-year term as CSEE Chair. His service over the past three years has been exemplary and under his leadership.

Gary Dargush has accepted an initial three-year term as MAE Chair. His appointment was strongly endorsed by department colleagues, and his experience as MAE Associate Chair will ease him into the new position.

Many thanks to **Andres Soom** for his role as MAE Chair during the 2007-08 academic year.

Promotions and Tenure *Congratulations to UB Engineering faculty who have been promoted.*

Promotions to the rank of Full Professor:



Stelios Andreadis,
CBE



Thenkurussi Kesavadas,
MAE



Sriram Neelamegham,
CBE



Mark Swihart,
CBE



Shambhu Uphadhyaya,
CSE

Promotions to the rank of Associate Professor with Tenure:



Mattheos Koffas,
CBE



Christina Tsai,
CSEE

New Faculty

UB Engineering welcomes two new faculty to their ranks, both of whom have already served with us in teaching capacities.



Michael Lockett, Professor, CBE
NAE member

Lockett was recently elected a member of the National Academy of Engineering (NAE) for contributions to the theory and practice of distillation. Prior to his appointment, he was a career employee at Praxair Inc. (Tonawanda, NY), holding the distinguished title of corporate fellow. He received his PhD from Trinity College, University of Cambridge in 1967.



Jennifer Zirnheld, Assistant
Professor, EE
Deputy Director, UB Energy
Systems Institute

Zirnheld (BS '93 MS '97 PhD '04 EE) has personal research interests in insulation coordination; energy systems; mobility platforms; and nano-dielectrics, topics of interest in homeland security and federal energy initiatives. She is lead instructor for EAS 140: Introduction to Engineering, the current freshmen mandatory course. She was recognized as Tau Beta Pi's Professor of the Year; as a "Positive Influence on Students" by Career Services; and she earned the Milton Plesur Excellence in Teaching Award. Dr. Zirnheld is chairperson of the IEEE Buffalo Section and Student Activities Coordinator.

Faculty Inventors in STOR

UB's Office of Science, Technology Transfer and Economic Outreach (STOR) recognized faculty members' research and commercialization achievements at the annual Inventors and Entrepreneurs Reception.

UB engineers received awards in the categories of U.S. Patents and Visionary Innovators.

Faculty members recognized for being named on U.S. patents:

CSE Professor **Chunming Qiao**, **Vishal Anand** (MS '99 PhD '03 CS), Yizhi Xiong and **Xiaojun Cao** (PhD CS '04), patent 7,162,632, Efficient Optical Network Design Using Multi-Granular Optical Cross-Connects with Wavelength Band Switching.

Distinguished Professor **Eli Ruckenstein** (CBE) and Yun Hang Hu, patent 7,250,146, Method for Producing a Reversible Hydrogen Storage Medium with High Storage Capacity and Ultrafast Kinetics.

Faculty members recognized as Visionary Innovators, for developing technologies licensed to outside companies:

Distinguished Professor **Sargur N. Srihari** (CSE), **Chen Huang** (CSE PhD '08), **Gregory Ball** (CSE PhD '07) and **Harish Srinivasan** (PhD CSE '08), all of the Center of Excellence for Document Analysis and Recognition (CEDAR), CEDARABIC Transcript Mapping Tool to CedarTech.

CSE Associate Professor **Vipin Chaudhary**, CSE student **Mohammed Alam**, Christopher Gammage, **Suryaprakash Kompalli** (CSE PhD '07) and **Mohammed Yaqub**, all CSE, A Versatile 3-D Image Viewer for Diagnosis and Interventions to Medcotek Inc.

Frank V. Bright and Joseph Gardella, (Chemistry); **Alexander N. Cartwright** and **Albert H. Titus** (EE); Robert Hard (Pathology and Anatomical Sciences); Wesley Hicks Jr., (Otolaryngology); **Venugopal Govindaraju**, (CSE); Jeffrey D. Jordan, A. Neal Watkins, Brett R. Wenner, Eun Jeong Cho, William G. Holthoff, Elizabeth C. Cornell, Gary A. Baker and Meagan A. Hughes, (all formerly of Chemistry), Sensor Array Platforms to Senz-It Inc. Sensor Array Platforms also was licensed to TheraSyn Sensors Inc.

Tarunraj Singh (MAE), Jerk Limited Time Delay Filter to Gilead Science Institute.

Chunming Qiao (CSE), **Dahai Xu** (PhD CS '05), Yizhi Xiong, **Xiaojun Cao** and **Vishal Anand**, all formerly of CSE, Optical Networks and Survivable Networks to Gilead Science Institute.

Jonathon Hull (BS '80 MS '83 PhD '88) and **Tao Hong** (MS '92 PhD '96 CS), both formerly of CEDAR, OCR Method and Apparatus Using Image Equivalents to Gilead Science Institute.

W. James Sarjeant, James Clerk Maxwell Chair Professor (EE), Retires

Professor Sarjeant leaves EE after a distinguished 27-year tenure. He is the founder and director of UB's Energy Systems Institute, dedicated to developing interdisciplinary technologies of power conversion and energy management systems, and application of information technology tools to such systems.

Professor Sarjeant's research for many organizations includes the Office of Naval Research, Sandia National Laboratories, and the U.S. Army. He has also been advisor to many prestigious government agencies and advisory panels including: member, DOD, US Army Science Board; chair, Department of Energy for Space Experiments Aboard Rocket Review Committee; and member, White House Committee on Space Technologies for Advanced Power Sources.

We congratulate Professor Sarjeant for his outstanding accomplishments, thank him for his contributions to the department and wish him well.



Emeritus Luncheon

Dean Stenger enjoyed a luncheon with Emeritus Faculty **Charles Fogel** (SEAS), **Dale Meredith** (CSEE), **Herb Reismann** (MAE), **Howard Strauss** (SEAS) and **Tom Weber** (CBE). Not pictured here, but also attending the luncheon were **Distinguished Professor Mitin** (EE), and **Professor** and **Chair Bharat Jayraman** (CSE).

If you would like to write to a former professor, please email correspondence to ubseas@eng.buffalo.edu or mail correspondence to:

[Professor's Name]
School of Engineering
412 Bonner Hall
University at Buffalo
Buffalo, NY 14260-1900

UB Reception recognized publication of scholarship

Three UB Engineering professors were among those honored at "An Anthology of Recognition: The Second Annual Salute to UB Authors." The reception was hosted by President John B. Simpson; Provost **Satish K. Tripathi** (CSE), executive vice president for academic affairs; and Jorge José, vice president for research.

UB Engineering professors recognized were:

Michel Bruneau, CSEE, "Steel Plate Shear Walls (AISC Design Guide)."

Venu Govindaraju, CSE, "Advances in Biometrics: Sensors, Algorithms and Systems."

Vladimir Mitin, EE, "Introduction to Nanoelectronics."



Service Recognition Ceremony

A Service Recognition Ceremony honored UB Engineering staff having served one to five decades of continuous University service.

40 Years: Ching-Shi Liu
(not pictured)



30 Years: Adly Fam, James Felske, Mohammed Safiuddin, Andres Soom



20 Years: Irene Brubaker, Marjorie Buscher, Ping Chin Cheng, Michael Constantinou, Drexel Gidney, Donald Goralski, Eileen Hassett, Roger (Xin) He, Theresa Nusstein, Michele Sacco, Ramalingam Sridhar, Jane Stoyke, Marianne Sullivan, Lee Webber)



10 Years: Paschalis Alexandridis, Amjad Aref, Ann Bisantz, Kerry Collins-Gross, Richard Garrabrant, William Grunert, Patricia Mattulke, James Michalowski, Sriram Neelamegham, Dimitrios Pados

Davis *continued from page 3*

In honor of his generosity, the clean room will bear the Davis name.

Dean Stenger lauded Davis' commitment to UB Engineering, and the result that it will have on helping recruit top students and faculty, attract vital research funding, and the wider beneficial impact that the resources will bring to bear on Western New York's employment and research.

Davis was born in Pittsburgh and raised in Western New York. He founded I Squared R Element Company, Inc., after serving in the Coast Guard Reserves as a lieutenant, in 1964. I Squared R, in Akron, is the only U.S.-owned plant that manufactures silicon carbide heating elements, designed for high-temperature electric furnaces. The company's products are made entirely in the United States.

Davis is married, with six children, thirteen grandchildren and two great grandchildren.

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Abbreviations Used in UB Engineering News

Departments

CBE, Chemical and Biological Engineering
CSEE, Civil, Structural and Environmental Engineering
CSE, Computer Science and Engineering
EE, Electrical Engineering
ISE, Industrial and Systems Engineering
MAE, Mechanical and Aerospace Engineering

Degrees

AE, Aerospace Engineering
CE, Chemical Engineering
CIE, Civil Engineering
CompE, Computer Engineering
CS, Computer Science
EE, Electrical Engineering
EnvE, Environmental Engineering
ES, Engineering Science
IE, Industrial Engineering
ME, Mechanical Engineering



NSF Recognizes Yoon's Research

As founder and director of the Multidisciplinary Nano and Microsystems (MnM) laboratory, Assistant Professor **Yong-Kyu Yoon** (EE) explores research across multidisciplinary topics. Yoon's mission, to create a strong multidisciplinary micro-/nano research program here, is actively pursued through his recruitment of top international researchers, including interns from École Nationale Supérieure de l'Électronique et de ses Applications (ENSEA), France and postdoctoral fellows from universities in Seoul, Korea.

Yoon's research won him an NSF CAREER award for his work on "RF/Microwave components and devices using micro-/nano-machined metamaterial." Metamaterial is an artificial material of fabricated structures and/or composite materials showing unusual physical phenomena (e.g., negative refractive index, sub-wavelength resolution optics, and backward wave propagation in microwave and optics regimes). Unsolved issues that prevent metamaterials' from practical use in radio frequency (RF)/microwave applications include large material loss, difficulty in 3-D implementation, and expensive fabrication processes. Yoon's research investigates and implements low loss, multi-dimensional high-quality metamaterials using advanced micromachining and nanotechnology, and translates the developed metamaterial technologies to highly efficient, compact, multifunctional radio frequency (RF) devices and components, such as multiband couplers, compact antennas, and invisibility cloaks. This research will impact diverse areas such as telecommunications, defense, microelectronics, and medical imaging.

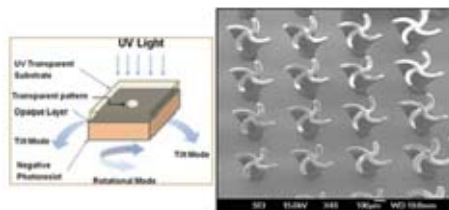


Figure1. Multidirectional 3-D UV lithography: (l) system schematic (r) a scanning electron microscopy image of the fabricated screwed micro wind vane array.

Recently, Yoon also received a second NSF award for "Exploration of multidirectional 3-D ultraviolet (UV) lithography for advanced microfabrication," to continue his work on computer-controlled multidirectional 3-D ultraviolet (UV) lithography with a broad range of efficient applications in lab-on-a-chip type research areas, including biomedical/microfluidic, integrated radio frequency (RF)/microelectronic, and optical. The capability to make array type and periodic 3-D structures enables 3-D metamaterial and photonic bandgap research.



Chaudhary Develops Teleradiology Technology

Vipin Chaudhary, associate professor (CSE), is the primary inventor of a new teleradiology technology that UB has licensed to

local Medcotek Inc., for use. The new technology will advance the company significantly in the lucrative teleradiology market.

The 3-D viewer and data-transmission system are designed to improve teleradiology, the transmission and diagnosis of radiological images sent over the Internet. It enables better and timelier patient diagnosis and treatment, and is unusual in

that it allows multiple radiologists to collaborate seamlessly from different locations.

Chaudhary, an expert on medical imaging, was recruited in 2007 as part of UB's strategic focus on health and wellness and computing technology.

A U.S. patent application is pending, with the primary inventor as Chaudhary. Co-inventors are Mohammed Alam, UB visiting researcher and Wayne State University research assistant; Christopher Gammage of Biologene Inc.; Suryaprakash Kompalli, visiting UB researcher and Wayne States University research associate; and **Mohammed Yaqub**, UB CSE researcher.

Cheng's Nanomedicine on a Smaller Scale



Assistant Professor **Chong Cheng** (CBE) is working to

fabricate biodegradable nanostructures small and versatile enough to transport nanomedicine effectively, while bypassing healthy tissue, to minimize patient suffering.

Cheng's research group is learning to create templates (nanostructures used to transport drugs throughout the body) smaller than 25 nanometers, significantly smaller than those readily produced through physical methods.

Smaller templates increase the bioavailability of cancer drugs, that is, the percentage of medicine actually reaching the body tissue needing the drug. While nanomedicine is already more efficient than conventional medical delivery, smaller nanostructures circulate through a patient's system with even greater ease.

Cheng also notes that cancer patients may undergo drug therapy for several years, so decreasing drug toxicity with biodegradable templates will be a significant advance. Nonbiodegradable polymeric nanostructures, a last resort in targeted therapies for certain cancer patients, are toxic over a long period of time because they accumulate in a patient's system.

With sales from the global drug-delivery market rising from an estimated \$26 billion in 2000 to approximately \$67 billion in 2006, this research could have great commercial significance.

Cheng's work as a chemical engineer concentrates on the fabrication of the nanostructure templates used to create nanomedicine, not drugs themselves. Cheng says his mission is to develop the most versatile and efficient vehicles to help other researchers and medical experts do their jobs.

"My research lab will provide the nanostructures, but for the targeting elements, for the detection components, I need collaborations," he says. "And I prefer to have those close research collaborations within UB."

Quake Research Provides Rare Glimpse of How Structures Collapse



Gilberto Mosqueda, assistant professor (CSEE), is principal investigator on research that seeks to evaluate and design steel buildings less vulnerable to collapse during strong earthquakes.

Mosqueda explained that buildings should absorb the impact of a strong earthquake such that the

damage to the structure won't cause collapse, and will allow safe evacuation. He noted that many different factors besides design come into play, such as the quality of construction, the known seismicity of an area, and the magnitude of an event.

Mosqueda has geared his research toward developing more realistic, reliable and economical ways of testing large-scale structures. To do this, his project will combine laboratory experiments of partial structures that can capture the initiation of a collapse either in slow-motion or in real-time with numerical simulations of the remaining full-scale building. This hybrid numerical and experimental model will then be subjected to earthquake loading.

Experimental simulations will be performed in UB's Structural Engineering and Earthquake Simulation Laboratory (SEESL), and some experiments will be conducted over the Internet, with pieces of the same structure simultaneously being tested at UB and Kyoto University, Japan.



SEESL Tests Shake RIDG-U-RAK to Award

The Structural Engineering and Earthquake Simulation Laboratory (SEESL) played a key role in conducting the testing that validated the development of RIDG-U-RAK's Seismic Base Isolation System (SBIS). SEESL Director and CSEE Professor **Andre Filiatrault** oversaw the SEESL staff team in the system's testing.

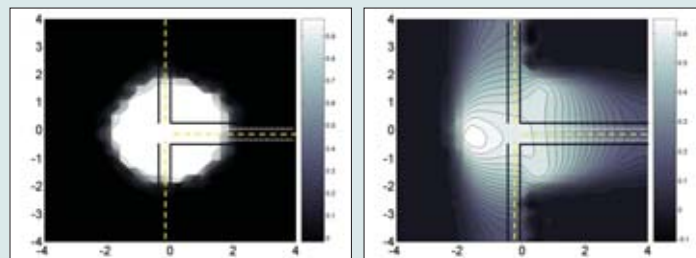
The product addresses public safety concerns where steel rack systems in retail environments could pose a danger during seismic events. At the 2008 National Earthquake Conference, SBIS won first place honors for "Excellence for Innovation" in the earthquake mitigation category.

Developing SBIS included 100 full-scale triaxial shake table tests at SEESL. The product absorbs 85% of the seismic energy before it gets to the rack structure itself, resulting in little or no rack damage or product shedding during even the most severe earthquakes.

Singla Modeling



Puneet Singla, assistant professor (MAE), was awarded a National Geospatial-Intelligence Agency (NGA) University Research Initiative (NURI) grant as principal investigator of "A Multiresolution Approach for Modeling and Forecasting of Geospatial Activities." The grant recognized his work on developing a novel multi-resolution framework for tracking and predicting natural or manmade activities with high-fidelity models of complex geospatial activities, and by exploiting data assimilation techniques for irregularly spaced and opportunistic data. The model domain can include dispersion phenomena of many types, including evolution of populations, epidemics, dispersion of chemical, biological, radiological, or nuclear agents subsequent to natural or man-made disasters.



Illustrated here, as a diffusion process, is the modeling of growth of residential construction given a high potential of jobs at the center of a city. As the jobs increase, one can use the diffusion process to study how the growth of residential construction evolves to cater to the growing requirement of houses for the increased number of workers. Each of three highways emanating from the center has a large coefficient of diffusion associated with it, with the east-running highway, which has a larger capacity, having a higher coefficient of diffusion.

Bisantz Invited by NAE

Ann Bisantz, associate professor (ISE) and director of Undergraduate Studies, was one of four invited speakers at the National Academy of Engineering's (NAE) Frontiers of Engineering Symposium, in the Cognitive Engineering session. The subject addresses understanding the complexities faced by health care workers, and the knowledge, strategies, and tools they use to work most effectively. Cognitive engineering provides the methods and tools to allow new technologies and processes to be successfully developed and implemented in the health care system environment, which has critical needs for enhanced efficiency, effectiveness, and safety.





Whittaker on Tall Building Codes Orders

Andrew Whittaker, professor (CSEE), Arup Fellow Michael Willford,

and Ron Klemencic of Magnusson Klemencic Associates, have developed a first set of recommendations for the adequate seismic design of buildings exceeding 160 feet. The recommendations were released during the Council on Tall Buildings & Urban Habitat's (CTBUH) Eighth World Congress in Dubai.

Because many current global codes were developed for the seismic design of low- to moderate-rise buildings, they do not convey specific criteria for tall buildings, a concern to architects, engineers, and officials worldwide. The CTBUH recommends a more appropriate approach to seismic design, as practiced in Japan and China, requiring new buildings to be rigorously tested through a series of computer-simulated earthquake events.

David Scott, CTBUH chairman, encouraged sophisticated computer analysis to predict a building's seismic performance, rather than changing design codes after the devastating effects of real earthquakes.

Stem Cells From Hair Follicles May Help 'Grow' New Blood Vessels

For a rich source of stem cells to be engineered into new blood vessels or skin tissue, clinicians may one day look no further than the hair on their patients' heads, according to new research by UB engineers.

"Engineering blood vessels for bypass surgery, promoting the formation of new blood vessels or regenerating new skin tissue using stem cells obtained from the most accessible source – hair follicles – is a real possibility," said **Stelios T. Andreadis**, professor (CBE), co-author of the paper in *Cardiovascular Research*.

Researchers from other institutions previously had shown that hair follicles contain stem cells. In the current paper, the UB researchers demonstrate that stem cells isolated from sheep hair follicles contain the smooth muscle cells that grow new vasculature. The group recently produced data showing that stem cells from human hair follicles also differentiate into contractile smooth muscle cells.

In addition to growing new skin for burn victims, cells from hair follicles could potentially be used to engineer vascular grafts and possibly regenerate cardiac tissues for patients with heart problems.

Since smooth muscle cells comprise the muscle of numerous tissues and organs, including the bladder, abdominal cavity and gastrointestinal

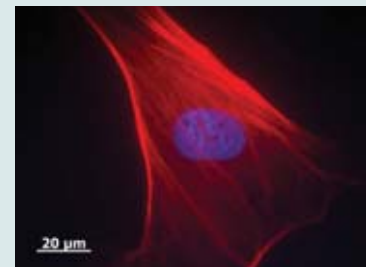
and respiratory tracts, this new, accessible source of cells may make possible future treatments that allow for the regeneration of these damaged organs as well.

Andreadis and his colleagues previously engineered functional and implantable blood vessels with smooth muscle and endothelial cells originating from bone-marrow mesenchymal stem cells. A key advantage of mesenchymal cells is that they typically do not trigger an immune reaction when transplanted, he said.

"The best case scenario is that from this one very accessible and highly proliferative source of stem cells, we will be able to obtain multiple different cell types that can be used for a broad range of applications in regenerative medicine," he said.

Co-authors on the paper are **Jin Yu Liu**, Ph.D., research assistant professor, and **Hao Fan Peng**, a doctoral candidate, both of CBE.

The work was funded by the John R. Oishei Foundation of Buffalo. Previous work by Andreadis has been funded by UB's Integrative Research and Creative Activities Fund in the UB Office of the Vice President for Research.



Graduates of UB's School of Engineering have the opportunity to improve their alma mater through the new joint membership between the Engineering Alumni Association and the UB Alumni Association. Members can participate in fun events such as the football tailgate and feel proud about giving back to UB.

Alumni Membership

Membership dues:

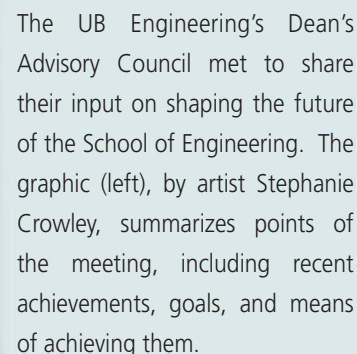
- Support alumni in 21 cities in the U.S. and 11 international locales, providing important opportunities to network and reconnect;
- Support scholarships for engineering students as well as student events such as Engineers Week and the Fall Picnic;
- Help produce *UB Today*, the alumni magazine, and @ub, the University's e-newsletter, sharing the latest accomplishments and remarkable research happening at UB;
- Connect UB alumni to current students through support of the University Student Alumni Board and partnerships with

the offices of Student Life, Student Affairs, Athletics and Career Services; and

- Deliver programs such as mentoring, "Dinner with Twelve Strangers," and Homecoming.

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

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



UB Engineering congratulates former Dean's Advisory Council Chair, attorney **Kenneth A. Manning** (BS ES '74) on receiving the President's Pro Bono Service Award from the New York State Bar Association. Mr. Manning is co-chairman of the Eighth Judicial District Pro Bono Committee. His efforts there and those of the committee as a whole resulted in an increase of pro bono attorneys and a boost in legal representation for the disadvantaged.



Stenger with Berardi (r)

Stenger Presents Moog With Vital Partner Award at UB Business Partners Day

Dean Harvey Stenger was master of ceremonies at UB Business Partners Day, and presented Moog Inc. with the Vital Partner Award, the highest honor UB bestows on a company, for its longtime support and collaboration.

Dean Stenger said Moog's many UB Engineering partnerships exemplify the extraordinary benefits gained by the community when industry and academia work together. "We are proud that over 200 graduates work at Moog and that over a dozen

Martin Berardi, president of Moog Medical Devices Group, accepted the award on behalf of the company, a worldwide designer, manufacturer, and integrator of precision control components and systems.

Moog's contributions include the donation of a six-degree-of-freedom motion base, located at UB Engineering's new driving simulation laboratory. The base allows realistic simulation of the sensations of driving; the simulator helps UB engineers conduct research on automotive and flight vehicles features. UB student interns have been mentored at Moog and have collaborated on research initiatives, while Moog representatives have served on various advisory committees and boards.

Robert Brady, president, chairman, and CEO of Moog, has served UB as a volunteer on several UB boards and advisory councils, and Moog's philanthropy has involved advocating for UB, as well as the support of university events, including UB Business Partners Day.

The annual UB Business Partners Day originated at UB Engineering and has transitioned to the university as a whole. It celebrates productive relationships among industry, government and UB, and honors outstanding business and civic leadership supporting UB and Buffalo Niagara.



Congratulations to Dean's Council member **Douglas Hillman** (BS EE '82) on his appointment to the position of President and Chief Executive Officer at Aerosonic Corporation. He is also a member of Aerosonic's board of directors.



New Ruckenstein Fund with Matching Contributions

Professor **Eli Ruckenstein** (CBE) is being honored with the launching of a fund to boost both the facilities and

reputation of the department of Chemical and Biological Engineering. UB Engineering has committed to matching all contributions up to a total of \$50,000, thus doubling the impact of supporting donations.

The fund will help bring visiting chemical engineers to CBE, and will enlarge CBE's reach through this exposure. Ruckenstein was a long-time coordinator of the CBE seminar series, so this is a fitting use. The fund will also help equip and improve laboratories, including the undergraduate laboratory.

Dr. Ruckenstein has authored over 1000 refereed journal articles in areas of chemical engineering including thermodynamics, transport, catalysis, materials, and bioengineering. He is a member of the National Academy of Engineering, having received the Academy's Founder's Award. He received the National Medal of Science in 1998, and is only the third chemical engineer to be accorded this honor, which dates back to 1959.

Please consider supporting the Ruckenstein Fund, at giving.buffalo.edu/ruckensteinfund, or by writing to: Tim Siderakis, 412 Bonner Hall, Buffalo, NY 14260-1900. Checks can be written to UB Foundation, Inc., with the note field completed as: "Ruckenstein Fund." Please contact Tim, Mike or Jenine in Development (**888-205-2609**), with any questions or suggestions.

Building the Path to a Brighter Future

UB Engineering and the UB Alumni Association recognized a Fisher-Price-UB partnership with "Building the Path to a Brighter Future," a networking event at the Roycroft Inn (East Aurora). Fisher-Price's continued support has supplied nearly 200 UB alumni with positions, and UB students and alumni with business, research, and education opportunities. After welcome remarks by Graham Stewart, Associate Vice President, Alumni Relations, **Dean Stenger** presented Fisher-Price's George Jamesson, Sr. Vice President of Engineering, with a certificate honoring the partnership. Fisher-Price judges the annual bot-wars competition at Engineers Week.



Stenger with Jamesson (r)



EDI Makes Donation to The Engineering Society of Buffalo

A tulip tree, graciously donated to the Engineering Society of Buffalo by Earth Dimensions, Inc. (EDI), was planted behind Bell Hall, near the complex of engineering buildings on UB's North Campus. EDI is a soils and environmental consulting firm located in Elma, New York.

UB Career Services: An Alumni Resource

UB Career Services is here to assist alumni who are looking for a job or a promotion, or those seeking to hire employees both in- and outside of the Western New York area market.

Among the comprehensive job resources available, alumni may log in to the data system on the Career Services website to find or post positions.

Seeking high-quality job candidates?

UB Engineering graduates have an academic advantage, with experience in applying concepts to real-world challenges. To arrange on-campus interviews or showcase your organization, e-mail jobs@buffalo.edu.

We invite you to attend the UB Tech Fair, on Tuesday, October 7th from 3-6:30PM in Alumni Arena's Main Gym (UB North Campus).

Have advice for current college students?

The Meet-a-Mentor program is a win-win situation for students and alumni. Mentors determine their own level of involvement in the program, while students tap alum's for insight about their industry, the work world, and job searching. Contact Megan Pendergast at mrp6@buffalo.edu to learn more.

Job hunting?

Additional resources available to engineering alumni include: résumé/cover letter critiques, job search and interviewing tips, access to online job postings, résumé referral, on-campus interviewing, and individual career counseling appointments. Visit the Career Services office in 259 Capen Hall to speak with a counselor, or call **(716) 645-2231**.

For more information about all of our programs, please visit: www.ub-careers.buffalo.edu.

BEAM's Be-Amazing Race: 21 Students Team Up

In the inaugural BE-AMazing Race, 21 local high school students proved their science and math mettle in a brain-teasing race around the Amherst Campus. This summer, BEAM students attended classes and field trips and some also conducted research.

The event was the brainchild of Robert Tom, race coordinator and Fisher-Price's engineering director. Volunteers from Fisher-Price, Ciminelli, Moog, URS and Verizon assisted, as did many UB faculty and staff.

The competition asked student teams to compete to destroy a miniature building in a simulated earthquake, detect hidden weapons in X-ray images of luggage, use trigonometry to operate a mechanical robot, and calculate turbulence in a wind tunnel, and also underscored the importance of taking an environmentally responsible perspective.

Dean Stenger called the 21 high school seniors

and BEAM graduates "tomorrow's engineers."

Participants were from these high schools: City Honors, Hutch Tech, Canisius, Maryvale, St. Joseph's Collegiate Institute, Orchard Park, Amherst Central, McKinley, Lancaster, Buffalo Seminary, Sweet Home, Cardinal O'Hara and Cleveland Hill.



NYSCEDII and Fisher Price Summer Workshop Inspires Young Women Engineers



Kate McGillicuddy (left), a student at Williamsville North, and Katie Kabacinski, a student at Nardin Academy, ride the virtual roller coaster during the Cyber Engineering Workshop for Young Women. PHOTO: NANCY J. PARISI

With females representing only 10 to 15 percent of all U.S. engineers, engineering educators underscore the importance of nurturing young women in the field.

To that end, 16 tech-minded young women from Buffalo area high schools attended the New York State Center for Engineering Design and Industrial Innovation (NYSCEDII) Fisher-Price Cyber Engineering Workshop for Young Women, which introduces engineering design techniques. NYSCEDII has hosted the workshop since 2001. This year and last, Fisher-Price helped design the curriculum and in part, funded the workshop.

Attendees work in NYSCEDII's state-of-the-art facilities and learn from UB instructors. They also benefit from camaraderie with other young women sharing an interest in science and technology, a social experience they often miss in high school.

This year's task involved designing a virtual roller coaster from conceptual design and analysis, to creating a virtual prototype and animation.

Fisher-Price engineers led a "reverse-engineering" activity, during which students took apart toys to understand the design of the mechanical and electrical components. Practicing engineers use the same process to investigate product designs and track down potential failures. Students also rode NYSCEDII's driving simulator.

NYSCEDII provides expertise to help New York State industry become more competitive. For more information, see "Recent News" at: <http://www.nyscedii.buffalo.edu/>.

A former **BEAM** graduate, Nnenna Ewing, was profiled in the *Buffalo News*. She recently earned her degree with honors in engineering physics at Morgan State University and will pursue a master's degree in electrical engineering on full scholarship at Baltimore University.

BEAM is a cooperative educational enrichment program that prepares under-represented students for science, engineering, and technology careers.

BEAM was founded in 1982 by a consortium that included UB Engineering, Linde-Union Carbide (now Praxair, Inc.), Omega Phi Phi Fraternity and the Buffalo Public Schools. Funding is made possible through the generous support of companies, educational institutions, community organizations and individuals. For more information about BEAM, go to <http://www.eng.buffalo.edu/beam>.



Tim Klein, BS EE '84, ATTO president, CEO, and co-founder, celebrated the success of ATTO Technology with the marking of its twentieth anniversary. The firm, located in Amherst, New York, is a storage connectivity and infrastructure solutions provider for data-intensive computing environments. Tim assists his alma mater as a member of the UB Engineering Dean's Council.

1970s



Tom Sorel, BS CIE '78, was appointed as commissioner of the Minnesota Department of Transportation (MN/DOT) by Governor Tim Pawlenty. Mr. Sorel has held various positions with the FHWA since 1978, including major project team leader at the agency's headquarters in Washington, D.C., and director of planning and program development and chief of technology services in Albany, New York. During the 2002 Winter Olympic Games in Salt Lake City, Mr. Sorel was the USDOT liaison for federal transportation issues and led the effort to build the infrastructure for the event.



Tom Valone, BS EE '74, P.E., president of Integrity Research Institute in Washington, D.C., lectured at X-Conference, portions of which can be seen at <http://youtube.com/watch?v=U8QpWCHg8Kg&feature=related>. He holds a PhD in Engineering from Kennedy-Western University, California.

1980s



Michael Haefner, MS CS '84, was named Atmos Energy Corporation's senior vice president of human resources. The company is headquartered in Dallas, Texas. Mr. Haefner comes to the position from Perform for Life, LLC, of which he was founder and president. He had served for 10 years as senior vice president, human resources, at Sabre Holdings Corporation, the parent company of Sabre Airline Solutions, Sabre Travel Network and Travelocity. Atmos Energy is a large natural-gas-only distributor that serves communities in 12 states.



David Leathers, BS EE '85, has been assigned as general manager of Jamestown's Board of Public Utilities.

Craig Miller, BS CIE '89, spoke in the Research and Markets program: "Using Simulation Modeling for the Planning, Design, and Operations of Healthcare Facilities: Advantages and Benefits out Now." Mr. Miller, a certified construction manager, is a project manager on a new hospital addition at Chicago, Illinois' Rush University Medical Center.

Patrick J. Ross, BS CIE '86, P.E. is now senior associate/senior project manager in Bury+Partners' Houston office. Ross previously worked in the Houston office of PB Americas Inc. as a project manager on highway and street projects. Prior to that, he held several engineering positions with the California DOT. Ross earned his bachelor's degree in civil engineering. He is a licensed engineer in Texas, Oklahoma, and California.

1990s

Matthew Marko, BS CIE '94, P.E., was appointed by New York State Governor David Paterson to the SUNY College of Environmental Science and Forestry's board of trustees' volunteer 15-member board, which provides development, support and oversight of the college. Syracuse resident Marko is senior project manager with Denver-based CH2M Hill.



Edward M. Murphy, BS CE '99, ME CIE '03, is now second vice president of the NYSSPE's Erie/Niagara Chapter. Since 2000, he has been a senior project chemical and environmental engineer with Golder Associates, an international environmental and geotechnical consulting firm in Niagara Falls, New York.



Nick Triantos, BS CS '91, was appointed CEO and board member of TokBox, provider of a web-based video communication product. He holds MBA degrees from Columbia University and UC Berkeley's Haas School of Business. Triantos's background includes senior positions at Quantum Technology Partners and NVIDIA and engineering positions at Navio, 3DO, and Apple.

Michael Zhao, PhD ME '94, was named President of Asia America MultiTechnology Association, a Silicon Valley business network that promotes the growth of technology enterprises in the Pacific Rim. He holds an MBA from Rutgers. He had been president and CEO of Array Networks.



David Qiao, MS CSE '99, is founder of JIDE Software. He was interviewed in pushing-pixels.org about his work in writing open-source and commercial Swing components, primarily for business applications.

2000s

Matthew Copeland, BS EE '00, was appointed platform developer at Synacor, a Buffalo internet tools and portals builder. Copeland had worked as a web designer at AAA Western and Central New York.



Dan Fenz, BS '03, MS '05, PhD '08 CIE, was hired by ExxonMobil Upstream Research Company (URC) in the Offshore, Arctic, and Pipeline Division in Houston, Texas. He will do research and development related to the construction of the company's offshore structures.



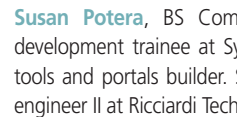
Victoria Koprucki, BS EE '04, will marry chemical engineer Gregory Sullivan. She is an electrical engineer in Albany and a member of the Society of Women Engineers. He holds a civil engineering degree from Cornell University.



Jiangjiang "Jane" Liu, MS '03, PhD '04 CS, received a University Merit Award at Lamar University-Beaumont for her outstanding commitment to education. She is in her fourth year as a faculty member there. Her area of expertise is computer architecture design for chip microprocessing and embedded systems. She is co-director of INSPIRED and WIRED, programs that mentor underrepresented groups in computer science.



Brian Munn, BS CompE & EE '08, a systems engineer at BAE Systems, will marry Brittany Miller.



Susan Potera, BS CompE '05, was appointed development trainee at Synacor, a Buffalo internet tools and portals builder. She had been a software engineer II at Ricciardi Technology.



William E. Schutt, BS CIE '79, was re-elected president of the Erie/Niagara Chapter of the New York State Society of Professional Engineers (NYSSPE). Schutt is president of Wm. Schutt and Associates, Engineering and Land Surveying in Lancaster.

UB Engineering Calendar



(above)
ASCE team members Miranda Robinson and Timothy Sugrue ride their concrete canoe.



(left)
ASCE team members stand by their steel bridge design.

(right)
Alumna and donor Gina Hammond celebrates the trailer demolition, with President Simpson (l) and Dean Stenger (r).



Thursday, October 16 – Sunday, October 19, 2008

Homecoming and Parents & Family Weekend

Friday, October 17, 2008

Annual Pillars Society Luncheon (Class of '58 and prior years)

Fall 2008 Engineering Dean's Advisory Council

Saturday, October 18, 2008

Fall Open House with Engineering Participation

UB Engineering Alumni Association Tailgate

Dean's Scholar's Tailgate

UB Bulls vs. Army

Human Factors Society Regional Student Meeting (ISE)

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