



University at Buffalo

The State University of New York

School of Engineering and Applied Sciences

UB Engineering and Applied Sciences Dean's Quarterly Report #4 April 1, 2007 to June 30, 2007

Topics:

<p>1. Advancement and Development</p> 	<p>2. Searches and Hires</p> 	<p>3. Projects</p> 	<p>4. Administration</p> 	<p>5. Events, and Visits</p> 
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Dear UB Engineering Faculty and Staff:

Here is a brief Dean's Office Progress Report covering the highlights of the last 12 weeks.



1. Advancement and Development

It's been an exciting and productive quarter for the School in *advancing* our mission through *developing* new resources. Between April 1 and June 30, the School received commitments from individuals and corporations totaling **\$2,028,000** for various programs and projects. Specifically, Gina Hammond, Vice President of Computer Sciences Corporation, '78 MS CSE; Bob Brady on behalf of Moog Inc.; and Ravi Bansal, President of AirSep Corporation, each made significant leadership gifts to our new building. Northrup Grumman and Praxair made multi-year commitments to our Dean's Scholar Program. Praxair also made a multi-year commitment to a professorship in Industrial and Systems Engineering.

While every quarter may not be this successful, the growing momentum and positive feelings toward the School are exciting and rewarding. For an individual or a corporation to commit and invest thousands of hard earned dollars towards our future, is one of the highest measures of our value and quality as an institution.



2. Searches and Hires

As described in previous progress reports, the School is aggressively searching for new faculty using as many funding sources as possible. These funding sources include the SUNY Empire Innovation Program, the UB Spousal Accommodation Program, the SUNY High Needs Program, the Strategic Strength hiring plans, and vacancies due to attrition. Three searches are still in progress, and nine (9) have been completed. The following Table lists the nine new faculty members. Links to more information on each new member is found in the [Name](#) column. A New Faculty Brochure, similar to last year's, will be distributed externally and internally to announce our new colleagues.

When the final three searches are completed, our net FTE faculty count will increase by 10, from 140.3 FTE faculty to 150.3 FTE faculty.

Name	Research Field	Rank	Dept.	PhD Granting Institution
Chong Cheng	Nano particle design for drug delivery	Assistant Professor	CBE	City University of New York
Jason Corso	Computational image analysis	Assistant Professor	CSE	The Johns Hopkins U.
Maoyi Huang	Carbon cycle modeling	Research Assistant Professor	CSEE	U. California, Berkeley
Tommaso Melodia	Wireless sensor networks	Assistant Professor	EE	Georgia Tech
Atri Rudra	Approximate solution algorithms	Assistant Professor	CSE	U. Washington at Seattle
Gwanseob Shin	Biomechanical stress and human factors	Assistant Professor	ISE	North Carolina State U.
Gottfried Strasser	Molecular beam epitaxy	Professor	EE/Physics	U. Innsbruck, Austria
Esther Takeuchi	Power systems for implantable devices	Professor	CBE/EE	Ohio State University
Changxu Wu	Modeling human performance	Assistant Professor	ISE	U. Michigan



3. Projects

a. Student Admissions Projects

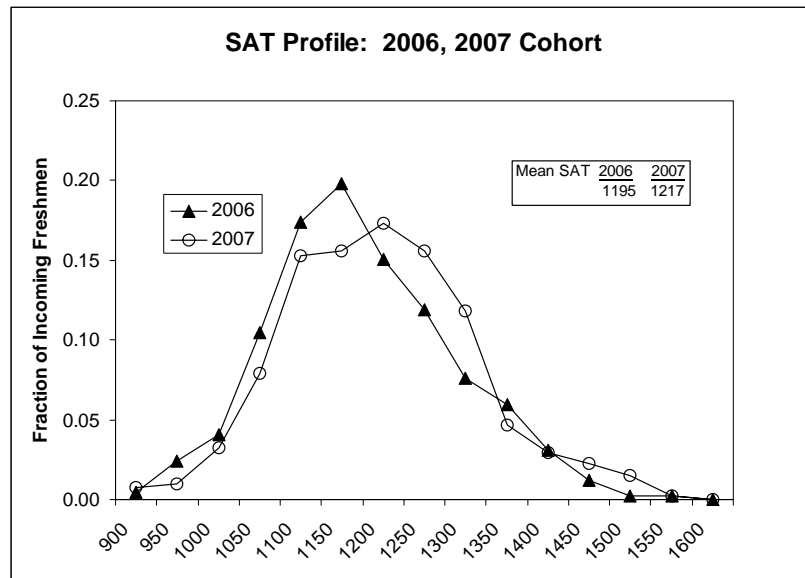
i. Undergraduates:

Student recruitment this year included a variety of traditional as well as new activities, including campus events such as Open House, Discovery Days, Preview Days, teacher/guidance counselor events coordinated with UB Admissions, weekly

engineering tours and presentations, and a variety of off-campus events related to science and engineering. A new Dean's Scholar Program was devised and implemented to recruit academically talented students.

As of 6/28/07, there were 555 deposits for entering freshman engineers compared to 523 in 2006 and 462 in 2005. Compared to 2006, this year's first-year student population in Engineering will increase 6.1%. Admission selectivity and yield were approximately the same in 2006 and 2007 (62% and 34%, respectively). Quality, as measured by SAT scores, increased significantly this year from an average of 1195 in 2006 to 1217 in 2007. The Figure below shows the shift in the SAT distribution from 2006 to 2007.

While cause and effect is difficult to attribute in undergraduate admissions, an increase in both quality and quantity is great news.



ii. **Graduate Students:**

Graduate applications to UB Engineering this year were up 21% to a record number of 3499. Recruiting visits to graduate school fairs and conferences by Jim Michalowski, faculty and students occurred at Binghamton, Cornell, Michigan State, Stony Brook, Waterloo, NSBE National Conference/Convention, and the Alfred McNair Scholars Summer Research Conference. The continuation of our student ambassadors program, and increased communication with prospects and applicants were all used to help boost our fall 2007 enrollment to meet a goal of 1100 students, approximately 11% over our last fall enrollment

of 991. Although our final numbers of students depend on the “summer melt,” we are confident that our fall enrollment will reach our 1100 goal.

b. *Service Systems Engineering*

Our new program in Service Systems Engineering will begin this fall with a class of 25 to 30 students, a good start for a program only a few months old. The curriculum has been designed, and instructors have been assigned for this 12-month, 30-credit hour MS program, geared towards the service sector industries of banking, investment, insurance, health, and hospitality. A formal launch and announcement of the program will occur in August when we receive State Education Department approval to advertise the program.

c. *Biomedical Engineering Department*

The 12-member faculty design team (see Progress Report #3) completed its work on May 30, 2007 with a 17-page proposal that presented the “why and how” a Biomedical Engineering Department should be created at UB. The reasons for “why” included: It is a distinct field of education, employment, and research that is growing and has the potential to continue to grow; it will have a positive impact on the student quality and student enrollment at UB; it will have an impact on the region’s economy and health care industry; it will foster and expand collaborative interdisciplinary research; it will take leadership and responsibility for important facilities; it will be a departmental home for faculty in this new and highly interdisciplinary area of education and research; and it will create an entity that enhances the reputation of UB and allows new opportunities to be pursued.

The “how” of the proposal described the four fields of emphasis for the new department: 1.) Molecular-Cellular, Cell and Tissue Engineering; 2.) Computational Biomedical Engineering and Modeling; 3.) Biomedical Sensors, Instrumentation; and 4.) Diagnostics Medical Imaging and Analysis. The proposal also presented possible undergraduate and graduate curricula; a set of five-year goals; and a plan for launching and growing the department. While this proposal does not make a specific request for investment, it does describe the investment areas and the resulting impacts.

The proposal has been submitted to our Provost and Vice President for External Affairs and is being positioned for approval as an entity, budget allocations for the 2007-‘08 academic year, and external support from foundations, corporations, and alumni.



4. Administration

a. *A new budget algorithm*

The associate deans, department chairs, and I worked from November to May on two of the “13 questions” that I posed when I first started at UB, namely #11: Do department chairs and center directors have financial resources necessary to do their jobs and #13: Are our resource allocation procedures appropriate? Through re-budgeting, tough choices on replacing staff and decentralizing financial responsibilities, we increased the OTPS (other than personnel services – which means everything other than faculty and staff salaries) by \$249,000, or approximately 7.2% over that distributed in 2006-07.

These resources were then allocated to the departments using a simple algorithm based on teaching load, research funding, and degrees granted. Due to enrollment trends over the last five years, this caused a shift in resources, mostly from Computer Science and Engineering to other departments. However, the School is working with CSE to bridge this change to reduce the abruptness of its impact.

b. *New chair in MAE*

The Mechanical and Aerospace Engineering Department has begun an external search for a new department chairperson. My thanks are extended to Joe Mook for his three years of dedicated service as chair of MAE. Andres Soom has accepted the position of interim department chair during this search that is being chaired by A. Scott Weber. Other members of the search committee are: Gary Dargush, Paul DesJardin, Susan Hua, Roger Mayne, and Tarun Singh. Our goal is to have a new chairperson in place by the end of the spring 2008 semester.



5. Events and Visits

c. Events

Date	Event	Location	Discussion Topics
Apr. 5	Alliance for Graduate Education and the Professoriate (AGEP)	UB Campus	Meet UB's minority students in STEM discipline
Apr. 11	Engineering Student Club Leaders	UB Campus	UB Engineering and student clubs
Apr. 11	UB Engineering Faculty Meeting	UB Campus	Bylaws; reports from FPC, our Faculty Senate reps., UG APC, Grad APC, and the Dean
Apr. 13-14	CSE's 40th Anniversary	Amherst, NY	Celebration of 40 years of excellence in

			research and education; invited talks and panel discussion by distinguished alumni
Apr 15-18	ASEE Engineering Dean's Institute	San Juan, Puerto Rico	Diversity in Engineering
Apr. 20	UB Alumni Association Achievement Awards Dinner	Buffalo, NY	Receiving awards were Krishna Kolluri, IE MS '88 (Distinguished Alumni Award); Christopher Scolese, EE BS '78 (Clifford C. Furnas Award); and Richard & Patricia Garman (Dr. Philip B. Wels Outstanding Service Award)
Apr. 25	Dine with UG students	UB Campus	General conversation
Apr. 26	Order of the Engineer	UB Campus	Swearing-in ceremony for Engineering students and the Dean
Apr. 27	Tau Beta Pi, New York Nu	Buffalo, NY	Induction ceremony and dinner
Apr. 30	Theta Tau Engineering Frat.	UB Campus	Plans for UB Engineering
May 1	UB Engineering Junior Faculty Mentoring Meeting	UB Campus	Technology transfer presentation by Jeff Dunbar, Director, UB STOR's Intellectual Property Division
May 12	UB Engineering Commencement	UB Campus	Graduation ceremony for UB Engineering students
May 13	UB General Commencement	UB Campus	Commencement ceremony for UB students
May 14	Moog Corporate Reception	East Aurora, NY	Corporate partnership reception
May 16	UB Engineering Emeritus Faculty Luncheon	UB Campus	Presentation and discussion of UB2020, by Alex Cartwright, INS Director
May 17	Conference in Honor of Colin Drury	Buffalo, NY	International experts in Human Factors and Aviation Safety were featured
May 22	Perkins + Will (architects for new building)	UB Campus	Presentation on new building and working sessions
May 23	Reception for Lancaster High School Seniors	Williamsville, NY	Reception for students from Lancaster HS - largest one school incoming class of students to UB Engineering
May 31	UB Scholars, Inventors, and Entrepreneurs Reception	UB Campus	Recognized research and commercialization achievements of faculty members
June 1	Ray Long and Lee Davis, NRG Inc.	Tonawanda, NY	Project update from NRG on IGCC Huntley
June 14	National Grid/UB Master of Engineering Program Reception	Buffalo, NY	Celebration of successful completion of Masters of Engineering Program by 20 participants, 16 of which are National Grid employees
June 14	UB Business Partners Day	Buffalo, NY	Keynote address by Steve Holliday, National Grid CEO; honoring Vital Partner, UB's Igniting Ideas, and UB Engineer-of-the-Year awardees
June 15	Service Recognition Ceremony	UB Campus	Recognition ceremony for UB Engineering faculty and staff who have 10, 20, and 30 years of service
June 18-20	Perkins + Will (architects for new building)	Boston, MA and UB	One-day visit to tour buildings at Boston University, MIT, and Harvard followed by two-day retreat at UB
Apr. 3	Hatim Tyabji, EE MS '69, CEO, Bytemobile, Inc.	Mountainview, CA	Promoting UB Engineering
Apr. 3	Rajeeva Lahri, EE, PhD '82, CTO, Intersil Corp.	Milpitas, CA	Promoting UB Engineering

Apr. 13	Wendel Duchscherer Architects & Engineers: Scott Smith; GM Michael Leydecker; Randy Roeseler CE, BS '74; Peter von Scheidt, EE, BS '72; Raymond Johnson II; Timothy Walck, CE, BS '91 ME '97	Amherst, NY	Tour of company; discussion of projects and student recruitment
Apr. 25	Wilson Greatbatch EE MS '57, Founder-GentCorp, and Jeffrey Deal, Chief Engineer	UB Campus	Green engineering
Apr. 26	Ron Gerster, President and Owner, Gerster Sales and Services, Inc.	Buffalo, NY	Dean's Scholar Program
May 3	Bob Brady, Chairman & CEO; and Dick Aubrecht Vice President/Vice Chairman, Moog	East Aurora, NY	Promoting UB Engineering
May 11	Ravi Bansal, Chairman & CEO, AirSep Corp.	Amherst, NY	Promoting UB Engineering
May 18	Dan Yankowski, Vice President, Operations, and Howard Brodbeck, VP Global Procurement and Materials Management, Praxair, Inc.	Amherst, NY	Promoting UB Engineering
Jun 6	Ravi Bansal, Chairman & CEO, AirSep Corp.	UB Campus	Promoting UB Engineering
June 7	Rick Posa, CEO, Matt Burger, Engineering Manager, and Rob Bellitto, Director of Sales, SAMCO Technologies Inc.	UB Campus	Promoting UB Engineering
June 11	Professor Max Muhlhausar, Dean-Engineering/Management Center Innsbruck, Austria	UB Campus	Overview of UB Engineering
June 12	Venkat Rangan, Vice Chancellor @ Amrita	UB Campus	Overview of UB Engineering
June 20	Richard Garman, friend and supporter of UB Engineering	Orchard Park, NY	Promoting UB Engineering
June 27	Geoffrey Taylor, Manager, Merseyside SME Development Center in Liverpool, England	UB Campus	Overview of UB Engineering
June 29	Daniel Gunderson, Upstate Chair, Empire State Development Corp.; Senators Young, Maziarz, Rath; Assemblymen Parment, Schimminger, Hayes; Samuel Teresi, Mayor, Jamestown; Dan Yankowski, VP Global Supply Systems & Rick Victor, Technology Development Director, Praxair; John Zabrodsky, Chairman & Dave Leathers, GM, Jamestown Board of Utilities; Brad Dickson, VP and Chief Marketing Officer, Dresser-Rand; George Rusk, VP, & Ian Miller, Senior Economist, Ecology & Environment Inc.	Buffalo, NY	New clean coal power plant at Jamestown, NY

¹ For alumni, degree title and date of graduation

d. **Dean’s Council Members Calls and Visits**

Date	Name and Title¹
Apr. 13	Lester Gerhardt, EE, MS '64, Ph.D. 67, Prof /Assoc Dean, RPI
Apr. 25	Ramji Gupta, MAE MS '72, Ph.D. '74, Product Line Manager, Moog, Inc.,
Apr. 25	Scott Stevens, CE, BS '79, President, Dimension Fabricators, Inc.,
Apr. 26	Steve Lerner, Senior VP & CTO, Praxair Inc.
Apr. 27	Lee Runk, IE, BS '61
Apr. 30	Hormoz Mansouri, Nuclear Eng, BS '79, President, E.I. Team Inc.
May 2	Doug Hillman, EE, BS '82, General Manager, Kearfott Guidance & Navigation Corp.
May 2	Bill Stysliger, ENS, BS '69, President, Seachange International Inc.
May 2	Kitty Pilarz, ME, BS '80, Director-Mattel Worldwide Product Safety, Fisher-Price
May 3	John Stopher, EE, BS '86, MS '88 Ph.D. '94, President, 377 Omega Inc.
May 11	Ephrahim Garcia, MAE BS '85, MS '88 Ph.D. '90, Assoc. Prof., Engineering, Cornell U.
May 18	Maria Lehman, CE BS '81, The Chazen Companies
June 8	Tim Klein, EE BS '84, President, CEO and Co-Founder, ATTO Technology Inc.
June 8	Nirup Krishnamurthy, , IE, MS '87, Ph.D'91, Exec VP/CTO, The Northern Trust Company

I hope this report is useful. If you would like more information on any of the topics, please contact me. Please continue to enjoy your summer!

Sincerely,

Harvey

¹ For alumni, degree title and date of graduation