



Mechanical Engineering News

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Managing Editor
Nathan Cloud
Contributing Writer
Diane Kukich
Layout & Editing
Liz Dunkle

Career Celebration



Inside: Alumni Career Celebration • ACC Highlights • ACC Pictures • Event Feedback • Honors day

Cheers from the Chair



Dr. Thomas S. Buchanan

This has been a great year for Mechanical Engineering at the University of Delaware. Our students are doing well, our faculty have been growing both in number and reputation, and our outreach with alumni has been terrific.

Undergraduate enrollment in Mechanical Engineering has never been higher. We are pleased with the number and quality of students applying to our program and are revising the way we teach courses so we can accommodate the increased number of students interested in joining us.

Along with the increase in students comes the addition of new faculty. Last fall we added Jill Higginson and Xinyan Deng to our roster. Dr. Higginson received a BS from Cornell, an MS from Penn State, and a PhD in Mechanical Engineering from Stanford University. Her area of expertise is neuromusculoskeletal modeling and she focuses on recovery of walking after stroke. Dr. Deng received a BS from Tianjun University and a PhD from UC Berkeley. Her research is on biomimetic robotic insects that swim or fly. Such

tiny robots have great potential for exploring, inspecting, and surveillance, which is important for industry and defense work. Both of our new faculty members have been busy writing grant proposals and both have been successful in receiving competitive awards from the University of Delaware Research Foundation—a great start!

In September we look forward to having Liyun Wang join us. Dr. Wang is a biomedical engineer currently working in the Department of Orthopaedics at Mount Sinai School of Medicine. She is an expert on the flow of fluid in bones. This is important for understanding not just how bone receives nutrients, but also relates to how cancers are fed. We believe she will be a great addition to our growing biomedical engineering group.

We have also been working a lot with our alumni this year. As can be read throughout this issue, our Alumni Career Celebration was a tremendous success. We are thankful for the planners and speakers involved with this event and look forward to future opportunities to bring together our alumni and students.

In a time when many ME programs are struggling, it is great to be a part of a program that is thriving. By rebuilding our ties to the past, strengthening our present faculty, and growing our future students, we believe we have good reasons to be excited about the future of Mechanical Engineering at UD!

Thomas S. Buchanan Chair of Mechanical Engineering

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Editor's Notes

The Alumni Career Celebration Planning Committee were very gratified that the April 29th event – the culmination of the year long project – was, by all accounts, successful. Thanks to those of you who confirmed this in your feedback during the year and following 4/29. (see ppg 10).

We have been discussing and working at integrating this feedback to find the “center of mass”, and we plan to reconvene a planning team in August to develop the path forward. Please continue to let us know what you think about this activity and about “Alumni Relations” in general.

Nate Cloud '64, ME Alumni Relations Coordinator

Alumni Career Celebration

ME Holds Alumni Career Celebration

by Diane Kukich

On Friday, April 29, 2005, more than 150 UD-ME alumni, faculty, and students converged on the University's John M. Clayton Conference Center for the Department's first Alumni Career Celebration.

ning committee was convened consisting of Cloud; Deirdre Smith, Director of Development for the College of Engineering; Profs. Mike Greenberg, Suresh Advani, and Jack Vinson; and alumni Tom Frey, Dick Orth, Bill Wagamon, and Jim Hutchison.

They began by sending out a survey to alumni to gain insights into careers, the effect of the ME degree on career experiences, and significant challenges

Delaware Technical Park, alumni career presentations, dinner, and a keynote address by Prof. Jack Vinson.

The following provides highlights of the day and offers some "take-away" messages that emerged from not only the formal presentations but also the informal conversations during breaks and lunch.

ACC Schedule of events

- 10:00a.m. Campus Tours
- 12:00p.m. Registration and Lunch
- 1:00p.m. **History & State of the Department**-Tom Buchanan, *Chair of the Department of Mechanical Engineering*
- Research Highlights**
- Biomechanics**-Jill Higginson, *Assistant Professor*
 - Fuel Cells**-Ajay Prasad, *Associate Professor*
 - Flying Robots**-Sunil Agrawal, *Professor*
- 2:15p.m. **Networking and Interactive Demonstrations of Research, Technology and Undergraduate Activities**
- 3:15p.m. **Diverse Career Options at Delaware Technology Park**-J. Michael Bowman, *Chairman and President, Delaware Biotechnology Institute*
- 3:45p.m. **Alumni Career Presentations, and Panel Session**
- David Bach** '77, *Owner, Scientific Products & Systems, Inc.*
 - Alex Bourdon** '80, *Vice-President of North American Reagents and Consumables Manufacturing, Dade Behring*
 - Anthony Laganelli** '61, *Chief Scientist and Assistant Vice President for SAIC's Power and Information Systems Division*
 - Amy Lerner** '90, *Associate Professor, Vice Assistant Professor of Mechanical Engineering, University of Rochester*
 - Patrick Reynolds** '67, *President, PoolPak, Inc.*
 - John Thackrah** '79, *Vice-President & General Manager, Pratt & Whitney Aircraft*
- 6:00 p.m. Cocktail reception
- 7:00 p.m. Dinner and Distinguished Career Presentations

Keynote Speaker: Jack Vinson

That convergence of people had its roots in a conversation dating back almost a year, according to Nate Cloud, coordinator of alumni relations for the Department. "We realized that we have about 2700 active alums," he says, "and probably close to 300 of them are in high leadership positions as CEOs, owners, vice presidents, and directors. This is a significant number of people who have achieved success, and we wanted to hear their stories."

With the concept identified, a plan-

and achievements of ME alums. Over the course of the next several months, ten outstanding alumni were identified to be honored, and plans were made for the celebration.

The action-packed agenda included a tour of the Center for Composite Materials by Assistant Director Dirk Heider, lunch, an overview of the department by ME Chair Thomas Buchanan, research highlights by three faculty members, a poster session, a discussion of diverse career options at

Lunch and Philosophy

At one lunch table, an alumnus from 1973, Greg Greer, and his wife shared experiences with Prof. Dick Wilkins and junior Kristen Elli. Greer, whose 1973 degree was in psychology, returned to the University for a bachelor's in mechanical engineering (1981) after realizing that he would need a Ph.D. to succeed in psychology. "But I'm convinced that we're more likely to solve the world's psychological problems than its engineering problems," he quipped.

The group also discussed engineering ethics, the senior design experience, and the concept of a common first year for all engineering majors. In addition, they touched on right-brain/left brain differences and how the arts and humanities can be effectively integrated into the engineering curriculum.

Elli shared with the group how she had come to choose UD. "I'm from Syracuse," she said, "and I barely knew where Delaware was. When I was in high school, I got a brochure from UD, which I initially tossed aside. But I retrieved it when I decided I was interested in bioengineering and heard that UD's ME department had a good program in that area."

Now that she is finishing her third year at UD, Elli is facing the challenge of trying to integrate what she is learning in narrow areas in her individual classes into the bigger picture of being a practicing mechanical engineer. She attended the event in the hope that it might shed some light on that issue.

From Pencils to PDAs

In the first formal presentation of the day, Department Chair Buchanan delved into the past of ME at the University, showing pictures of football



players from the 1920s and a dorm room from 1904. But the dorm room was telling — while ukuleles and guitars have given way to computers and TVs, the room was remarkably similar to the dorm rooms of today, including the messy bed and the poster-covered walls.



Tom Buchanan

Buchanan went on to compare the curricula of 40 years ago and today. While students in 1965 had to take military science and Delaware history, Buchanan pointed out that the 1965 and 2005 curricula are otherwise remarkably similar. “Fluids, thermodynamics, solid mechanics — the core of what it means to



Images from Tom Buchanan’s talk from Pencils to PDAs illustrate the difference of then and now in the Mechanical Engineering Department.



be a mechanical engineer hasn’t changed much,” he said.

The current Chair then touched on several other pieces of ME history — the Department’s home in several buildings on campus and its growth from one faculty member in 1891 to more than 40, including adjunct positions, today.

He also mentioned that UD’s predecessor, Delaware College, had been ahead of its time in going coed in 1872 but reversed that policy in 1895. “There’s probably a really great story behind that,” joked Buchanan, “but I don’t know what it is.”

Research Highlights

Three ME faculty members provided overviews of major research programs underway in the Department, often citing statistics to provide motivation for the work they’re doing: Twenty million Americans suffer from osteoarthritis.

Every year 700,000 Americans experience strokes. There are 200 million cars in the United States, which translates into more cars than drivers. Two-thirds of the petroleum used in the U.S. is for transportation.

Jill Higginson, Assistant Professor,



Jill Higginson

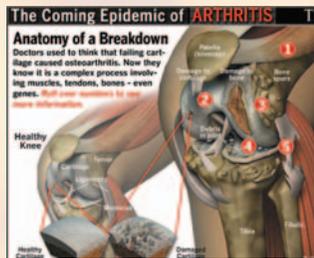


Illustration from Jill Higginson’s talk on biomechanics

discussed the ongoing biomechanics research, which she described as a type of reverse engineering. “We’re working backward from an existing system and



Ajay Prasad

trying to determine the forces acting on it,” she said. With nearly half of the faculty in the Department doing some work in the biomechanics area, research is underway in a number of areas, including sports injuries, stroke rehabilitation, prosthesis design, and respiration.

“We’re using experimental tools related to imaging and motion analysis, coupled with computational tools such



Image of a fuel cell

as modeling and simulation, to develop improved therapies for a range of disabilities,” Higginson said.

With 800 million cars on the world’s roads, fuel cell technology is assuming increasing importance. Prof. Ajay Prasad explained that a fuel cell is basically an electrochemical device that combines hydrogen and oxygen to produce electrical power, with heat and water as byproducts.

The voltage produced by individual cells is tiny, so they have to be used in a stack similar to a loaf of bread. Transportation uses include cars and busses, while stationary applications include devices like laptops, PDAs, and cell phones.

Fuel cell engines are quiet and produce zero emissions at the source, Prasad said, but they’re expensive because they currently use platinum. One of the efforts underway in UD-ME is to find a less expensive alternative for that material. Other current fuel cell projects in ME focus on durability and transport phenomena.

With homeland security on everyone’s mind, the work of Sunil Agrawal and his research team on flying robots has attracted national attention. The tiny unmanned vehicles, which mimic the mechanics of birds in flying and hovering, have applications



Prototype of flying robot



Sunil Agrawal

in reconnaissance, security, and surveillance.

Challenges being addressed by the research program include design for “correct” aerodynamics, maneuverability, and real-time sensing and control.

After starting several years ago with balsa-wood robots that crashed into the walls of Spencer Hall, Agrawal and his team have advanced to the point where their work has been featured on the Discovery Channel.

“We’re currently developing a facility for navigation and control within a



small physical environment," Agrawal said. "Mimicking what we see in nature is helping us in the design of new machines."

Matt Porter, a junior in ME, attended the event because he is very interested in research. "My favorite part of the event was the presentation on fuel cells," he said. "It provided me with a much enjoyed insight into the world of alternative power and made the entire event worthwhile and meaningful to me."

A Tale of One Company

Conversation topics at the break ran the gamut from patents and grad school to internships and careers. Jim Hutchison (1979), President of JAED Engineering, talked with students about opportunities at his company. Of JAED's 35 employees, five are UD-MEs: Hutchison himself, Brian Zigmund, David Spangler, Rebecca Durney, and Jason Parish.

"JAED is a consulting engineering/architecture firm and as such is organized with partners who own the business and associates who are recognized for outstanding work as being on track for partnership in the near future," Hutchison explains. "Dave is a partner in our firm, and Brian is an associate."

Hutchison has nothing but good to say about his four UD-ME colleagues, referring to "versatility," "great engineer," "management aptitude," and "top performers."

"They each bring the confidence and solid education that we have come to associate with UD-ME grads," he concludes. Always on the lookout for more of this talent, Hutchison and Zigmund chatted with several UD-ME juniors about career opportunities during the networking session.

A Tale of One Family

The Bourdon family takes mechanical engineering seriously — so much so that three generations attended the alumni event. Dick (1969), Alex (1980), and Brian (2007) were joined by Alex's wife Diane and their daughter Lauren, a high school junior. Not in attendance was Alex's brother Richard, a year older but also in the ME class of 1980.

Dick worked for more than 30 years at Thiokol (now ATK), helping design, build and test rocket motors. His wife Ruth also worked there as an adminis-



trative assistant.

Alex, who is Vice President for Global

Manufacturing at Dade Behring, was being honored as one of ten Outstanding Alumni at the event. "Ever since I was a kid, I've loved making things, so I knew ME was the right field for me."

Brian chose both the field of mechanical engineering and UD as the place to study it without any influence from his father, uncle, or grandfather. "I looked at other schools," he said, "and I quickly identified UD as the best."

But UD-ME shouldn't look to his sister Lauren to continue the family tradition. She's more interested in subjects like English, psychology, and history, and says she'll probably choose a career that involves working with people.

Posters, Posters, and More Posters

More than 20 posters were set up in the lobby of Clayton Hall, with students and research staff available during breaks to answer questions and explain their work. Alumni from four and five



decades ago had the opportunity to learn more about UD-ME's twenty-first century research in topics ranging from fuel cells and orthopedic implants to coating systems and nutrient transport in cartilage.

With a large presence from the Center for Composite Materials, many of the posters addressed ongoing research in advanced materials, and the Center's annual poster book, featuring information on more than 100 projects, was

available for participants to take home.

Words of Wisdom from Alumni and Friends

Mike Bowman, Chairman and President of Delaware Technology Park, explained that the Park's role is to connect engineering in academia with engineering in industry and thereby foster the translation of ideas into the marketplace.

"You can have a great idea," he said, "but if you can't move out the incumbent, then it won't work. Innovation is our great hope, and engineering plays a large part in that."

Bowman pointed to UD-ME alum Mark Hopkins (80BME) as an example of a success story in bringing an idea to market. Inventor of an innovative bicycle wheel that was eventually used by Lance Armstrong, Hopkins did everything right in developing the idea, patenting it, scaling it, and finding a company to market it effectively.

"Entrepreneurship is risky," Bowman said. "Entrepreneurs have a passion for their idea, and what they do is way more important to them than how much money they'll make. They trust deeply in their idea, and they use their energy to overcome enormous obstacles."

Bowman spoke about the importance of alliances. "Tech parks foster leveraging and mitigate duplication of effort. Being near a university is a big deal in terms of intellectual property, students, facilities and equipment."

"We have to think like Leonardo da Vinci," he continued, "and focus on the whole system, not just the parts. The business aspect is very different from the engineering part — it's messy, emotional, and nonlinear. If you want to be an entrepreneur, you have to seek enjoyment at every step and always be ready for an unexpected change in direction."

Bowman's talk was followed by career presentations from six of the outstanding alumni being honored at the event: David Bach (1977), Alex Bourdon (1980), Anthony Laganelli (1961), Amy Lerner (1990), Patrick Reynolds (1967), and John Thackrah (1979).

Although they allegedly didn't collaborate with Bowman in preparing their presentations, many of their messages were uncannily similar to those offered by Bowman — and each other:

"Never stop learning," said Bourdon.



"Continue your education," said Bach.

"Do the right thing sooner rather than later," said Bourdon.

"Ethics are the key to success," said Bach.

"It's a really small world, so speak carefully," said Bourdon.

"Write your rejection letter very carefully – it's a small world," said Bach.

And, echoing Bowman's comment about entrepreneurs, Bourdon said, "People can live with almost anything as long as they have a good reason why. Go where you're loved and do what you love."

As Reynolds pointed out in a follow-up letter about the event, "I found it interesting that a common theme that ran through almost all the alumni speakers was the need to acquire business and management credentials after graduating. Of the six speakers, five of us charted courses into the business area after graduating."

Junior Janelle Konchar enjoyed hearing about the actual careers of ME grads. "We get lots of opportunities to attend academic lectures within the Department," she said. "But it's not that often that we get to hear about what people in industry are doing. There are so many types of jobs out there. I think everyone wants an opportunity to be creative, and it's great to know that there are lots of ways to do that."

Having the Last Word

It was fitting that the keynote speech, following dinner and completing the day, was delivered by Jack R. Vinson, H. Fletcher Brown Professor of Mechanical Engineering.

Now a vibrant 75 years old, Vinson has been with the University since 1964, and he brought more than 40 years'

worth of reminiscences and recollections to the celebration. He plans to retire in June, but, in typical Vinson style, he plans to keep doing all of the things he's currently doing because he is a man who will let nothing slow him down.



Jack Vinson

For the past four decades, Vinson has been a dedicated teacher, a prominent researcher in structural mechanics and composite materials, an author or co-author of seven popular textbooks, a highly active contributor to several professional societies, and an inspiring mentor to graduate and undergraduate students.

His anecdotes included a story about Kenneth Rowe (1958), who wrote *A MiG-15 to Freedom: Memoir of the Wartime North Korean Defector Who First Delivered the Secret Fighter Jet to the Americans* in 1953.

"I really enjoyed Prof. Vinson's talks," said junior Ross Rozansky. "It was interesting for us to hear about how he started CCM and how the University has changed over the 40 years that he's been here."

With one the primary objectives of the event being to increase students' awareness of the variety of career options available to them, the planning committee would have liked to see higher student participation. However, those students that did attend felt the time was well spent. They also had some suggestions for future such events, including

making attendance mandatory for upperclassmen, with classes canceled for the day, and dedicating a brief session to one-on-one discussions between alumni and students about career opportunities.

"I think the event was a tremendous success," said ME Department Chair Tom Buchanan. "Nate Cloud, Deirdre Smith, and many faculty, staff, and alumni spent a lot of time making things work incredibly smoothly. I am very pleased we were able to bring together so many alums and hear their inspiring stories. I sensed that many had not been back for a long time and it was pleasant to participate in a joyous gathering of long-lost friends. A good time was had by all!"

To make the event even better in the future, feedback was requested through a survey sent to participants. The comments were overwhelmingly positive, according to Cloud, including such accolades as "well-organized," "entertaining," and "informative."

Many suggestions were also made for additions and improvements. While all ideas will be considered in planning future career celebrations, particular attention will be paid to increasing student participation and improving connections with female alumni. The tour of the Center for Composite Materials was very well received, and some attendees suggested tours of the campus and other engineering facilities.

Reynolds summed up the reactions of many when he wrote, "I want to thank you and your army of volunteers who organized and produced the very successful University of Delaware Mechanical Engineering Alumni Career Celebration. I was very impressed with the attention to detail for every aspect of the event."

Abstracts of Presentations by Distinguished Career Alumni

David Bach— Graduation from the University is the start of the career process where technical individuals build upon their academic studies through industrial experience and further



college studies. An intrapreneur builds technical credibility within an organization by applying fundamental engineering skills and learned experience. These individuals often become the technical engines and innovators within an organization. Many individuals complete their careers attaining this level of achievement, but others will take the step of becoming entrepreneurs, where firms are completely developed outside a corporation or large organization structure. This presentation suggested several rules on intrapreneuring and discuss technical achievements along the path from graduation to intrapreneur or entrepreneur.

Alex Bourdon— BSME 80, is Vice President Global Manufacturing for



Dade Behring, the world's largest company focused solely on clinical diagnostics. He shared his background, career choices, lessons learned, and a relevant war story in the business arena, connecting some key decisions back to his educational foundation from the U of D.

Anthony Laganelli—Since completing his PhD in Applied Science 40 years ago, he has worked with talented people in two corporations—General Electric and SAIC International.

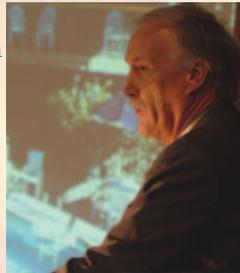
The projects he worked on were always on the cutting edge and presented engineering and logistic challenges. These included re-entry environments, alternative sources of energy, nuclear energy/weapon systems, information technology, and homeland security before 9/11. His discussion will also address ethics in business and personal financial management.

Amy Lerner—Career paths can follow such unusual routes that it is sometimes challenging to identify the underlying theme. In Lerner's case, this



theme involves design of and for the human body. After a beginning designing space suits, she became more interested in the "design" of the anatomical structures within the body. In her research, she considers the design of the knee joint, an elegant but complicated structure which functions beautifully—most of the time. She investigates some of the knee injuries that lead to problems during growth or aging. As she provided students with experiences in medical device design, she encouraged them to keep their eyes and minds open for whatever unexpected opportunities may come along in their careers.

Patrick J. Reynolds—Despite having what he thought was "all the right stuff" for starting a business—the right product, the right people, enough venture capital, engineering talent, sufficient marketing experience, hands-on operations and financial management experience, and family support—Reynolds experienced a "free fall" as



soon as the corporate documents were signed and he was "President Reynolds." He quickly realized that he not as prepared for what was ahead than he had thought. A lot of hard work and an equal amount of family support and luck combined to produce a successful new business. Today his company has the largest market share for its products in North America. They have over 70 employees and are expanding products into new markets. The future looks positive. The past contains a lot of survival lessons, which he shared in this talk.

John Thackrah described his career in three major phases: the formative years, the development years, and the executive years. These three phases of his career were separated by two significant events, and they had an unanticipated impact on his life and career. The message was one of commitment and results, opportunity and fulfillment.



Distinguished Career Alums Receive Citation Plaques



The ten alumni who were selected as distinguished representatives of all of the careers of our alumni around the word, Class of 2005, were invited to speak at the 4/29 Celebration, and to receive a citation plaque commemorating their selection. (See ME News issue: Winter 2005, ppg 12 - 16). Honorees are listed below.

Bach, Bourdon, Laganelli, Lerner, Reynolds, and Thackrah attended the ACC to speak and receive their awards from Department Chair Tom Buchanan at a ceremony after Dinner.

Popovich, McCoy, and Kohloss were unable to attend and received their awards by mail. Pezza was to receive his at a regularly scheduled ceremony at the Philadelphia Navy Yard over the summer.

Dave Bach, President & CEO of Scientific Products & Systems, Inc., University of Maryland Baltimore Campus (UMBC) Technology Center

Alex Bourdon, manager of global manufacturing operations, Dade Behring

Frederick H. Kohloss, retired consulting engineer

Anthony L. Laganelli, Chief Scientist and Assistant Vice President, Propulsion and Information Technology Division, Space and Defense Group, Science Applications International Corporation

Amy Lerner, Associate Professor, Department of

Biomedical Engineering, University of Rochester

Donald R. McCoy, Deputy Associate Director for Weapons Physics, Los Alamos National Laboratory

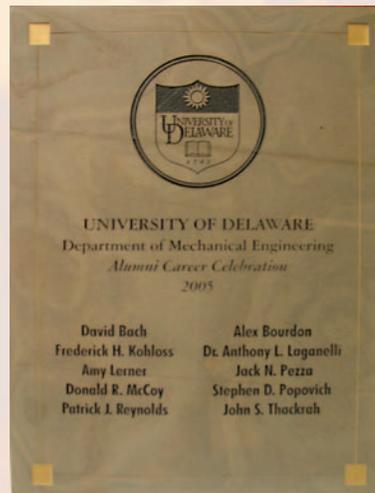
Jack N. Pezza, Mechanical Engineer, Shock Qualification Program, Naval Surface Warfare Center—Carderock Division (NSWCCD)

Stephen D. Popovich, retired, General Electric

Patrick J. Reynolds, co-founder, President, and CEO, PoolPak Technologies Corporation

John Thackrah, Vice President and General Manager of Operations, Pratt & Whitney

A similar wood and marble plaque was created with all the honorees names. This will be displayed in Spencer Lab.



**Alumni
Celebrate
April 29**



Career Exposition September 9, 2005



Event Feedback

We requested feedback from attendees on the 4/29 Alumni Career Celebration event. Questions posed to Alumni are bolded below and responses are listed under each question.

The responses were very kind; thoughtful; and very much appreciated by the planning team. All comments and ideas will be taken into consideration in future planning.

1) What comments do you have on the event organization and format including facilities and agenda?

- ◆ It is helpful enlisting the help of an individual per company to help recruit alumni within that specific firm
- ◆ Really enjoyed the networking opportunity, would personally have liked to help more interaction with the alumni)
- ◆ It is particularly important and can be helpful for the students to see the range of possibilities. May want to get better diversity of alumni that not only took a business direction, but remained in an ME functional role.
- ◆ Facilities were appropriate and well managed.
- ◆ Could have used a little more time for the technology displays. Given the quantity of displays, it would have been good for the presenters to know and articulate quickly what the main 1 or 2 interest points were for their topics (i.e. "my project helps joint replacement last longer".)
- ◆ Panel session was enjoyable for the speakers, and good questions were asked, but time was limited. Too few students to matter.
- ◆ Reception/Dinner was Well done. Jack Vinson is as excellent today as he was 25 years ago.
- ◆ Really, I thought the Event was well thought out and executed.

2) What suggestions do you have for improving a future event of this type? Timing; Format; Frequency; etc.

- ◆ More opportunity for mingling with students
- ◆ Not too often—every year seems too much, perhaps every 3-5 yrs
- ◆ Showcase some of the design projects - talk more about current STUDENT achievements, not just faculty achievements/research. Perhaps even have one of the students/grad students speak???
- ◆ The program was clearly too long for most busy professionals to attend the entire event.

◆ This was good—dinner, or luncheon, or even a Saturday outing would be fine.

◆ Frequency: I would love twice a year, but I know cost might be too much get-togethers—on campus have always been nice - I also went to the dinner for Dr. Vinson, so this year has been nice for me, and I still feel part of the University because of these functions.

◆ Timing-OK; Format-OK

◆ Frequency- Yearly

◆ The planning and preparations made a big difference.

◆ Timing and format were fine. I don't have a firm opinion on frequency.

◆ The poster session layout was difficult to navigate. It would have been more interesting with "props" like a model of the flying robot or some other hardware. We're all ME's, we like to touch, poke and see how things work.

◆ I think Friday afternoons/evening can be difficult and may impact attendance. Once per year, would be good timing. I do like combining the opportunity with meeting students.

3) What ideas do you have of a more general nature for achieving the purpose (below) that was established for this project in summer of 2004?

◆ To celebrate the careers of the university's mechanical engineering graduates;

◆ To facilitate the building of stronger relationships between our mechanical engineering alumni, the university's mechanical engineering department, and current mechanical engineering students; and

◆ To increase our mechanical engineering students' awareness of the variety of career options available to them, as well as their role as future alumni;

◆ Construction of a member-accessible database organized by geography and profession - members listed therein would volunteer to consult with one another and the students regarding their areas of expertise and business.

◆ Exposure to engineers with more varied careers by students

◆ Lacked importance of communication skills for engineers

◆ Recognition of older faculty- pre 1965- There's some of us older alumni around.

◆ My suggestion relates to Student Engineer and Young Professional participation.:

Separate from the Distinguished Graduates (the speakers were outstanding!!!), I would add just one or two speakers for a young engineer category. I think it would be good to hear from

young engineers with interesting stories and notable progress/accomplishments.

2 to 4 years recent grads BS or MS

7 to 10 years (or a Post Doc) with notable accomplishments

◆ Maybe this would help promote greater participation from younger students and graduates.

◆ Biggest improvement: Have more students attend. It seemed clear that each of the speakers designed their talks for the students, and the students have the greatest potential to benefit from the event.

◆ I think an Alumni email directory will help bring in more alumni. I would contact friends I've lost touch with and encourage them to attend.

◆ You've made a great start at getting the alums together with each other and students. This was a commendable beginning. I enjoyed talking to the student at our table. I hope every table was lucky enough to have one or two students. I don't know what kind of ties the students have to the professional chapter of ASME. I'm a member but have only done one or two events over the years. Some of them look quite interesting, particularly the plant tours.

◆ Could this be combined with corporations setting up job fairs to provide information to students regarding specific companies/opportunities

4) Please share any other thoughts not covered by the above.

◆ I had a wonderful time. It appears that you need to better connect with the women alumni. Have you tried to compare your responses to known numbers of women in each class? Even 15 yrs ago when I graduated, there were quite a few women in the class. I don't know why they would have chosen not to attend - perhaps they haven't stayed in engineering as much as you'd like, but as was pointed out, MANY of the male alums have gone more towards business careers.

◆ Overall, surprisingly well organized and entertaining. I'm looking forward to the 2006 event.

◆ I would just like to add that this has been very helpful for me - I am a female engineer, and a mother, so I have chosen part time work (not very technical work - database management) at this time to be able to actually be home some of the time, and so it has been a nice opportunity to get out and network. Also, some of us are involved in the Engineering Department's mentoring program for female engineers, and this has helped to re-enforce this. I did not think to talk to my student about the dinner, but did



get to network with other female engineers in this program, and it helped reinforce that effort. Perhaps the next program you put on could be advertised within this mentoring program for the mechanical engineers. (We mentor across all engineering disciplines.) Thanks!

◆ Overall it was a very interesting and informative day. A complete campus tour would be interesting. Also a tour of engineering facilities. Really enjoyed the tour of the Composites Facility.

◆ I thoroughly enjoyed the Career Celebration! Thank you for all you did to organize it!

◆ As you could imagine, it was a once-in-a-lifetime opportunity for me, my Dad and my son to celebrate our engineering-ness together, and, of course,

talking about my company and career are always pleasurable for me.

◆ Great start! Thanks to all the team who put the event together. I had a wonderful time and would come again. The class "agents" would have been good to have in place to get their classmates out to an event. I saw two of my classmates at the event. We had dinner, and had a great time together talking over old times and catching up on professors and friends.

Undergraduates feedback

1. Get more undergrads there!

a. Market a lot harder to undergrads. Make them sign up in class.

b. Get Honors Juniors & Seniors involved in the planning! Or Student

Advisory Board.

c. Display undergrad research posters to give alums reasons to talk to undergrads.

d. Display Sr Design Posters to give seniors a reason to be there, and to show the alums what we are doing in Sr Design.

e. Modify the name to include undergrads, i.e. "Career Success Secrets for ME Students"

2. Consider repeating it with only a slice of classes, i.e., 1, 10, 15, 20, etc. years ago (Same people will probably not come every year.)

3. More breaks to encourage mingling.

It was a great initial experiment!

Get involved in the College of Engineering

Deirdre Smith

The Blue Hen spirit is alive and well in the Department of Mechanical Engineering, a point clearly displayed at the Alumni Career Celebration event. If you missed this opportunity to hook up with your fellow engineering alumni, you don't have to wait for the next event to get involved. Now is a great time, and there are many ways...

Attend the College of Engineering Homecoming Luncheon on Friday October 7, 2005 from 12:00 to 2:00 at the University's Blue & Gold Club. All engineering alumni and their guests are invited.

Check out the Engineering Alumni Association's website, and get involved with as a board member, join the planning or scholarship committee, or simply attend an outing. Upcoming events include a golf outing on August 22, 2005 and a wine dinner at the Blue & Gold Club in October 2005. All proceeds from these events are used to fund the Engineering Alumni Association Scholarship Fund.

If you are not already receiving the College of Engineering's quarterly electronic newsletter, sign up now, and stay up to date on alumni, student and faculty news, as well as upcoming University and College events.

Join the Women in Engineering mentoring program and share your guidance, experience, and most importantly, your encouragement, with our mechan-

ical engineering students.

Have your company sponsor a senior design project - a culminating educational experience for our undergraduate mechanical engineering students.

Join the over 400 mechanical engineering alumni who provide valuable financial support to the University of Delaware each year. You can designate your support to the Department of Mechanical Engineering or any of its programs.

For more information on any of these ways to get involved, visit the College of Engineering alumni website at www.engr.udel.edu/alumni/index.html or call Deirdre Smith at (302) 831-8694.

Honors Day — Mechanical Engineering Award Recipients May 6, 2005

Senior Year Awards

W. Francis Lindell Mechanical Engineering Award to the Distinguished Senior

*Christine M. Tate
Michael D.M. Kutzer
Scott E. Kasprzak*

Mary and George Nowinski Award for Excellence in Undergraduate Research

Justin W. Caulfield

Junior Year Awards

W. Francis Lindell Mechanical Engineering Award to the Distinguished Junior

*Douglas A. Brunner
Kristem M. Elli*

W. Francis Lindell Mechanical Engineering Achievement Award

*Janelle A. Konchar
Erik A. Pearson*

Sophomore Year Awards

W.J. Renton Award for Outstanding Sophomore

Hadi M. Fattah

Other Department Awards

Delaware Section of The American Society of Mechanical Engineers Outstanding Student

Michael A. Fuqua

American Society of Mechanical Engineers Student Section

John R. Eisenbrey

Robert T. Bosworth Scholarship

Christopher T. Sherman

Redden Scholarship

*Douglas E. Erickson
Jessica A. Dibelka
Christopher M. Gordon*

Helwig Graduate Fellowship

*Justin B. Alms
Thomas N. Shipman*



ALUMNI FEEDBACK - What's New With You?

Do you have any feedback (comments, questions)? Or let us know any current events or info not covered by the data sheet below.

INFORMATION FORM FOR THE DEPARTMENT'S RECORDS

Name _____
First _____ Middle _____ Last _____ Maiden _____

Delaware Degree BME Date _____ MME Date _____ Ph.D. Date _____

Spouse's Name _____ DE Alum? _____

Mailing Address _____

Home Phone _____ E-mail _____

Company _____ Your Position _____

Mailing Address _____

Business Phone _____ Fax _____

E-mail _____ Web Address _____

Please identify if your company is an affiliate or subsidiary of a larger company _____

Return this form to: Nate Cloud, 126 Spencer Lab, University of Delaware, Newark DE 19716 and/or contact me anytime at cloud@me.udel.edu or 302-778-4567



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Department of Mechanical Engineering
University of Delaware
Newark, DE 19716-3140

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