



University at Buffalo

The State University of New York

School of Engineering and Applied Sciences

## UB Engineering and Applied Sciences Dean's Quarterly Report #7 January 1, 2008 to March 31, 2008

### TOPICS:

<b>1.Hires &amp; Searches</b> 	<b>2.US News Ranking</b> 	<b>3.Biomedical Engineering</b> 	<b>4.Philanthropic Investments</b> 	<b>5.Energy Initiative</b> 	<b>6.Events and Visits</b> 
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### 1. Hires & Searches

During the past quarter, the ten ongoing faculty searches (shown in the Table below) made good progress. The status of each is described briefly in this Table. Two of the searches are completed, and the hired candidate has been announced (see below table).

Faculty Searches as of April 23, 2008					
	Strategic Strength	Topic	Status	Rank	Department
1	INS	Multi-functional Materials	Offer extended, waiting for reply	Assistant	MAE
2	ExEv	Wind, Blast, Fluid Modeling	Final candidates being interviewed	Assistant	MAE
3	ExEv	Intelligent Transportation Systems	Offer extended and verbally accepted (1)	Assistant	CSEE
4	ExEv	Risk Analysis Information Infrastructure	Offer extended and accepted (2)	Assistant	ISE
5	ICT	Smart Environments	Interviews completed	Assistant	CSE
6	ICT	Smart Environments	Offer extended, waiting for reply	Full	CSE
7	ICT	Smart Environments	Search continuing	Assistant	ISE
8	ICT	Smart Environments or Enabling Discovery	Search continuing	Assistant	CSE
	Other				
9	SSE	Service Systems Engineering	Interviews being scheduled	Associate	ISE
10	Chair	MAE Chair	Search continuing	Full	MAE

(1) Jun Zhuang, PhD University of Wisconsin. PhD Dissertation May 2008: "Modeling Secrecy and Deception in Homeland Security Resource Allocation"

(2) Qian Wang, PhD RPI. PhD Dissertation May 2008: “Modeling Commercial Vehicle Trip Chains in Urban Areas”



## 2. *US News* Ranking

On the eve of the *US News* issue that reports rankings of Graduate Engineering programs, the *US News* website showed UB Engineering ranked 50<sup>th</sup>, up from 61<sup>st</sup> in 2007 and 54<sup>th</sup> in 2006. The next morning, however, when the magazine hit the street, we were ranked 52<sup>nd</sup>! According to the *US News* editor Bob Morris, the change was caused by a “calculation error.” We are not sure which was actually right, but the published rankings and website now agree and have us at 52<sup>nd</sup>. Bummer! The good news is, our ranking has a positive trend (from 2003 to 2008, our ranking has been: 59<sup>th</sup>, 56<sup>th</sup>, 56<sup>th</sup>, 54<sup>th</sup>, 61<sup>st</sup>, and 52<sup>nd</sup>).

Key metrics in the *US News* calculations—acceptance rate, research expenditures, PhDs awarded, GRE scores, % in NAE, recruiter perception—all improved. Other good indicators are that we are now ranked 28<sup>th</sup> in public engineering schools (versus 31<sup>st</sup> in 2005, 29<sup>th</sup> in 2006, and 35<sup>th</sup> in 2007). Lastly, but perhaps most importantly, almost all of our department rankings improved by 3 to 6 spots. As these are solely based on a reputational survey, this indicates that department chairs across the country are viewing us more favorably.

(If you want more details than I provided here, please contact [Nancy Recupero](#).)



## 3. Biomedical Engineering

On January 30, 2008, Michael Cain (Medical School Dean), Marsha Henderson (VP External Affairs), and I presented a proposal to the Oishei Foundation Board of Directors to help launch our Biomedical Engineering Department and programs. Our request from the Oishei Board was for \$4M over five (5) years. The money would be used to startup new faculty in the department and to renovate critical facilities. The Oishei Foundation Board decided in late March to approve our proposal and allocated \$2M in year one and \$1M if a match of \$1M could be found in year two. Our development staff is preparing a \$1M proposal for another local foundation, who has informally indicated their support. Three key tasks to launch the program are to recruit a Department Chair, to recruit affiliated faculty, and to gain approval of our BS, MS, and PhD degree programs:

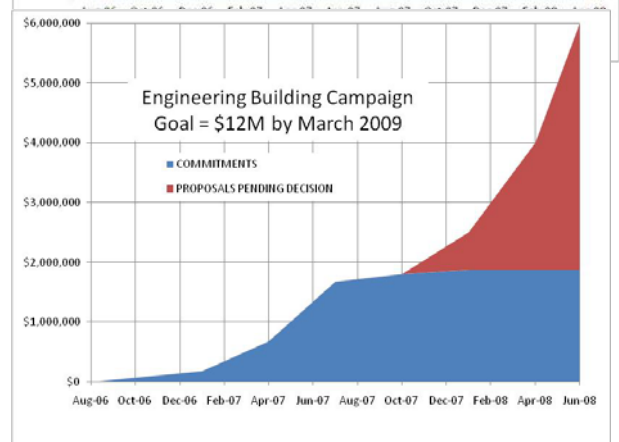
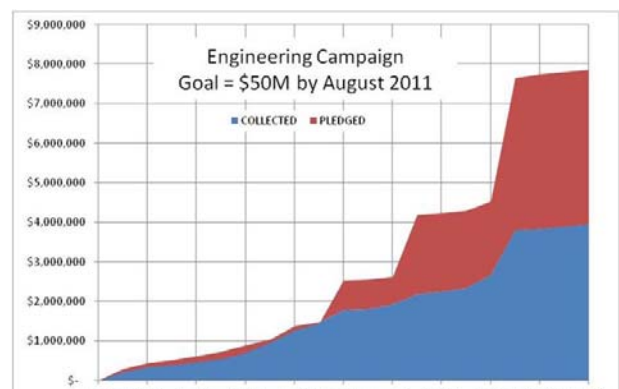
- 1.) For task one, I have asked Professor Stelios Andreadis to chair a search committee that Dean Cain and I will formally charge next week. The committee membership includes: Professor John Canty of Cardiology, Professor Steve Rudin of Radiology, Professor Vipin Chaudhary of Computer Science and Engineering, and Professor David Kofke of Chemical and Biological Engineering. It can take up to 12 months to complete a successful chair search; however, we hope to conclude by January 2009.
- 2.) The second task of recruiting faculty is still a work in progress. We are looking at other BME departments to learn best practice methods for providing incentives to faculty to supervise graduate students and teach courses in the new department.
- 3.) The third task requires great patience and skill to navigate the bureaucracy of UB, SUNY, SED (State Education Department) and NYSSPE (New York State Society of Professional Engineers). To help me, I have asked Professor Albert Titus to lead this effort. I have given him a 12-month appointment as Associate Dean for Program Development.



#### 4. Philanthropic Investments

One of the school's most challenging tasks is to increase the amount of philanthropic investments made by alumni, corporations, and foundations. We have set an ambitious goal of \$50M in pledges over the 5 years that began in August 2006. This \$50M goal is divided into several categories: New Building Construction—\$9M, Building Equipment, Technology, & Furnishings—\$13M, Scholarships & Fellowships—\$10M, Faculty Support—\$8M, Program Support—\$6M, and Facilities Support—\$4M. We're about 20 months into those 5 years, so it's a good time to assess how we're doing. The chart to the right shows in red the amount pledged (\$7.9M) and in blue the amount collected (\$3.9M). I'll leave it to the modelers to predict our probability of success; however, I feel confident that we'll be there ahead of time.

Within that goal of \$50M is \$22M for our new building.



While this is an ambitious goal, this project has great potential for transforming the school's ability to conduct research, teach our students, and improve our reputation. The results so far are promising, but show a tough hill to climb. However, the more alumni I meet the more excited and optimistic I feel. The results are shown above in the chart to the right, where the amount of proposals presented and pending decisions is shown in red (\$6M), and the current commitments made by donors are in blue (\$1.9M). While the progress is significant, our deadline (when the building goes for construction bids) of March 2009, is not far off.



## 5. Energy Initiative

A recent announcement from the [Department of Energy](#) has called for proposals to create 20 to 50 Energy Frontier Research Centers at \$2M to \$5M per year (total annual funding is \$100M). At two evening events in March, more than 35 faculty attended two-hour briefing and brainstorming sessions. The result so far is that at least one team of faculty, mostly led by the EE and CBE departments, will submit a letter of intent on July 1, 2008. The topic is still being developed, but it will capitalize on our existing strengths in materials fabrication, materials characterization, energy storage, fundamental modeling, and systems design. A PI has not been chosen by the group yet, but if you would like more information, please contact me.



## 6. Events and Visits

### a. Events

Date	Event	Location	Discussion Topics
1/3	Perkins+Will (new building architects)	UB Campus	Sustainable design presentations and group work sessions
1/8	Lockheed Martin	Owego, NY	Tour and brainstorming session; discussion to strengthen our relationship
1/9	Perkins+Will (new building architects)	UB Campus	Clean room, research space, engineered systems
1/16	Perkins+Will (new building architects)	UB Campus	Site design and review; discussion with School of Architecture and Planning
1/16	Life Sciences Industry Council Executive Committee	Buffalo, NY	Presentation of proposal for Biomedical Engineering Department at UB
1/30	Oishei Foundation Chairman's Breakfast	Buffalo, NY	Presentation of proposal for Biomedical Engineering Department at UB
2/6	Perkins+Will (new building architects)	UB Campus	Meetings with end user groups
2/10	UB Bulls vs. Eastern Michigan Eagles Basketball Game	UB Campus	Engineering Alumni Association event
2/13	BEAM Annual Volunteer Awards Breakfast	Buffalo, NY	Recognition of volunteers to the BEAM Program
2/21	Order of the Engineer Ceremony	UB Campus	Induction ceremony and reception

2/26 & 2/27	ASEE Engineering Dean's Council Public Policy Colloquium	Washington, DC	"Engineering Solutions for the 21st Century" colloquium, and visits with staff of Senators Clinton and Schumer, and with Congresswoman Slaughter
2/28	Perkins+Will (new building architects)	UB Campus	Schematic design presentation to UB faculty, staff, students, and other interested parties
3/3 & 3/5	Energy Dinner	UB Campus	Discussion of UB's strengths for solving energy-related problems and related funding opportunities. Participation by UB faculty in Engineering, Management, Medicine, the Sciences, and representation from Praxair
3/6	NRG Energy	Kenmore, NY	Update on Huntley IGCC Clean Coal Project with 3 dozen government and labor officials and representatives of NRG
3/6	Northrop Grumman Corporation, Amherst Systems	Williamsville, NY	Plant tour for Dean's Scholars and Engineering student club leaders
3/13	Reception and presentation for our local alumni, friends and corporate supporters	Buffalo, NY	Future growth of UB Engineering and the positive impact it will make on the local economy
3/14	NYSCEDII Grand Opening of our Motion Simulation Laboratory	UB Campus	Presentation on some conceptual details and vision for the facility to a number of people from industry, government, academia, and the press
3/17 & 3/18	Chemical and Biological Engineering Department Graduate Program Evaluation	Amherst, NY and UB Campus	Met with external evaluators (Kyle Vanderlick, Engineering Dean-Yale and Rex Rekalitis, Distinguished Professor-Purdue) for a welcome/orientation meeting and for an exit interview
3/24 & 3/25	Civil, Structural and Environmental Engineering Graduate Program Evaluation	UB Campus	Met with external evaluators (Helmut Krawinkler, Blume Professor-Stanford and Danny Reible, Professor-U Texas@Austin) for a welcome/orientation meeting and for an exit interview
3/26	Perkins+Will (new building architects)	UB Campus	EE Campus User Group Post Workshop Wrap-Up and Administrative Meeting
3/28	UB Engineering Scholarship Reception	Amherst, NY	23rd Annual Scholarship Reception honoring student excellence and achievement. Attended by UB Engineering faculty & staff, scholarship donors, recipients and their families and friends
3/29	UB Open House	UB Campus	Scholars Forum, presentation and tours of UB Engineering for prospective students
3/31	Computer Science and Engineering Graduate Program Evaluation	UB Campus	Met with external evaluators Eric Allender, Dept. Chair-Rutgers and Mike Attalah, Assoc. Dept. Head-Purdue) for a welcome/orientation meeting

**b. Visits**

<b>Date</b>	<b>Visit with</b>	<b>Location</b>	<b>Discussion Topics</b>
1/16	Electrical Engineering Faculty/Staff Meeting	UB Campus	New building
1/17	JoAnn Winson, Senior Consultant, IBM Academic Initiative; Jeffrey Brody, Program Manager, University Relations, IBM Corporate Headquarters	UB Campus	Overview of UB Engineering to strengthen our relationship
1/17	Computer Science and Engineering Faculty/Staff Meeting	UB Campus	New building
2/5	Rick Victor, Director-Technology Development and Dante Bonaquist, Chief Scientist, Praxair	Amherst, NY	Research collaborations
2/8	Michael Cadigan, GM, Semiconductor Solutions, IBM Global Engineering Solutions Systems & Technology Group	UB Campus	Research collaborations
2/8	National Society of Black Engineers Student Chapter	UB Campus	Assistance with underrepresented minority recruitment
2/11	John Stanfill, President, Northrop Grumman Amherst Systems Corp.	Amherst, NY	UB Engineering Dean's Advisory Council membership
2/13	Nguyen Dang Binh, Rector; Phan Quang The and Nguyen Dang Ho, Vice Rectors, Ngo Van Hai, Vice President, Nguyen Thi Thu Ha, Thai Nguyen University of Technology; Nguyen Thi Thu Ha, Ministry of Education and Technology; Vietnam	UB Campus	Partnership to teach UB's mechanical engineering curriculum at Thai Nguyen University of Technology, Vietnam
2/14	Rick Victor, Director-Technology Development and Dante Bonaquist, Chief Scientist, Praxair	UB Campus	Praxair alliance
2/14	James Weyhenmeyer, Senior Vice President, SUNY Research Foundation, and Bonny Boice, RF Senior Vice President for Finance and Treasurer	UB Campus	Overview of UB Engineering
2/15	Bob Burrier, Vice President-R&D, and Mohan Vemuri, Principal Scientist-Stem Cells, Research Area Manager, Invitrogen	Grand Island, NY	Research collaborations
2/20	Cerry Klein, Program Director-Service Enterprise Engineering and Manufacturing Enterprise Systems, NSF	UB Campus	Vision for service systems engineering and manufacturing enterprise systems
2/20	Daniel Gundersen, Upstate Chairman, Empire State Development Corporation	UB Campus	Tour of NYSCEDII and discussion of university-industry collaboration
2/25	Raj Boveja, President, CEO, and Co-Founder of OCR Services, Inc.	Washington, DC	UB Engineering new building

2/27	Peter Rozelle, Program Manager, Office of Clean Energy Systems, US Department of Energy	Germantown, MD	Clean coal project
3/7	Annual meeting between SUNY and YOK (Turkish Higher Education Council) regarding the dual-degree programs (DDP)	UB Campus	Introduction. Included representatives from all 9 Turkish universities and 10 SUNY campuses participating in the 24 programs. (UB participates in the Civil and Environmental Eng. DDP with Istanbul Technical University.)
3/12	Ed Reinfurt, Executive Director, and Ed Hamilton, Executive Deputy, NYSTAR	Buffalo, NY	Center for Advanced Technology
3/14	Dennis Elsenbeck, VP-Business Services, National Grid	Amherst, NY	UB Engineering new building
3/14	Carl Hayden, Chairman of the SUNY Board of Trustees	UB Campus	Overview of UB Engineering
3/20	Leon Manole, Picatinny Arsenal	UB Campus	Research collaborations
3/26	James Milch, President, and Mark Morita, Director of External Technology and IP Alliance, Carestream Health Inc.	Rochester, NY	Biomedical engineering program
3/28	Rick Victor, Technology Development Director, and Dante Bonaquist, Chief Scientist (Praxair) and David Leathers, GM (Jamestown BPU)	Jamestown, NY	Oxy-coal CFB project
3/28	Michael Cadigan, GM, Semiconductor Solutions, IBM Global Engineering Solutions Systems & Technology Group, and Dana Hoffman, IBM Client System Manager, NYS Government and Education	Buffalo, NY	Research collaborations

If you would like more information on any of the topics, please contact me. I wish you a happy, healthy, fun, and productive summer.

Sincerely,  
Harvey