Here is another outstanding issue of the Newsletter which highlights the accomplishments of our students, faculty, staff and alumni. Our appreciation goes to LaRoux Gillespie, Advisory Board member and Newsletter Editor, as well as Amanda Johnson and Shelby Stice for their hard work in assembling this latest celebration of the Department and its people. We’ve had such a great past few months as you’ll see in the following pages.

However, we’ve also lost two of our own. Professor Bill Barr and Advisory Board member Larry Hole are no longer with us, and we mourn their loss. Professor Barr was on the faculty from 1962 to 1992 and died on March 20, 2006 at the age of 82. Please see www2.ljworld.com/obits/2006/mar/22/bill_barr/ for more information on his passing. Larry Hole initiated Boeing senior design projects with the Department and had served on the Advisory Board for about a year when he died on January 2, 2006 at the age of 48. Please see www.legacy.com/Kansas/deathnotices.asp, and search for “Hole”, for more information on his passing. We will miss both of these individuals, but we take heart in the impact they had on KU-ME, and will continue to build on the solid foundation which they’ve left us.

Please don’t forget the Spring Banquet on April 28, 2006. We will honor our students, faculty, staff and alumni at that time. In particular, we’ll be recognizing two distinguished alumni, George Forman and Harry Gibson. Please see the articles on pages 2 and 3 which describe their exemplary lives and achievements. Check Page 9 for information on the Banquet and reservation details.

We look forward to seeing you there!

Molly McVey Wins Self Fellowship

The Self Graduate Fellowship supports outstanding doctoral students in the biological and physical sciences, business, economics, applied mathematics, and engineering at the University of Kansas. The Self Graduate Fellowship provides each fellow a four-year award, including a generous stipend, educational allowances, and a development program. The Fellow Development Program provides general education and training in communication, management, and leadership to assist the fellows in preparation for future leadership roles. The ideal candidate possesses unusual motivation, passion, and potential to make significant contributions to his/her profession and to society. The applicant must also possess a strong academic record, leadership, communication, and decision-making skills. Molly McVey has these characteristics, and joins three other ME Self Fellows: Bryce Baker, Chad Clary, and Joe Soltys.

Molly graduated with her bachelor’s degree from KUME in 2003, and returned to begin her MS in January 2005. Her research advisor is Dr. Carl Luchies, and their research is taking place in the Human Performance Laboratory at the Landon Center on Aging at KUMC. Molly is currently studying balance in Parkinson’s disease and how that relates to the increased risk of falls seen in those with PD, since the effects of a fall can drastically reduce quality of life. The long-term goal is to develop a clinical tool that can be used to identify those with increased fall risk. In the future, Molly hopes to lead a multidisciplinary research team with a goal of investigating neurological diseases to gain knowledge, develop more effective treatments, and design new medical devices to improve the care for people living with these diseases.

The Self Fellow Development Program will enrich Molly’s education and prepare her for the future by providing general education and training in communication, management, and leadership. She will learn from leaders in fields other than her Ph.D. program such as economics, public policy, negotiation, teamwork, and decision making. Molly is a 2003 KUME graduate and her husband Scott graduated from KUME in 2000. Outside of school, Molly is involved in the community fitness program “Red Dog’s Dog Days,” and enjoys competing in triathlons and distance running events.

Congratulations Molly!
George W. Forman: Mechanical Engineering 2006 Distinguished Alumnus
By: LaRoux Gillespie

George Forman started his college education at the Junior College in Kansas City. He also attended the University of Alabama and graduated from the University of Illinois. He received his MSME from KU in 1957. He taught in Hartford, Connecticut and at Kansas City Junior College.

Mr. Forman worked for Hamilton Standard under orders from the Navy. After the war, he was the Mechanical Engineering Manager for the Marley Company in Kansas City, and then he went on to do research with Butler Manufacturing. For several summers, he worked for Bendix, Sandia National Labs, Sandia Livermore and at Lawrence Livermore National Labs. The nature of all the work he did was nuclear weapons. He was involved with the design of governors and propellers for turbine engines and the questions of stability.

Mr. Forman was working for Hamilton Standard the night of December 7, 1941, when somebody came in and said that the Japanese had bombed Pearl Harbor. Shortly after that he went into the Navy. There were 14 engineers like himself in the United Aircraft Corporation.

Mr. Forman spent many hours working on the B29. He notes, “We lost more B29’s in the South Pacific from fire in the blower section of the right 3350 engine than we did from enemy action. The housing would catch on fire and take the wing. We had trouble with the transfer fan in the engine nose. It would get cold and shrink away and you couldn’t feather the propeller. There was no way to shut it down. I spent quite a few days and nights worrying over this.”

His first job in Connecticut, along with 14 young men with engineering degrees, involved filling in as laborers in the factories when someone called in sick. “I personally operated at least one of every type of production machine that Hamilton Standard and Pratt & Whitney owned at the time,” he noted. “Everything from automatic screw machines to lowly Bullards. I was purposefully taught a great deal about the production capability of my employer before I was assigned design duties.”

The Marley Co. hired Mr. Foreman after WWII. He had experience in the design of aircraft propellers and propeller blades. Cooling tower fans are very similar to aircraft propellers. The design premises are similar. If you look out the window of most tall buildings any place in the world, you can probably see a cooling tower fan that he designed.

Mr. Forman came to KU in 1955. In 30 years of teaching at KU, he had about 3500 students. That is 3500 students he taught, tested, graded, and influenced. His tenure covers the years 1955-1986. Mr. Foreman was a 1967 Gould Award winner, which was the Outstanding Teacher Award, and he was the first recipient of this prestigious award from KU.

His list of professional and social associations is lengthy. In fact, a one-inch thick notebook is required to hold the certificates attesting to each participation. They include membership in ASME, SAE, Tau Beta Pi, Pi Tau Sigma, and national leadership in Sigma Tau. He was personally responsible for the merger of Sigma Tau with Tau Beta Pi. He was a Registered Professional Engineer in Missouri 50 years ago.

David Kruse, a 1966 ME graduate, notes the distinguishing factor that almost every one of Professor Forman’s students identify about him. They say that Professor Forman was a major influence on almost all graduates in his time. “He is the one person I remember from KU. Every time I talked with Professor Forman, he had real life examples of what he was doing in Mechanical Engineering and that’s what kept me interested. That’s the only place I really saw what a Mechanical Engineer actually does. He brought in all of these examples. He brought the information to life.”

He taught design-oriented classes like strength of materials, machine design and senior design projects. He also taught Thermodynamics and heating and air conditioning machinery, but his primary interest was in machine design and mathematics. He co-taught Math 250 when it was Laplace transforms. His first investigation task as a technical expert in conjunction with legal matters involved the failure of a twin tandem horizontal compressor engine in southwest Kansas. As a result of that kind of activity, he was involved with around 1400 clients all over the world.

George W. Forman is obviously an alumnus who has had a great impact upon the lives of thousands of engineers, providing practical solutions for industry. He is also a role model for mechanical engineering educators. He is clearly a distinguished alumnus.
Harry T. Gibson: Mechanical Engineering 2006 Distinguished Alumnus
By: LaRoux Gillespie

Harry Gibson is a retired Exxon Corporation executive now living in Lawrence, Kansas. Prior to his retirement from Exxon, he was responsible for managing engineering, computing, and planning support for Exxon’s U.S. Refining business, which, at the time, was the second largest in the United States. In this position, he also provided oversight for Refining’s capital budget ($200-$500 million/year) and was responsible for personnel development for Exxon’s Refining technical and management personnel (500+). Other positions held during his 34-year career with Exxon include: Environmental Manager for Exxon Company, USA, Strategic Planning Coordinator for Exxon Company USA’s Supply, Refining, and Marketing business segments, and numerous other management, technical and operations assignments with Exxon’s domestic refining operations. During his career, he was an active member of the American Petroleum Institute, serving as a member and chair of various committees involved with industry safety, health and environmental legislative and regulatory issues.

A native of Kansas City, Kansas, Mr. Gibson graduated from The University of Kansas with a BS degree in Mechanical Engineering with Distinction and an MBA. He received academic and athletic scholarships to attend KU, where he was a three-year varsity basketball letterman, serving as Co-captain in 1963/64. He played from 1962-1964, wearing jersey #42, which was also worn by Jeff Graves in 2003. He is a member of Tau Beta Pi, Pi Tau Sigma, Sigma Tau, Omicron Delta Kappa and Beta Gamma Sigma honor societies. Currently, Harry is a member of the Board of Advisors of The University of Kansas School of Engineering and a member of the Advisory Board for KU’s Center for Environmental Education and Research.

Harry began working for Exxon as a summer employee while working on his Master’s degree at Kansas. His professional career with Exxon began at the Baton Rouge Refinery in Louisiana in 1966 after graduation. While in Baton Rouge, he worked in various technical, operating and supervisory assignments.

Mr. Gibson was transferred to Exxon’s refinery headquarters in Houston, Texas where he developed business plans and strategies for Fuel Products in the Supply Department.

Moving west, Harry spent a part of his career at the Benicia Refinery in California heading the technical and administrative support departments for the refinery, while managing operations procedures. Harry returned to Houston’s headquarters to work in the downstream area of strategic planning of company policies. During his stretch in Houston, Harry worked in the environmental department analyzing and planning company procedures.

Harry worked as the technical manager of all Exxon Refineries in the United States; designing and completing capital projects and investments, working with all operating and technical managers and guiding engineers in the development of their careers. Over 21 years he had various technical, planning, and operations staff and management assignments at the Baton Rouge Refinery, Houston Headquarters, and the Benicia, California Refinery.

During 1988-1992, he worked in the environmental area for Exxon in Houston. In 1992, he was assigned as Environmental Coordinator for the Exxon Company, USA. Responsibilities included coordination of Exxon’s company-wide environmental programs, development of company positions on emerging environmental legislative and regulatory issues, and interfacing with trade groups, Congress, Congressional staff, and government agencies to communicate Exxon’s position.

Throughout Mr. Gibson’s career, he has been a leader in his communities: from little league, President of the Kiwanis, and Junior Achievement to numerous community committees. Harry’s wife, Becky Goodbar Gibson, graduated from Kansas University in Elementary Education (1964). Harry and Becky have two children, Lisa and Mike, and two grandchildren. They are also proud citizens of Lawrence.

As can be seen, Harry is an exemplary role model for our students, demonstrating the tremendous breadth of activities and accomplishments which lie ahead for KU Mechanical Engineering graduates. Thank you, Harry, for the legacy that you’ve provided for our students!
The 2006 Engineering Expo, held on February 24-25, was a huge success again this year. A large number of junior high and high school students from the surrounding areas came to find out what engineering is all about. KUME students spent a lot of time and effort setting up displays to show the visitors various aspects of Mechanical Engineering. These displays ranged from heat transfer to automobiles to biomechanics.

Left: The Formula SAE Cars, left to right: 2001, 2003, 2004 are displayed in the courtyard between Learned Hall and Eaton Hall.

Right: ASME members prepare the trebuchet to launch t-shirts during Expo on the lawn in front of Learned Hall.

Left: Master’s student Farhana Lamis attaches a volunteer to the Human Motion Analysis Machine.

Right: Formula Team captain Logan Johnson demonstrates last year’s car.
I have been inspired to tell my story by Mr. Ken’s Razak’s speech, as published in the September 25, 2005 Issue of ME Vibrations.

Chancellor Lindley helped me to be admitted to KU in the fall of 1940 when I had only completed eleventh grade in a high school in Peking (now Beijing) that KU had never heard of. His help was crucial at the time because war in the Pacific appeared imminent, and waiting one year until I graduated in 1941 would probably mean that I couldn’t make it to the U.S. and had to choose between the options of studying at Japanese controlled universities in Peking (Peking was then under Japanese occupation) or taking the long dangerous trek into the war-ravaged interior of China for college education.

The occasion that brought about the meeting of the Chancellor with my father was by pure coincidence. In 1940 the Chancellor was on a world tour gathering material for his forthcoming book. Before he reached Peking, he had developed a nose ailment that required regular treatment at the Peking Union Medical College Hospital (PUMC, endowed by Rockefeller). All the facilities were up to U.S. standards. My father was on the ENT staff of PUMC, but was not Chancellor Lindley’s attending physician. One morning the Chancellor’s attending physician asked my father to pinch hit for him because he had to tend to other matters. That set up the occasion for the two men to meet, and their conversation drifted to the problems I was confronting. The Chancellor informed my father that KU accepted high school graduates with 16 credits, with at least three in English, and that although scholarships were not available, tuition and living expenses were lower than in the East. I discovered that I met the credit requirements. The remaining problem was that I had not yet graduated. Nevertheless, I started the application procedures in motion.

A few days later the Chancellor summoned me to his hotel room (his ailment did not require hospitalization at that time.) We talked for about a half an hour. I guess he liked what he heard and saw and most probably recommended to the university to give me an opportunity to prove myself in spite of my lack of a high school diploma.

After I reached the campus, my patron saint was still active (using Mr. Razak’s words). Room and board in an ordinary boarding house was $35 a month. I was worried that my financial resources wouldn’t last until graduation. Again, I guess that Chancellor Lindley’s recommendation played a part in my being admitted to a scholarship hall, where we paid $18 a month and did about an hour’s work each day. In the summer of 1941, when I was working with a pile driving inspection team in Dubnque, Iowa, I received a refund check for $36. So my room and board for my first year (9 months) cost me about $130. Together with out-of-state tuition of $150, the total was $280. This enabled me to stretch my resources.

A sad note I must add here is that Chancellor Lindley’s condition worsened when he was on board the ship returning home and he died at sea. I sure wish he could have seen me make it through KU. I graduated from Mechanical Engineering in 1944.

I am also certain that he feels happy that the boy he assisted became in later years a recipient of the DESA and the Mechanical Engineering Distinguished Alumni Award. All of this hinged on one thing: my father’s colleague having something to tend to and asking him to take care of Chancellor Lindley that morning. Had this not happened, the course of my life would have been entirely different.

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In future newsletters, we will continue to run favorite memories of alumni. Please send us memories from your time in Mechanical Engineering at KU! This can be anything from a favorite class or instructor to a memorable experience that you would like to share with others. We look forward to hearing from you!
Dr. Bedru Yimer
Wins Kipp Teaching Award

In 2005, Robert A. Kipp, a KU 1952 graduate of Civil Engineering, currently employed at Halmark in Kansas City, set up the Harold L. Kipp Outstanding Teaching Award in Mechanical Engineering. He did this to honor his father, Professor Harold Kipp, who taught in Mechanical Engineering from 1948 to 1973, and to recognize ME faculty like his father who are wholly committed to their students’ academic well being. (Please refer to page 7 for a related article by Bob Kipp.) In keeping with Professor Kipp’s sincere dedication to his students, we are proud to recognize Dr. Bedru Yimer as our 2005 Kipp Teaching Awardee.

The following is a quote from the Kipp Award Committee which selected Dr. Yimer. “The committee found that Dr. Yimer is considered an excellent teacher and educator by the faculty, the undergraduate students, the graduate students, and the alumni. His outstanding student evaluations, his efforts to improve his teaching skills, and his support of graduate students as the Graduate Director of the department all demonstrate his attention to teaching and his care for the students.”

Rock Chalk Ball 2006

Every year in February, KU supporters assemble at the Rock Chalk Ball. Through silent auctions, “noisy” auctions and outright gifts, these supporters provide Rock Chalk Ball scholarship funds for high-achieving National Merit scholars at KU. This year, the theme was “The Stars Come Out at Night.” During the 10 year period since the Ball was initiated, over $1 million has been raised for scholarships. Refer to www.kualumni.org/rockchalkball_home.html for further information on the Ball.
Sometimes unexpected events turn out to be the most memorable.

In the late 70’s, one of our sons, David, was approaching the time for his study of thermodynamics (a challenge facing all ME students I am told. As a past CE graduate, I only know hearsay since we stayed far away from such courses!). Dave had a high regard for his thermo teacher, Professor Ivan Nemecek.

In late summer, the department learned of Professor Nemecek’s serious, later terminal, illness, so with short notice my Dad, Professor Harold Kipp, was invited out of retirement to teach the course.

Lo and behold, Grandfather and Grandson became teacher and student. Throughout the semester, my Dad scrupulously avoided disclosing the relationship and always referred to Dave only by first name, and likewise Dave never confided the relationship to his fellow students. Needless to say, Dave was intent and focused on thermodynamics to do his best. As it turned out, my Dad later told me that Dave performed perfectly in the class and this unique, special gift was cemented in all of our memories.

(Dave went on after graduation to a stint with General Electric in Cincinnati and Boston. He completed his masters degree at the University of Cincinnati, and has more recently worked in the consulting field. He is now Senior Vice President of Ross and Barruzzini in St. Louis.)
New CNC Router Made Possible by School of Engineering Benefactor

By: Charles Gabel, Engineering Shop Supervisor

Thanks to a recent estate gift from an Engineering alumnus, the School of Engineering Machine Shop was able to purchase a new three-axis CNC router, further increasing the shop’s fabrication capabilities. The Techno Isel 5996 allows 11 inches of gantry clearance and provides a 59X96 inch-working envelope. Carbon fiber tooling and rapid prototyping are only two of the many examples of how the router will expand the student/faculty design capabilities. Once the designs are visualized using CAD, the solid geometry is then converted to G-Code. The 3-axis router interprets the code and then creates the 3-D surfacing of the solid. Student design teams can now imagine, design, and machine a finished product/prototype with fewer restrictions. Imagination, time and materials are a student’s only limitation. Without the router, students had to rely on outside businesses to donate scarce machine time on an “as available” basis. Although such donations are greatly appreciated by the School and the students, the timing of the available machine time could cause scheduling difficulties in timely project completion for both the students and the companies involved. Thus, the new CNC router has definitely provided much needed capabilities with direct positive impact on both student projects and research projects.

For many years to come, Jayhawk Engineering students will use the router made possible by this generous investment in the School’s future. Support from alumni and many others give students and faculty opportunities otherwise not possible. Thanks to all of you for your kind support and generosity.

Below are pictures of the Router and of a model boat fabricated with the Router.

Above:
Components of the boat model laying on the Router table.

Above:
Finished model boat.
You are cordially invited to:

The University of Kansas
Mechanical Engineering
2006 Awards Banquet

Alvamar Country Club
1809 Crossgate Drive
Lawrence, Kansas 66047

6:30 - 8:30 p.m.
April 28, 2006

(The cost is $25 per person and $40 per couple.)
Please RSVP!

For more information, please contact
Carol Gonce
at
cgonec@ku.edu or (785) 864-3181
The Graduate Engineering Association and the Engineering Graduate School are proud to announce the winners of the 1st Annual Graduate Engineering Poster Competition. Winners were chosen by a panel of 16 engineering professors and Ph.D. students from a field of 12 entries. The winning posters were...

PhD competition:
- 1st Place and $200 Prize: Chad Johnson, CPE, Development of Functional Heterogeneous Nanomaterial
- 2nd Place and $100 Prize: Feiyan Chen, CPE, Experimental and Modeling Study on the Transport of Chromium Acetate through Carbonate Rocks

MS competition:
- 1st Place and $200 Prize: Nick Morton, ME, What Causes an ACL Rupture: Investigation of Ligament Strain During Non-Contact Cutting Maneuver
- 2nd Place (tie) and $100 Prize: Abraham Pradeep, ME, Whole Body Vibration and Neuromuscular Response
- 2nd Place (tie) and $100 Prize: Amit Mane, ME, Assessing the Effects of Change in Q-Angle on Patellofemoral Kinematics during Gait Cycle

The winning posters will be displayed throughout Learned Hall. The Graduate Engineering Association would like to thank everyone for participating in the poster competition. This competition will be held annually, and competition announcements will be provided next spring. You can visit the Graduate Engineering Association website at gea.engr.ku.edu for more information.

Left: Nick Morton stands ready to explain his first place poster on Anterior Cruciate Ligament damage.

Right: Amit Mane shows off his second place poster on Knee Kinematics.
**NORMAN L. CARROLL, 1951**

**Company:** Applied Test Systems, Inc.  
**Title:** Founder & Past President

**News:** Mr. Carroll is still working part-time with the company, Applied Test Systems, Inc., which he founded 40 years ago. He and his wife, Virginia, are still active despite a full quota of aches and pains!

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**R. L. Guthrie, 1959**

**Company:** Asura  
**Title:** CEO

**News:** Mr. Guthrie is now retired from Asura. He has been elected to the Board of Builders for Mutual Insurance Company. He is also one of the organizers for a new community bank in Raleigh.

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**Alfonso A. Mages, Jr., 1965**

**Company:** Fort Lewis College  
**Title:** Director, Physical Plant Services

**News:** Mr. Mages was recently featured in the December 2005 issue of ME Vibrations in the “Where Are They Now?” section. His actual job title is Director, Physical Plant Services. His department is responsible for operations support including providing maintenance and construction management services for Fort Lewis College in Durango, Colorado. Mr. Mages also said that he appreciates the recognition.

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**Justin Poplin, 2001**

**Company:** Lathrop & Gage  
**Title:** Patent Attorney

**News:** Mr. Poplin is licensed in Kansas, Missouri, and Georgia. He is enjoying the practice of Intellectual Property Law (primarily focused on patents) at the Overland Park office of Lathrop & Gage, L.C. He is now engaged and will be married to Liz Weltz in June 2006.

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**Jeff Stanton, 2000**

**Company:** Garmin International  
**Title:** Automotive OEM Systems Engineer

**News:** Mr. Stanton completed his MSME at the University of Michigan in May 2004. He had worked at Ford Motor Company for the previous five years in Engine Design as a Systems Engineer. He recently relocated back to Kansas and is now working for Garmin International.

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**George VanTrump, Jr., 1958**

**Company:** Geological Survey  
**Title:** Mathematician/Computer Scientist

**News:** Mr. VanTrump is now retired from the Survey. He currently teaches senior citizens computer techniques and applications. He also volunteers for civic and community projects.
In order for us to know what you are doing and inform others in future newsletters, please drop us a note or fill in this form and return it to: ME Vibrations Newsletter, University of Kansas, Mechanical Engineering Department, 1530 W. 15th St., 3138 Learned Hall, Lawrence, KS 66045. Or, send an email to kume@ku.edu; and visit our website at http://www.engr.ku.edu/me/.

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