USF College of Engineering
2008-2009 Annual Report

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Associate Deans Rafael Perez and Tom Weller

As part of the annual review of the College and its leadership, the Provost requests an annual report which is used to inform the faculty and others of the College's progress over the past year. In addition to this report, the College's annual portfolio of data is available on the USF website (http://www.ods.usf.edu/DSS/Resources/docs/college-profiles/Engineering.pdf). This report is the first report produced by myself. Since this report is retrospective, I will make reference to activities on occasion that occurred in the 2007-8 academic year but, in general, will attempt to limit most of the report to the 2008-9 year's activity.

I strive to include the voice and input of the faculty in all major administrative decisions. As much as possible, I consciously decided to avoid major changes or disruptions during my first year in the College in view of the turmoil that arose in the transition that occurred upon Dean Martin-Vega's departure. Unfortunately, external forces were not cooperative and we were faced with major budgetary matters and potential academic re-organization last year. Although I saw the merits as well as the disadvantages of the many options that were discussed (including the merger with the Sciences), I relied heavily on the Faculty Governance Council and the department Chairs to guide and inform decisions and Collegiate positions. These discussions have resulted in policies being developed on Endowed/Named Chair appointments and reviews as well as the department Chair appointment process. Both policies have been utilized in several cases already in the past 18 months. We will need to do more work as far as governance documents and policies and this action item will be on my list of goals for next year.

Probably the most significant change of the 2007-8 year is the centralization of business functions into Resource Management or RM. Although the centralization of business functions into a College-wide, one-stop office has been a major change for all of us, it has positioned us to be more cost effective and consistent in the way we do our business. This change was driven by faculty input. I met with all-comers in the Fall 2007 and I heard you, the faculty, loud and clear. Something had to be done to streamline and improve our business functions in the College. I engage the Chairs and business staff in developing a plan that finally emerged as the current RM structure. I believe that on the whole, we have accomplished our goals. Certainly some departments and faculty have seen a slight decrease in personal attention and timeliness, but in other cases, departments were understaffed and overwhelmed and their faculty are now seeing significantly improved service. Most importantly, RM is designed to provide constant improvement. If something is not working, it can and will be fixed.

The remainder of this document will be framed around goals that the Provost and I mutually set for the College of Engineering in 2008-9. I do not necessarily view these goals as a discrete package that must be completed within one year but rather as a continuum … new ideas will come to the surface as we try to follow through and complete on-going projects.

Goals for the College of Engineering

(Goals set by Provost in consultation with the Dean)

1. ***Expand world-class interdisciplinary research and scholarly endeavors***, through a commitment to efficient research administration, promotion of innovative interdisciplinary research, and by facilitating interactions with centers of research excellence outside the college.
2. ***Promote the timely completion of degree programs***, by emphasizing excellence in our undergraduate programs and counseling, enhancing the supervision of graduate programs, and improving our recruiting processes to attract the best students possible.
3. ***Increase contracts and grants, especially competitive federal funding***, through support of faculty in terms of teaching load and administrative assistance, and by hiring the best and brightest new faculty members.
4. ***Strengthen opportunities in sustainable healthy communities, material science and biotechnology*** by encouraging and supporting research and cross-college collaboration.
5. ***Re-engage with alumni and advisory board***, by supporting our very committed Engineering Alumni Society and re-forming the College Advisory Board.
6. ***Establish a process for nominating faculty for prestigious awards***, by forming a College Research Council to identify opportunities and help in the promotion of strong candidates.
7. ***Participate in USF Comprehensive Campaign***, and achieve the goal set for the College of Engineering.
8. ***Continue focus on diversity***, through strong support of the college's Office of Outreach and Diversity.
9. ***Continue focus on marketing and public relations***, by re-energizing the college's Office of Development and hiring appropriate staff to affect comprehensive internal and external communications.

1. Expand world-class interdisciplinary research and scholarly endeavors. Upon my arrival, I was faced with finding and appointing a permanent Associate Dean of Research that had the trust and confidence of the faculty. A search committee comprised of faculty and chaired by Professor Kaw identified and ultimately recommended Professor Tom Weller. Although Professor Weller was not able to start the position until the end of the academic year 2007-8, he has made substantial headway in the roughly nine months since he started. In addition, the staff running our research office was inadequate in Fall 2007. In response, I invested significant effort (with the aid of Richard Buffington and Rafael Perez) in identifying high caliber, experienced staff to help us attract, administer and close our research grants and contracts.

The centralization of business functions into one unit has been very helpful in getting us out of the "blame game" and into a "customer service" mentality with a focus on servicing faculty and students. I heard one RM staff describe her job as "we just get things done." In my opinion, this attitude is exactly what we need. The staff in the departments continue to be an important part of this "we can do it" mentality. These folks have been instrumental in keeping our students and faculty informed, facilitating our academic business functions such as waivers, and assisting in recruiting / hiring.

The general philosophy for the past year has been to get a solid infrastructure in place and let the faculty grow the research enterprise. We have instituted a seed grant program (College of Engineering Interdisciplinary Scholarship Program) that fosters interdisciplinary cooperation with faculty outside of the College. In addition, in an effort to broaden our awareness of scholarly work as well as make key external constituents aware of us, we have instituted the College of Engineering Eminent Scholars Lecture Series. This idea arose out of the faculty's input from the Strategic Planning listening session as well as an immediate need to increase enrollments at the graduate level. This lecture series began in Spring 2008 and featured lecturers from across the nation including an associate provost (Penn State), a college dean (UCSB), center directors (Georgia Tech and Northeastern) and a renowned expert in biomimetrics (UC Irvine). Thus, this "public relations" effort also serves our educational and research mission well. We look forward to continuing these activities in the coming years in hopes of promoting collaborative and interdisciplinary work.

To provide college-level stewardship of the research mission a COE Research Council will be activated in Fall 2009. This council will be comprised of leading faculty researchers in the college, and will be charged with leading efforts or playing a supervisory role in large center proposals, faculty recognition and awards (e.g. Fellow nominations), developing best practices in new faculty mentoring, promoting collaborative research and the external research profile of the college, and similar activities.

2. Promote the timely completion of degree program. Degree productivity per full-time faculty equivalent is shown below, comparing USF COE 2007-2008 data against the average of AAU-member engineering colleges.

Engineering College	Bachelor	Master	Doctoral
USF	3.88	2.12	0.49
AAU Average	3.65	1.51	0.52

Clearly, we are a productive College. However, when it comes to questions such as retention and time to degree, we have not done a good job evaluating our effectiveness. In this regard, we have some work to do but we have started the discussions. At the undergraduate level, we have re-invigorated the Research Experience for Undergraduates (REU) program and will continue to look to retain our students by providing experiential learning opportunities including programs such as REU, internships, co-op jobs, study abroad and other unique opportunities (e.g. international design, the Peace Corps MS program, Engineers Without

Borders etc.). The REU program has a current enrollment of over 80 undergraduates, or approximately 1 REU student per faculty member. There are now four people directly involved in various aspects of administering the REU program, along with seven coordinators distributed throughout the academic departments and CUTR; this team will pursue expansion of the program by proactively targeting REU supplemental awards on NSF-funded projects and seeking out new opportunities for our REU students to participate in internships at national laboratories and companies. It is expected that the program enrollment can grow to ~120 students in the next 1-2 years. The College considers a strong REU program to be a critical factor in increasing the overall quality of our undergraduate curriculum.

At the graduate level, we continue to emphasize the need for full time support of our graduate students as a means of assuring that they can devote their time to focused research and coursework. The College of Engineering does a reasonable job supporting its graduate students through teaching assistantships with state funds and research assistantships with external grants. For example, during the Fall 08 semester, graduate students in the College were supported as shown below:

Support From Contract & Grants:

	Compensation Amount	Number of students
Ph.D.	$ 546,035.39	132
M.S.	$ 272,487.20	83
Total	$ 818,522.59	215

Support From E&G funds:

	Compensation Amount	Number of students
Ph.D.	$ 338,476.27	99
M.S.	$ 259,158.67	107
Total	$ 597,634.94	206

Support from Fellowships:

In addition to the TA and RA support, the College of Engineering has assisted our graduate students pursuing external fellowships. We had a total of 53 fellowships (non-USF funded) awarded to minority graduate students totaling approximately $350,000 during the fall term. The source of support is as follows:

NSF Graduate Research Fellowship & NSF Graduate Research Supplement: 3
NSF Bridge to the Doctorate: 6
NSF GK-12: 6
Alfred P. Sloan Foundation: 21
McKnight Doctoral Fellowship: 13
Ford Foundation: 2
NASA: 1

GEM Fellowship Consortium: 1

The College is committed to providing full-time support for our PhD students. Right now, the contracts and grants secured by the faculty play the largest role in supporting these students. However, we need to provide additional TAs and re-allocate current resources to provide a better pool of funds to recruit students nationally and internationally. Indeed, this point has been reflected in several Strategic Planning sessions over the past six months.

Although the above steps seem reasonable, we have operated in the dark for too long. Much of our efforts going forward will be focused on providing reliable measures of time to degree for both graduate and undergraduate students. We need to be able to parse the data between full and part-time students and to understand where our students go after graduation. As I said at the start of this section, there is much to do.

3. Increase contracts and grants, especially competitive federal funding.

If you review our R&D expenditures posted on the Provost's website (Collegiate profiles), you will quickly note the downward trend in R&D expenditures per faculty member. Over the three-year period from FY05-06 to FY07-08, total R&D funding in the College of Engineering dropped from $27.8M to $19.3M, while the total R&D expenditures dropped from $24.1M to $22.6M (6% decrease). The table below shows that the 11% decrease in federal expenditures over this time period runs counter to the 9% increase in the average federal expenditures of ASEE-reporting colleges. So, since 2006, we have been falling behind, not moving ahead of our peers. Over this same period the FTE for tenured/tenure-earning (TT) faculty in the college dropped from 97 to 93.

Federal Research Expenditures (in $Million)

Engineering College	2005-2006	2006-2007	2007-2008
USF	18	17.2	16
ASEE Reports	20.5	21.6	22.3

Despite these recent drops in research productivity there is ample evidence that the college will see a near-term resurgence in awards and expenditures. A year-to-date comparison between FY07-08 and FY08-09 shows a 9% increase in competitive federal awards, while total awards doubled from $15M to $30M due to the recent $15M contract to the Power Center for Utility Exploration (PCUE). The ~$6M awarded to the USF – Florida Energy Systems Consortium will be credited to the Office of Research, but expenditures by engineering faculty will be credited to the individual investigators and thus will count toward the college total. Total expenditures in FY08-09 are expected to exceed $20.5M based on the per-month average through February. Another promising indicator is the substantial increase in proposals: to date in FY08-09 there is $130M pending, far surpassing the total year record of $103M set in FY07-08. The current year totals will see a further substantial increase due to activity associated with NIH Challenge Grants and other stimulus funding-related opportunities. This base of funding will provide

momentum while the latest class of new faculty hires ramps up research activity, and our pursuit of federally-supported research centers accelerates.

Consistent with the drop in research awards in the past two years, the number of postdocs and non-faculty research staff also decreased from a combined total of 31 in Fall 2007 to 14 in Fall 2008. The upswing that is currently occurring in external funding will naturally have a positive impact in this category. The College will also take a proactive approach to increasing postdocs by: a) organizing internal workshops on the topic of postdoc recruiting and mentoring, and b) considering some form of financial incentive to faculty members that hire postdocs.

4. Strengthen opportunities in sustainable healthy communities, material science and biotechnology . The College is building on its extensive expertise in sustainable healthy communities, materials science and bio-technology through a variety of activities. The USF-FESC integrates investigators from the Clean Energy Research Center (CERC) and the Power Center for Utility Exploration (PCUE) along with faculty in several other COE departments and Arts and Sciences. The success of this collaborative thrust will see further expansion as it develops cross-linkages with several investigators focused on the environmental sciences. Similar multi-disciplinary growth occurred with the launch of the Materials Science and Engineering (MSE) program which brings together faculty members from three COE departments and the Physics Department; opportunities to pursue large center proposals, potentially with strong participation in the biomedical area are being investigated. Several exciting new developments have also occurred in the biotechnology area, including: the first collaborative faculty hire between COE and the Diabetes and Autoimmune Disorders Thrust; new research collaborations with Draper Laboratories; new partnerships between COE and the Integrative Neurosciences Thrust; a joint, federally-funded project between COE, The Arts and the Haley VA Hospital; and, a National Science Foundation Science and Technology Center proposal on health care delivery in partnership with the North Carolina State University, Purdue University and the University of North Carolina.

5. Re-engage with alumni and advisory board. As a college, our relationship with our alumni and our advisory board members was damaged in the transition between Dean Martin-Vega and myself. After spending a year "getting to know" the alumni, I truly believe that the Engineering Alumni Society is now fully re-engaged with our College. My measure of success was enthusiasm at our long running tradition of Bull-Arney as well as my personal interaction with several alums who had discontinued giving to the College. The final numbers are not in, but it will not surprise me to see giving at Bull-Arney being up in a year that economic conditions would not suggest it should go up. The advisory board has also been put into disarray and I am in the midst of re-establishing the board. Rather than convening the board prematurely, we have purposefully waited for the Strategic Plan to get to at least a "close to final draft" form. The board will be a key evaluator of our progress with the plan and will provide counsel on how we can make the progress despite the current economic climate.

6. Establish a process for nominating faculty for prestigious awards. As mentioned earlier, a COE Research Council will be activated in Fall 2009 and will be charged with leading efforts to

provide faculty recognition and awards in the research area (among other things). However, awards run the gamut in our field and include professional society awards, federal awards of recognition and a variety of teaching and service awards. In view of the USF vision to achieve AAU status, we will institute College-wide effort to promote nominations for key national awards in the coming years. To date, we have relied, with great success, on nominations coming from the grass roots. Examples of our success in this regard can be seen in the following list of awards to our faculty and students:

Selected Faculty Achievements 08-09:

- **Dr. Jose Zayas-Castro,** Chair of Industrial Engineering, will receive the 2009 American Society of Engineering Education John L. Imhoff Global Excellence Award for Industrial Engineering Education in recognition of his distinguished accomplishments.
- **Tapas K. Das**, Associate Provost and Professor of Industrial & Management Systems Engineering assumed the position of Chair for the Energy, Natural Resources, and the Environment (ENRE) Section of the Institute for Operations Research and Management Sciences (INFORMS) (2008-2010).
- **Dr. Vinay Gupta**, Associate Professor of Chemical & Biomedical Engineering receives the *Jerome Krivanek Distinguished Teacher Award* given by the USF Faculty Senate.
- **Dr. Paul Schnitzler**, faculty in the Department of Industrial and Management Systems Engineering, was awarded the *IEEE Region 3 Joseph M. Biedenbach Outstanding Engineering Educator Award*.
- **Dr. Kumar** has been selected to be on the editorial board of Journal of Materials Online.
- **Center for Urban Transportation Research (CUTR)**'s *Transportation Concurrency Best Practices Guide* was awarded *the 2008 Project of the Year Award* from the Tampa Bay Institute of Transportation Engineers. Principal researchers on the project were CUTR researchers *Kristine Williams, Karen Seggerman*, and *Pei-Sung Lin*, with outstanding graphic design by *Wendy Teague*.
- **Dr. Abdul Pinjari**, Assistant Professor in the Department of Civil & Environmental Engineering, received the *2008 Wootan Award* for outstanding Ph.D. dissertation in policy and planning in Transportation.
- **Dr. Amy L. Stuart**, Assistant Professor of Environmental and Occupational Health (College of Public Health) and Civil and Environmental Engineering (College of Engineering) has received a *National Science Foundation CAREER Award* for her project *Multi-scale interactions of air pollution, urban growth, and equity – integrated research methods and informal science teaching*.
- **College of Engineering faculty award recipients** at the Research Week 2008 awards banquet.
    - *Outstanding Research Achievement Award*
        - **Sanjukta Bhanja** (Assistant professor, Electrical Engineering)
        - **Yogi Goswami** (John and Naida Ramil Professor, Chemical & Biomedical Engineering)
        - **Ryan Toomey** (Assistant Professor, Chemical & Biomedical Engineering)
    - *Excellence in Innovation Award*

        - **Venkat Bhethanabotla** (Professor, Chemical & Biomedical Engineering)
        - **Stephen Sundarrao** (Instructor, Mechanical Engineering)
        - The team of **Miguel Labrador** (Associate Professor, Computer Science & Engineering) and **Rafael Perez** (Professor, Computer Science & Engineering), **Philip Winters**, **Sean Barbeau** and **Nevine Georggi** (all Center for Urban Transportation Research)
- **Dr. Ed Mierzejewski**, CUTR Director, was the recipient of the FSITE 2008 Nat Rambo Award in recognition of his long and distinguished participation in the activities of the Florida Section Institute of Transportation Engineers and his outstanding contribution to the fellowship and camaraderie among the members.
- **Dr. Yogi Goswami,** John and Naida Ramil Professor**,** Chemical & Biomedical Engineering was inducted into the *Pan American Academy of Engineering*. Dr. Goswami also received the "Outstanding Professional of the year" award from the Federation of Indian Associates (FIA) of Tampa Bay.
- **Prof. Sudeep Sarkar** was elected a fellow of the International Association of Pattern Recognition.
- **Wayne Echelberger, Ph.D., P.E.,** Professor Emeritus of Civil and Environmental Engineering (Department Chairman, 1989-96) at the University of South Florida, was honored as *Engineer of the Year* by the Tampa Chapter of the Florida Engineering Society.
- **Prof. Venkat Bhetanobotla,** was named an Associate Editor for the IEEE Sensors Journal.
- **Associate Prof. Srinivas Katkoori,** wins Outstanding Undergraduate Teaching Award.

Student Successes 08-09

Graduate Students:

- **2 out of 4 winners** of the 2007-2008 Graduate School Outstanding Dissertation Awards are from the College of Engineering.
    - **Dr. Shyam Aravamudhan,** Electrical Engineering, for his dissertation titled *Development of Micro/Nanosensor Elements and Packaging Techniques for Oceanograph.*
    - **Dr. Upavan Gupta,** Computer Science and Engineering, for his dissertation titled *Approaches for Multi-Metric Optimization in VLSI Circuit Design and Spatial Clustering*.
- **Dorielle Tucker Price**, a Ph.D. student in the Department of Electrical Engineering, was awarded **first place** during the *Graduate Student Technical Paper Competition* at the 2009 National Society of Black Engineers (NSBE) Annual Conference.
- **Dawn Fox** was awarded a grant for one calendar year to finance her academic project from the Schlumberger Foundation. She was selected from 180 candidates in 29 countries.
- **Three graduate student teams** from the Department of Civil & Environmental Engineering excelled in a national competition to design the best pre-stressed concrete beam. There were 54 teams in the competition.

    - **First place for innovative design in the national championship** and award of $1000 for team consisting of *Vladimir Simonovski, Lori Elkins, Julio Aguilar, Hida Bagheri and Ashley Quaid*.
    - **Third place in the national championship and first place in the Zone 6 competition** and award of $1500 for team consisting of *Marcia Alvarado, Muntaha Abu-Hijleh, Margareth Dugarte, Gouzel Ipaeva and Rene Jacir.*
    - **Second place in the Zone 6 competition** and award of $750 for team consisting of *Evan Birk, Geoffrey Chambers, Jonathan Collins, Edward Francis, David Furry, and Purvik Patel.*
- **Cindy Bethel**, a CSE Ph.D. student, received the 2008 IEEE Robotics and Automation Society Fellowship
- **Deidra Hodges,** a Ph.D. candidate in Electrical Engineering, was one of six recipients campuswide selected to receive a 2009 USF Women's Leadership Award. Deidra was recognized for her leadership in encouraging young women, both USF undergraduates and local K-12 students, to pursue careers in science and engineering.
- **Julio Medrano**, a Ph.D. student in Electrical Engineering, was selected as a recipient of the Ford Foundation Diversity Fellowship 2009 predoctoral competition. The three-year fellowship is sponsored by the Ford Foundation and administered by the National Research Council of the National Academics. Julio's honor marks the **third** Ford Foundation Diversity fellowship awarded to College of Engineering doctoral students within the past four years.
- **Natasha Cover,** a Ph.D. student in the Department of Chemical and Biomedical Engineering, was selected as a recipient of the 2009 GEM (Graduate Degrees for Minorities in Engineering and Science)) fellowship program. Natasha's fellowship will be sponsored by Johnson & Johnson, Inc.
- **Quenton Bonds,** a Ph.D. candidate in the Department of Electrical Engineering, was selected as one of two winners from a national competition to receive a 2009 IEEE Microwave Theory and Techniques Society (MTTS) Graduate Fellowship for Medical Applications.
- **Fedena Fanord,** a Ph.D. student in the Department of Chemical and Biomedical Engineering, was selected as the 2009 recipient of the 2009 Dow Chemical Company Graduate – National Organization of Black Chemists and Chemical Engineers (NOBCChE) fellowship award.
- **Mechanical Engineering Alumnus, Bob Andrew,** was named 2008 Engineer of the Year by the American Society of Mechanical Engineering West Coast Chapter.
- **IEEE Computer Society,** wins Best Student Organization Award at 2008 Engineering EXPO
- **Award winners in the 2008 College of Engineering Research Week Poster Competition:**
    - Quenton Bonds, *Second Generation Microwave Radiometer*, Advisor: Tom Weller
    - Athina Brintaki, *A Biologically-Inspired Computational Geometric Method for Effective Identification of Molecular Conformations*, Advisor: Susan Lai-Yuen
    - Audrey Buttice, *Improving Water Quality with Green Chemistry*, Advisor: Norma Alcantar

- Sergiy Fefilatyev, *Detection of Marine Vehicles on Horizon from Buoy Camera*, Advisor: Rangachar Kasturi and Dmitry Goldgof
- Christopher Frewin, *Atomic Force Microscopy Analysis of Central Nervous System Cell Morphology on Silicon Carbide and Diamond Substrates*, Advisor: Steve Saddow
- Karan Khokar and Eduardo Veras, *Laser Assisted Real-Time Scaled Telerobotic Manipulator Control with Haptic Feedback for Activities of Daily Living*, Advisor: Rajiv Dubey
- Anthony Richardson, *Pattern electrodes for thickness shear mode quartz resonator to achieve uniform mass sensitivity distribution*, Advisor: Venkat Bhethanabotla
- Joshua Schumacher, *Sensitivity Enhancement of MALDI Mass Spectrometry Measurements using H2O-Insoluble Matrix Compounds*, Advisor: Rudy Schlaf
- Chamila Siyambalapitiya, *Fabrication of stimuli-responsive Poly-NiPAAM surfaces for bio medical applications*, Advisor: Jing Wang and Ryan Toomey
- Matthew Spaulding and Eric Tridas, *Deposition of E. coli 0157:H7 Biosensor Coupons with Electrospray*, Advisor: Rudy Schlaf

Undergraduate Students:

- **Mr. Jose Caraballo,** Mechanical Engineering student, has been selected as the 2008 ASME Florida West Coast Section *Student Engineer of the Year*.
- **Mr. Nathan Quecan,** Electrical Engineering student, has been selected as *the2008 IEEE Florida West Coast Section Student Engineer of the Year.*
- **Minh Nguyen,** Chemical Engineering student, received awards for the "Most Creative Drive System" and "Best Show for the poster Competition" at the South East Regional ChEME car competition organized by AIChE.
- **Mr. Christopher Alexander**, Civil and Engineering student, was awarded **1st place** in the oral competitions within the engineering category during the 2009 Florida-Georgia Louis Stokes Alliance for Minority Participation (FG-LSAMP) Annual Career & Research Expo.
- **Ms. Ana Rioja,** Chemical and Biomedical Engineering student was selected to participate in the Amgen Scholars Summer Research Program in the Sciences and Biotechnology at the University of California-San Diego (UCSD). Annually, the Amgen Scholars Program provides high-achieving undergraduates with opportunities to engage in "hands-on" research at some of the nation's leading universities (Cal Tech, Stanford, MIT, Columbia, USCD, etc.).
- **Mr. Jose Carballo,** a Mechanical Engineering student was awarded Student Engineer of the Year by the American Society of Mechanical Engineering Florida West Coast Chapter.
- **Mechanical Engineering students** participated in 2008 Mini-Baja and Formula SAE competitions. They were among the top performers in 3 different Mini Baja competitions. They have had number one overall rank twice during the last five years.

7. Participate in USF Comprehensive Campaign. Again, a period of "Dean transition" left us without a viable Development office for over a year. Brett Woods and Mandi Alexander have been hitting on all cylinders since Brett started working here in January 2009. I want to give a special note of thanks to Mandi Alexander who bore a tremendous load for the roughly six months prior to Brett Woods joining our team. The turmoil in the Development office and the recent recovery are reflected in the dip ($700,000 in 2007-8) and resurgence (>$1.2 million in 2008-9) of giving over the past two years. Since the Capital Campaign has not yet been formally announced, it is premature to discuss the specific goal. However the action plan and targets have been developed in consultation with the Chairs and the Provost. There will be strong focus on the undergraduate experience in view of the likely donors (alums and corporate sponsors hiring our BS students), with hopes of securing donations sufficient to construct a new building.

8. Continue focus on diversity. Of the 106 faculty members currently in the College, thirty (~ 28%) are Asian, eleven (~10%) are female, ten (~ 9%) are Hispanic, and six (~6%) are African-American. Of the 14 new individuals who will be joining our faculty this coming fall, three (21%) are female and one (~7%) is African-American.

Faculty hiring overview. In spite of the economic climate, we are making reasonable progress. At the beginning of this fiscal year, the Provost approved the College to hire six tenure track faculty. I could see that this was not adequate for our needs and decided to utilize the "start-up" resources that were provided to me as part of my hiring package to boost the number to ten tenure track faculty. If you review the list below (which includes all instructional faculty hires since my arrival), we ended up with twelve tenured track (TT) faculty (including one department chair position) for the year, two more than the revised plan and twice the number in the originally approved plan! This outcome is even more remarkable in view of the fact that we were approved to hire four tenure track faculty for the 2007-8 year but ended up hiring eight tenure track faculty. The "windfall" over the past two years can be explained by alignment of our College's strengths with opportunities that come our way. The Provost believes in us and is willing to take some risks if we provide a return on his investments. In the last two years, if I had settled for the hiring plan as originally approved we would have had a total of 13 new hires (TT and instructors) instead of the actual 22 hires that we have achieved (see list below). I firmly believe it is my responsibility to act in a swift manner to opportunities that come our way and that are synergistic to our goals.

Over the last two years, we have seen roughly 8 TT faculty or instructors leave for various reasons. Thus, on the net, we have seen an increase of 16 TT/instructor lines (~ 15%) in the time period of Fall 2007 to Fall 2009. Of the 17 new TT faculty hires, 10 are from AAU member universities and 7 are from top 50 engineering schools.

Computer Science and Engineering:
Xiaoning Qian, Assistant Professor, Ph.D. from **Yale University**

Luther Palmer, III, Assistant Professor, Ph.D. from **The Ohio State University**
Yu Sun, Assistant Professor, Ph.D. from the **University of Utah**

Electrical Engineering:
Lingling Fan, Assistant Professor, Ph.D. from **Montana State University**
Gokhan Mumcu, Assistant Professor, Ph.D. from **The Ohio State University**
Chair (to be named shortly)
Justin Harlow, Instructor, M.S. from **Duke University**

Chemical and Biomedical Engineering:
John Kuhn, Assistant Professor, Ph.D. from **The Ohio State University**

Civil and Environmental Engineering:
James Mihelcic (Fall 2008), Professor, Ph.D. from **Carnegie Mellon**; previously at Michigan Tech
Abdul Pinjari (Fall 2008), Assistant Professor, Ph.D. from **University of Texas, Austin**
Yu Zhang (Fall 2008), Assistant Professor, Ph.D. from **University of California, Berkeley**
Michael Stokes (Fall 2008), Instructor, Ph.D. from **University of South Florida**
Dennis Magdolen (Spring 2009), Patel Center Associate, P.E.
Linda Philips (Spring 2009), Patel Center Associate, P.E.
Sarina Ergas, Associate Professor, Ph.D. from **U.C. Davis** ; previously at UMass, Amherst
Qiong Jane Zhang, Assistant Professor, Ph.D. from **Michigan Technological University**

Industrial and Management Systems Engineering:
Bo Zeng (Spring 2009), Assistant Professor, Ph.D. from **Purdue University**
Hui Yang, Assistant Professor, Ph.D. from **Oklahoma State University**

Mechanical Engineering:
Kyle Reed, Assistant Professor, Ph.D. from **Northwestern University**
Nathan Gallant (Fall 2008), Assistant Professor, Ph.D. from **Georgia Tech**
Rasim Guldiken (Fall 2008), Assistant Professor, Ph.D. from **Georgia Tech**
Instructor (to be named soon)

9. Continue focus on marketing and public relations The College was making great strides under the prior Dean's leadership in establishing its reputation and improving its visibility. Again, the transition resulted in a major step back due to lost personnel and momentum. However, the pause has allowed us the time to think about what image we wish to portray to the rest of the world. As part of our ongoing Strategic Planning discussions, the faculty and staff have a clear sense of ownership and passion for the College. However, this passion has not been clearly represented in our decision-making process or in a cohesive marketing and communication plan for the College. In view of the vital importance of marketing and communication, I requested that a communications audit be conducted for the College in the Spring 2008. The results of that audit have been shared with the College community and we are in the midst of hiring a professional Communications Officer to help marshal our communications efforts going forward. Our ability to gain alignment around a shared vision is

critical to our future success. This alignment and the concomitant marketing requires the skills of this professional.

Closing Thought Since joining the College of Engineering, I have spent a great deal of time listening. There is a Vietnamese saying that I think is very relevant to this approach, "Chew before you eat, Think before you speak." How could I intelligently act to move the College forward without listening to the needs and aspirations of the faculty, the staff and the students? I think our best thinking is required before we act. For this reason, I have gone to great lengths to engage as many faculty, staff and students as possible in a Strategic Planning process. During 2008-2009, the college engaged in a comprehensive strategic planning process that has involved over 150 faculty, staff and students. In April 2009, a retreat was held to review the input gathered to date, at which time 25 participants generated the framework of an action plan in the areas of Education, Research, Service & Outreach, Operational Excellence, and Marketing & Communications. The plan is very close to completion and we intend to have a near-final draft available for final feedback in the Fall 2009. We are now poised to take action. I look forward to seeing our plan come alive in the next few years.