This issue of *Vibrations* contains so many exciting articles concerning the students, faculty and alumni that I do not want to take away from your time in getting to the “heart” of the Newsletter as soon as possible. However, I do want to extend a personal invitation to each of you to attend our Awards Banquet on April 26, 2002. We will be recognizing many outstanding individuals’ accomplishments, but especially those of six prominent alumni: Jim Adam, Robert Eaton, LaRoux Gillespie, Forrest Hoglund, Mou-Hui King, and Robert Umholtz. Please join us for this momentous occasion as we initiate the KUME Outstanding Alumni Award. There is a reservation form on the last page of this Newsletter. We look forward to seeing you at the Banquet!

(PS: If you are a history buff and would like a copy of KUME’s History, please drop me a line requesting it.)

**Umholtz Fires Silver Bullets**

The first recipient, Associate Professor Robert C. Umholtz, of the Wesley Cramer Professorship for Excellence in Teaching has long been known to students as “Bullet Bob”. Not only speed, but also accuracy and finality of result is evoked by this sobriquet. The official title recognizes both the magnitude and the duration of his teaching excellence.

His footprints have been traced back to Miami, OK where he was born “as a child” in 1928. Following later rearing in Topeka, his path to the present pedagogical pinnacle led through elementary and high schools at Highland Park, rural schools at the time. He showed promise at that stage, and was student body president and valedictorian of the class of 1946. After earning a BS in ME in 1951, he joined the faculty of the University of Kansas in 1953. An MS in ME in 1956 earned from the University of Kansas, military service, industrial employment, consulting, and 45 semester credit hours of course work beyond the MS sharpened both edges of his double-edged professional sword, probably accounting for the incisive character of his explanations to students.

The funds for this professorship were donated in honor of Mr. Wesley G. Cramer (BS in ME from KU in 1928) and his wife Mrs. Jessie Marie Cramer (Bachelors in Spanish from KU in 1927). Their thoughtful distributions to the University of Kansas over many years of the accumulation from Mr. Cramer’s career in engineering culminated in this one to the Department of Mechanical Engineering. As might have been said of Mr. Cramer in one of the old countries, “Es gereichte ihm zur Ehre” – it redounds to his honor. Their daughter Ann Cramer Root earned bachelors and masters degrees in French from KU; and her husband, John Root, earned bachelor and doctorate degrees in chemistry from KU. They, also, have been active supporters of the University of Kansas.

Professor Umholtz has played an integral role in the Department for almost 50 years, being very important in molding the ever-changing curriculum, serving on a large number of committees (Departmental, School and University), and serving as the Scheduling Officer and Associate Chair of the Department for over 15 years. He has always been heavily involved in teaching, as evidenced by his course loads being typically half again more than the Departmental average, and in student advising, having been the Undergraduate Director for several years and the person that all faculty ask the tough advising questions. His accolades from current students and alumni are multitudinous. Two of the many prominent examples are Robert J. Eaton, 1963 alumnus and retired CEO of Chrysler, and LaRoux K. Gillespie, 1965/1968 alumnus and Manager of Technical Operations at Honeywell in Kansas City, obviously high achievers themselves (see pages 6 and 9 for bio-sketches). Both emphatically indicate that Professor Umholtz had an extremely positive impact on them and their careers. Professor Umholtz’ awards are also numerous, as outlined in the article on his most recent honor - ME Distinguished Alumni Award - see page 8.

Professor Umholtz is obviously most deserving of the high honor bestowed upon him in being awarded the first Wesley Cramer Professorship for Excellence in Teaching; and we are proud to have him on the KUME faculty!

**Student News**

*Mike Swofford* of Shawnee, KS was recognized during the Mechanical Engineering Awards Banquet, April 26, 2001 as the Mechanical Engineering Department’s Outstanding Senior. He received a certificate and a $200 cash award.

*Vicente Avila* of Eudora, KS, also a senior in ME, received the Gilberto E. Soto Award during the 30th celebration of Diversity Programs in the School of Engineering.

*Thomas Flora* of Sedgwick, KS, was commissioned on May 21, 2001 as an officer in the U.S. Navy.

*Our last issue* (September of 2001) included a photograph of the Formula SAE team in Pontiac, MI prior to the competition. There are many stories behind that photograph and each of three design team photographs in that issue of ME Vibrations. We asked Mike Mercer (the chassis team leader) to describe what happened at the competition. It was a competition at which several team members spent almost a full
Student News (cont’d)

week. Mike provided the following details.

“You keep your car covered for as long as you can. You can make last minute repairs and changes, and you do not want anyone else gaining a few points on you using last minute fixes from your ideas.

You have to be there an hour before check-in on the first day. If you are not there on time, you are disqualified. The leader assigns jobs to each team member - who keeps the tools in order, who has tires, who is the runner for odds and ends. Someone has to make presentations. Someone has to get a fire extinguisher - that is a requirement, but you do not hear about that until you are standing in the queue. The runner goes to get it. When you pass the initial inspection, you do not have to worry about making last minute fix-ups. You know you will have some last minute improvements, but fix-ups consume unplanned time.

You are there at 7 am or you do not compete. You have a team meeting. The design team presents the 6 inch thick design report - - everything you need to know about design, cost, manufacturing, etc. It truly is an industrial grade effort - - the plan, the details, the budgeting, fundraising and costing, even the marketing. Design is worth the most points, and some schools just participate in design; but KU does it all: design, build and on-track competition. If you forget to mention any aspect of the design, you lose double the points; and this year, we forgot to include the cost of making jigs or fixtures. We lost points - - points based on how many hours it took to make the tools and the material costs in them. Next year we will know better.

There is a brake and noise evaluation. You have to meet standards. There is the official presentation, the marketing aspect of the product. Chris Dundon and Mike Mercer did that this year.

You have to pass the tilt table. The car with driver sits on a table that is rotated 45 degrees to look for leaks and a safe center of gravity. If the car topples over, it obviously is not safe. (The team passed this test.)

The static tests include weight. You need to be under 500 pounds total car weight, and this year we were 505 pounds - - 5 pounds over. A major problem. This prevented the team from reaching the semifinals. (It weighed less than that in Lawrence - - but that was on an apparently uncalibrated scale. What a way to learn about calibration!)

The second day is for dynamic events. The driver practices on the track for 5-10 minutes. Someone is in charge of tire changes. You hit the skid pad to see how much the car can sustain in the lateral direction - - the lateral G force from a skid. We hit 0.95 Gs in two tries. 1.3 Gs is the limit. It takes a good suspension and good driver practice to reach the target value. We were in the top 50 for that part of the competition.

For the Autocross, you get two tries of one lap going through hairpin curves, slaloms and chicanes (“S” curves). We did well. That gives us a maximum of 150 points. Several cars are on the track at one time, but you lose points if you pass someone.

For acceleration, you peel out for 75 meters. We took 3rd or 4th, but that only accounted for 100 points of our maximum possible [overall competition] score of 1000 points. Placing high though provides better placement in the endurance run. This gives us a maximum of 350 of the 1000 points, if we can do well, plus an additional maximum of 150 points for fuel economy, if we finish. There are two heats, one in the morning for those being slow in the Autocross, and the afternoon is for the fast teams. Ten to twelve cars are on the mile long track all running 26 miles [total]. This time you can pass. The target is to finish. You get zero points if you fail to cross the finish line. We were one of 24 cars to finish.

You cry if you do not finish, and a loud cheer erupts from the entire team when you do finish. We finished!

One hundred twenty-six teams entered, but only 112 actually showed up at the competition. Obviously some teams failed to finish their designs or the fabrication part.

The following day trophies are awarded for the top finishers. Panoramic photographs of every team - - all 112 - - are taken, and individual team photographs are also taken. Only the top 10 are announced at this event. You have wait another day or another week if you fall below that.”

This year we were 18th. We were 24th Mike says in 1999. They have come a long way since the first year of the competition. Everyone learned a great deal about design, construction, and what can go wrong.

At the start of the year, Team Leader Chris Dundon told the 25+ team members, “This will be the hardest thing that you have ever done.” A year later Pete Gillespie, one of the seniors, said, “That sure proved to be true.” But he added, “I continue to see the effects of what I learned in that design and build effort. It was the one college class that tied everything you had studied, and had not studied, together with experiences of how individuals work in teams. Some gave their total commitment and some gave some commitment. It is a torturous experience, exhausting, demanding, but it is a teaching tool the participants will never forget. It is a taste of life in industry for the successful.”

Thirteen seniors took the class for credit. Five or six volunteers participated for the experience. They will be this year’s leaders. Parents can view the competition or at least parts of it. Allen Fransen and his wife watched their son, as did the Dundon parents. There was lots of press attention, from the Topeka Channel 13 station to the Lawrence Journal World, the UDK and Chrysler TV.

The big three auto makers sponsor the event and have their recruiters out scouting for potential engineers. This year is a bad year for the auto makers. So few offers are made - - in fact thousands will be laid off. Chris Dundon though, now works for Honda.

KUME Students and Faculty Successful in Part Because of Supporters and Donors

Our students and faculty have been successful for many reasons this past year, but one of the often unheralded reasons is the active support by many donors for the student projects, scholarships, research partnerships, student design projects, corporate on campus support, tours and a host of other forms. The Department thanks the following corporations and individuals for their direct support during the 2001-2002 academic year. You made a difference to the students, the faculty and the department as a whole.
Richard L. Coleman (BSME ’36) was intrigued by the memories of David B. Gray of the ME Department in the 1940’s. He notes, “The Corliss engine was a major study for us. We started and operated the engine.

My son, Richard N. Coleman, was chairman of the 45th Engineering Exposition, and he now has his architectural firm in Irvine, CA.”
Richard L. Coleman is a retired past Vice President of the Carter-Waters Corporation in Kansas City, MO. His two sons graduated from KU - - Richard N. Coleman in Architecture and Steven P. Coleman in Electrical Engineering. Richard notes that his wife of 61 years is Grace L. Coleman.

Montie Bowen (BSME ’53) of Clay Center, KS retired from the Army Corps of Engineers, Kansas City Office in 1993, as Project Engineer.

He currently is living on the family farm ten miles north of Clay Center. He and wife Tricia (BS ’57 nursing) are remodeling their home. They have two grown daughters living in Kansas, a son living in California, and three grandchildren.

Since his retirement, he has also been involved in various projects. These have been working with Plaza Resolana Study and Conference Center, Santa Fe, NM; working to construct new houses for Hurricane Mitch mudslide victims in Honduras; and most recently building new houses with Habitat for Humanity in Guatemala. He notes that readers might be interested in an experience he had in 1999.

“I had been retired six years then, and had done some volunteer work since then. During 1999, I had been fortunate to travel and visit in Central America. In fact I was there on two different trips, and had the opportunity to meet some very special people and see many interesting features of the countries. They were just recovering from the effects of a hurricane, heavy rains and mudslides. They still have some beautiful country scenery and after the devastating storms are starting a come back.

I was in Honduras with a group to build new houses to replace some of those destroyed by the hurricane. Most of their industry is still agricultural. They were carefully getting their crops planted and harvesting pineapple, bananas and coffee again. One of the big problems was to get roads and bridges repaired and replaced. Some of the roads had been repaired, but some bridges were still missing. A few of the rivers that had receded enough and had a bridge disappear, now had a makeshift ford for crossing.

Another problem they encountered was with electric utilities. Almost half of their electricity was generated by the hydroelectric El Cajon plant. Along with the torrential rains in January,1999, they had a high voltage transformer burn out along with high voltage electric cables. Repairs were slow in coming, since they would need repair and replacement parts from the United States and Canada. When I was in the city of San Pedro Sula in February, they were still having electrical rationing and rolling blackouts.

They have varied tropical plants with a rich volcanic soil. The natives were very friendly, and I enjoyed weekends seeing many of the Mayan ruins in both Hondurans and Guatemala.

After returning from Central America, I have had time to think more of the industrial problems that their citizens are now having. Some of the problems are those that existed when we were attending classes at Kansas University. A few I have noted in the following paragraphs as I remember them. I remember some school experiences that were important to me while attending KU classes. One of the assignments of Professor Tate’s mechanical design class was a tour of the construction progress of a new electrical power plant northwest of Lawrence. This was about 1952. We were impressed by the extent of long range planning.

Another time we were able to see the upgrading of the steam heat plant near the old Fowler Shops on campus. This was in the early fifties. Not only was the steam capacity being increased, but new steam tunnels were being installed to connect to existing facilities.

Later I took a summer job in the surveying and construction of a natural gas pipeline. From the late forties, there was an increasing demand for natural gas heating. I had an opportunity to see a large pipeline being built that would serve the eastern states.

The class work at KU has been undoubtedly very important to my career; but from observing some of the early industrial projects then, it now makes me more appreciative of the benefits we Kansans enjoy. And after seeing the obstacles that citizens of Honduras and Guatemala are facing and overcoming, I appreciate these benefits even more.

Since my retirement, I am still busy with several activities. My wife and I still live in Kansas, but we travel when we can get away. I appreciate receiving the ME Vibrations and enjoy reading of the ME Department.”

LaRoux Gillespie (BSME ’65; MSME ’68) remembers sitting in Professor McBride’s class in about 1964 or 1965. “We were all busy listening and watching Professor McBride write some long strength equation on the board, and he turned around and saw Dave Turner bent over his desk. Professor McBride very sternly told Dave that if he couldn’t pay attention he could leave the class. The problem was that Dave was furiously writing his notes just trying to keep up with the professor. I think the rest of us were just listening. Dave was trying take good notes. He appeared for just an instant to be inattentive. Dave was a little ticked, but I guess he got over that. Dr. McBride was good and clearly knew his material. He wanted to make sure that his students did also.”

Alumni News

1930s
Ken Razak (BSME ’39; MSME ’42) sent some memories of the 1930-1940 era for the last issue of Vibrations. We include one of his 1939 wind tunnel photographs on the following page.

1940s
Richard G. Winslow (BSME ’42) is living in Bradbury, CA.
William C. Nichols III (BSME ’48) is retired as administrator and CEO for Memorial Hospital in Cheyenne, WY. He held the post for 36 years and after retirement spent two more years as the director of the hospital’s foundation. He and his wife, Marti, were designated as honorary chairs for Denim n’ Diamonds, the major fund-raising event of the hospital medical center. The event was held on their 56th wedding anniversary.

1950s
Donald R. Bayne (BSME ’51) notes that he retired from U.S. Government service in 1984. His son is an electrical engineer and has a digital TV discussion group at http://www.geocities.com/siliconvalley/campus/3097.

1960s
Merle L. Engle (BSME ’62) is living in Little Rock, AR. He is Managing Director for Family Life Ministry.

Alumni News (cont’d)

Robert C. Holder (BSME ’69) is a procurement Team Leader at the Los Alamos National Laboratory in NM. The procurement team supports the lab’s Science and Technology Programs, Non-Proliferation and Threat Reduction and the Strategic & Research Directorates.
Wayne Pratt (BSME ’64) is Vice President of MassMeters in Arizona. He is involved in all phases of measurement of liquids and gases for ABB. This requires extensive world travel for new applications and training of field personnel. He holds several patents in instrumentation. He has been living in Scottsdale, AZ for 17 years and has a married daughter and family (husband Dave and daughter Hannah) living in Germany. Dave is in the Air Force. Wayne also has a son who is an engineer for Boeing in Seattle. Wayne continues to fly to keep his instructor’s certificate current.

1980s

Mark D. Schulz (BSME ’84) senior engineering specialist for Lockheed Martin Tactical Air Systems. He lives in Fort Worth, TX.

Kirk S. Christensen (BSME ’89) is an engineering manager with Caterpillar Global Mining Products in Decatur, IL. His wife, Kathy (MS Eng. Mgt. ’99) also works with Caterpillar one day a week, and the rest of her time is spent with the couple’s daughter, Erika Marie, who was born on March 9, 2001. They reside in Heyworth, IL.

Gregory Towsley (BSME ’86) and Paul Wallen (BSME ’91) jointly published “A Case History: Improvements to an Existing Cooling Tower Sump and Horizontal Split Case Pumps,” at the 16th International Pump Users Symposium in Houston, TX in March of 1999. The article also appeared in the July 1999 issue of Pumping Technology magazine. Gregory provides technical support to all areas of JCI Industries, Inc. in Lee’s Summit, MO. JCI is a value-added distributor of pumps, process equipment, and accessories, and provides after-sales services that include pump and electric motor repair. Prior to 11 years with JCI, Greg was an Applications Engineer with Goulds Pumps for two years. Greg was pursuing his MS in Engineering Management at KU at the time the Pumping Technology article was published. Paul J. Wallen was a Maintenance Engineer at Farmland Industries in Lawrence in 1999. He previously worked as a Maintenance Engineer at Huntsman Petrochemical Corporation for three years, and Texaco Chemical Company for three years as a Project Engineer.

2000s

Jeanne Sarver (BSME ’00) is an engineer at Honeywell’s Kansas City plant.

Peter K. Gillespie (BSME ’01) is in seminary at Calvary Bible College in Belton, MO.

Mike Mercer (BSME ’01) is an engineer at Honeywell’s Kansas City plant.

Left to right: Ken Razak, Fred Gustafson and Jesse Gamber in KU’s 5 Ft. Wind Tunnel in 1939.

Distinguished Alumni Awards

On Friday, April 26, 2002, the Mechanical Engineering Department will hold its annual Mechanical Engineering Awards Banquet. In addition to student and faculty awards, this year we will begin a tradition of recognizing distinguished alumni. In the past 100 years, there have been many graduates who have attained excellence worthy of special note. As part of our second century, we will begin taking formal note of some of the most prominent graduates and will formally recognize their accomplishments at this awards ceremony each year.

Charter Members receiving Distinguished Alumni Awards at this banquet include:

- Jim Adam, Chairman Black and Veatch (retired)
- Robert J. Eaton, Chairman Chrysler Corporation (retired)
- Forrest E. Hoglund, Chairman of the Board, EOG (retired)
- Mou-Hui King, President and Chairman of the Board, China Steel Corporation (retired)

Joining the Charter members of this distinguished group as 2001-2002 recipients are Professor Robert Umholtz, Associate Professor of Mechanical Engineering at Kansas University and LaRoux K. Gillespie, Manager, Technical Operations, Honeywell in Kansas City, MO.
We provide a brief summary of these distinguished graduates in the following paragraphs and ask you to join us on Friday night, April 26, 2002 to honor these individuals as well as our most outstanding students and faculty.

**P.J. “Jim” Adam**

Chairman and Chief Executive Officer (retired)

Black & Veatch

Overland Park, KS

BS Mechanical Engineering 1956

As chairman and chief executive officer of Black & Veatch, Jim Adam was responsible for managing the engineering and construction firm’s 4,900 employees and 45 offices worldwide. The 80+ year old firm, which is based in Kansas City, MO, was the eighth largest contractor in the United States in 1995. Annual revenues approached $985 million in 1994. Adam steered Black & Veatch to a doubling in revenue to almost $2 billion, establishing it as an engineering giant with global ambitions and a presence in many of the world’s countries. Today Black & Veatch handles projects in telecommunications as well as power and other utility plants, petrochemical facilities, airports and other design/construction efforts.

A loyal supporter of the University of Kansas from a variety of aspects, he was chairman of the Engineering School’s Development Committee during Campaign Kansas, a fund-raising effort resulting in $265 million in donations to KU.

After graduating from KU in 1956 with a B.S. in Mechanical Engineering, Adam began his engineering career at Black & Veatch. He spent three years as a first lieutenant in the U.S. Air Force and returned to Black & Veatch in 1959. He returned as a Mechanical Engineer and was subsequently promoted to Project Manager of major power projects. He was named a general partner in 1975 and became Executive Partner and Head of the Power Division in 1979. He was responsible for all of the firm’s power station and transmission and distribution design and construction management.

In 1995, Adam was chairman of the Joint UNIPED/World Energy Council Committee on Performance of Thermal Generating Plants and was vice chairman of the United States Energy Association. A recent landmark study by the council reported that energy companies would spend $30 trillion over a 30-year period to meet a 75 percent increase in global energy demand.

Adam is a registered professional engineer in 17 states and is a member of the National Society of Professional Engineers, the Missouri Society of Professional Engineers, the American Society of Mechanical Engineers, and the American Nuclear Society. He is a member of Pi Tau Sigma, Sigma Tau, Tau Beta Pi and Omicron Delta Kappa honor societies.

Black & Veatch was considered the 118th largest privately held firm in the U.S. in 1997. It employed 7,000 professionals in more than 90 offices worldwide. The firm employed more than 3,800 engineers and architects in the United States, with about 2,500 in the Kansas City area.

Jim Adam has made major contributions to the local economy, has increased greatly the breadth and reputation for one of the world’s leading companies, and has helped develop many other leaders. He is one of our foremost Distinguished Mechanical Engineering graduates.

**Robert J. Eaton**

Chairman (retired)

Chrysler (now Daimler-Chrysler)

Detroit, MI

BS Mechanical Engineering 1963

As chairman of the Chrysler Corporation, Robert J. Eaton helped rebuild the auto industry with his innovative ideas and enthusiasm. He grew up in Arkansas City, KS where he bought and repaired his first car, a 1933 Chevy, when he was only 11! At KU, he strengthened his problem-solving skills and won affection and respect as a student leader. He joined General Motors in 1963 as a graduate-in-training, and, over the next 25 years, advanced to lead its large, lucrative European division. He was still expanding GM's markets and profits when Lee Iacocca asked him to take the wheel at the Chrysler Corporation. As vice chairman through 1992 and chairman and chief executive from 1993-1998, Eaton used creative thinking to generate a corporate renaissance.

On May 7, 1998 Eaton, CEO of Chrysler, announced the merger of Chrysler and Daimler-Benz in a $31 billion deal for a combined company of $131 billion. With the merger, he would become the joint leader of a new automotive giant, Daimler-Chrysler. The new company at the time of the merger had 450,000 employees. When Chrysler merged with Daimler-Benz in 1999, the merger represented the largest merger in U.S. history.

Eaton’s influence also extends beyond the company through many organizations. He was secretary-treasurer of the American Automobile Manufacturers Association, the industry’s voice in Washington, and worked on trade issues as a member of the U.S.-Japan Business Council and the Economic Strategy Institute. He helped shape national public policy as a member of the Business Roundtable and the Business Council. For higher education, he has advised engineering schools at KU, the University of Michigan, and Stanford University. In Detroit, he has chaired the United Way of Southeast Michigan, and he helped guide the Detroit Symphony, Detroit Renaissance and New Detroit. In 1989, he was elected to membership in the National Academy of Sciences and can be found in *Who’s Who in Engineering*. For his dynamic leadership, the University of Kansas and its Alumni Association awarded Robert J. Eaton KU’s Distinguished Service Citation.

Robert J. Eaton is clearly one of Mechanical Engineering’s most distinguished graduates.
Forrest E. Hoglund  
Chairman, President and Chief Executive Officer (retired)  
Enron Oil & Gas Company  
Houston, TX  
BS Mechanical Engineering 1956

Forrest E. Hoglund rose to Chairman, President and Chief Executive Officer of Enron Oil & Gas Company, which, in 1999, split off from Enron and today is known as EOG Resources, Inc., an independent oil and gas exploration, development, production and marketer of natural gas and crude oil.

Prior to his appointment with Enron Oil & Gas in September of 1987, Hoglund was President of Texas Oil & Gas (TXO), a Dallas-based subsidiary of USX Corporation. He became President of TXO in 1977, Chief Operating Officer in 1979, and Chief Executive Officer in 1982. Since 1986, when TXO merged with USX, he also served as a Director of USX. In 1981, the Dallas-based gas gatherer and producer (TXO) racked up the 24th straight year of earnings gains in its 26-year history.

Earlier in his career, Hoglund worked for Exxon Corporation from 1956 to 1977 in various capacities, including Vice President of Esso Middle East and as corporate Vice President of natural gas and gas liquids.

He is a director of the Mid-Continent Oil & Gas Association, and a member of the Texas Independent Producers and Royalty Owners Association (TIPRO), the Society of Petroleum Engineers, and the Independent Petroleum Association of America (IPM). He is also an Associate Member of the Board of Visitors of the University Cancer Foundation, a member of the Development Board of the University of Texas Health Science Center at Houston, and a Board member of the Houston Museum of Natural Science.

EOG Resources, a New York Stock Exchange company, is one of the largest independent (non-integrated) oil and gas companies in the United States in terms of domestic proven reserves. Hoglund was instrumental in the growth of this major company and as such joins an elite group of very distinguished KU ME graduates. He retired from the company in 1999.

In 1996, KU awarded Hoglund the Fred Ellsworth Medallion for Unique and Significant Service to the University of Kansas. This medal recognizes his development of one of the most effective volunteer forces of any college or university in the United States. Today Forrest Hoglund leads KU’s $500 million fund raising campaign (KU First).

Mou-Hui King  
President and Chairman of the Board (retired)  
China Steel Corporation  
Taiwan, Republic of China  
BS Mechanical Engineering 1944

In a career tied to Taiwan’s emergence as an industrial leader, Mou-Hui King helped rebuild the country’s post-war economy and later was a founder and top manager of China Steel Corporation, the country’s only world-class steel mill. King helped see the project from concept through a challenging construction to successful operation. For nearly two decades, he served as a member of China Steel’s top management, including Chairman of the Board. His contributions to his country’s economy began, however, before the inception of China Steel.

Upon graduating from KU in 1944, King joined Allis Chalmers in Milwaukee and, in 1945, the Chinese Government Purchasing Office in Washington, DC, where he procured power plant equipment to help rebuild post-war China. In early 1947, King joined the Ji Bei Power Company in Beijing, and, in 1948, he joined the Taiwan Alkali Company. There he had a major role in market development and expansion projects that more than doubled capacity.

In the early 1960s, King’s successes drew the attention of government officials overseeing industrial development. King was appointed to a group promoting foreign investment, and eventually he became a key member of the planning group for the steel mill that became China Steel Corporation.

The planning and construction of China Steel involved a scale and complexity never before encountered in Taiwan. Some challenges and successes involved diverting a river, tight schedules, pier building for large ships, and adoption of the continuous casting process for 100 percent of its liquid steel output. (China Steel was the first steel mill in the world to do so - - the resulting lower cost helped China Steel be competitive from the outset and to re-capture the Taiwan steel market.)

King held the offices of Executive Vice President and President in the early 1980s, and, in 1985, he was elected Chairman of the Board. He retired in 1990 and is now an honorary adviser. Today, China Steel Corporation employs 9,000 people. Production in 1998 approached 10 million tons with gross sales topping $3 billion.

King was active in bilateral trade and friendship committees between the ROC and the United States, Canada, Australia, Belgium, Japan, and Malaysia. He imparted to American makers his experience as a user of heavy equipment from many industrial countries in order to help American makers improve their competitiveness.

King has received many prestigious awards for his accomplishments, including the Medal for Meritorious Service of the Third Order from the ROC Cabinet, Outstanding Mechanical Engineer Medal from the Chinese Society of Mechanical Engineering, La Decoration Civile officier de l’ordre de Leopold from Royaume de Belgique, and the Chancellor’s Award from the University of Kansas. He has been director and supervisor of the Chinese Institute of Engineers, president of the Chinese Society of Mechanical Engineering, president of the Southeast Asia Steel and Iron Institute ROC National Committee, executive director of the International Iron and Steel Institute, and executive supervisor of the Chinese Association for Energy Economics.

King set a billion dollar enterprise in place that changed the economy of his country. He traveled to a distant land and a culture unknown to him to gain his degree, with which he left to become a scion of Taiwan industry. His understanding of global business, before that concept became widely accepted, helped make him a trend setter.

Clearly Mou-Hui King is among the foremost graduates of the Mechanical Engineering Department.

Robert C. Umholtz
Robert C. Umholtz is a legend in his own time. He has taught Mechanical Engineering at KU for over 45 years in a manner distinctive enough that every student remembers him. His legions of students (estimated at over 1200) write of his excellence decades after they have left and those just graduating share the same thoughts on exit interviews and formal class reviews.

Umholtz is a consummate organizer and one of the hardest working professors in the university. He is the departmental choice for compilation of the masses of paperwork required to support ABET accreditation. Under his leadership, accreditation efforts have always been very successful in gaining full accreditation. He has consistently had heavy course teaching loads in order to assure that students received the education they needed.

Umholtz is not an easy instructor. Rather, students laud him for providing the material they need to understand and be able to use and, especially, for being available in his office for personal, tutorial coaching. Most of his former students knew him as “Bullet Bob” for the rapidity and detailed coverage of material that he provided. After 45 years, he is still known by the students as “Bullet Bob”.

To ensure that his choices of topics and their exposition were appropriate, he has sharpened his professional insight and understanding by also practicing his profession with the Corps of Engineers in Korea, Phillips Petroleum Company, Westinghouse Electric Corporation, Boeing Airplane Company, General Services Administration in Kansas City, NASA Manned Spacecraft Center (Houston, TX), Sealright Inc., and the Bendix Corporation. Two patents have been awarded for his inventions.

He has developed computer programs for kinematics of linkages and vibrations which he uses in his classes. He has composed Engineer-in-Training examinations and assembled them into a complete professional engineers licensing examination, prepared a solution manual for graders, and graded and proctored examinations. These examinations were taken by all engineers who sought professional registration in Kansas during the 1958-1965 period. He served as Chief Examiner and Special Consultant to the Board from 1958-1972.

He has contributed to research programs in manufacturing as a coauthor and a co-investigator, and as an associate director. He has contributed to a research program in the energy-management area, overseeing the preparation of 61 reports of energy management studies of State of Kansas buildings.

Umholtz is a full-time, tenured associate professor in Mechanical Engineering and was first appointed to the KU faculty in September 1953. He has served continuously except for one year of leave without pay.

He has long been regarded as an excellent teacher. He was nominated for the H. Bernard Fink Distinguished Teaching Award in 1963, named a finalist for the Gould Award in the School of Engineering by the all-engineering honorary fraternity, Tau Beta Pi, in 1971, nominated for the HOPE award in 1976 and 1977, awarded the Wesley G. Cramer Mechanical Engineering Faculty Award in 1993, awarded the American Society of Mechanical Engineers (KU student section) Distinguished Professor Award in 1997, and awarded the first Wesley G. Cramer Professorship in Mechanical Engineering for Excellence in Teaching in 2001. He has also been nominated for the Chancellor Archie and Mrs. Nancy Dykes Distinguished Teaching Award, and the Ned Fleming Trust Distinguished Teaching Award.

For many years, he has chaired the departmental curriculum committee. In this capacity, he has led the introduction, removal, and revision of courses, and has represented the department for the School of Engineering in curricular matters. As the Scheduling Officer for the department, he has coordinated the frequency and timing of course offerings for maximum student convenience and benefit. The willingness he displays to blend the requirements of the curriculum to the individual desires of the faculty and of students is especially appreciated by both groups.

His assistance to students is unmatched in this and most other departments. He is the principal undergraduate advisor, the summer advisor (without pay) for entering freshmen, and advisor for the combined BS in Mechanical Engineering and Business Administration program. As part of these activities, he assists students with planning future enrollment, preparing substitution petitions, and understanding the manifold regulations of the university. His service as Associate Chair (1973-79, 1987-90, and 1991-present) is a natural outgrowth of this realized desire to give academic assistance and counseling to students.

His teaching innovations are too many to list here, as are many of his detailed accomplishments. He is or has been faculty advisor for Tau Beta Pi and Pi Tau Sigma. He has revised the widely used engineering graphics textbook Geometry of Engineering Drawing, provided suggestions for Applied Numerical Methods for Digital Computation, and reviewed textbooks prior to publication for several commercial publishing houses. He authored four correspondence courses, and served on 9 PhD committees, 1 Doctor of Engineering committee, and 6 MS committees in the past 5 years.

He’s a very good instructor, is unambiguous, and he has a strong command of the subject. He’s always available to help and he’s fair. His students say he is a great teacher. Stated in today’s vernacular, a 1998 student noted, “Bob is cool.”

It is clear that students are his priority. Their learning is his priority, and they recognize that.

Selecting Professor Robert Umholtz as a Mechanical Engineering Distinguished Alumnus clearly recognizes the impact he has had on over a thousand students, at least a third of all graduates of the M.E. program. It is an appropriate recognition of an entire career dedicated to students, not just a small part of a career, a career of being an outstanding teacher!

LaRoux K. Gillespie
For 35 years, LaRoux Gillespie has balanced manufacturing production and research needs at the Kansas City Honeywell plant. Today he guides the engineering and equipment needs, for what will be a $60 million facility involving roughly 200 full time or support personnel. He and his staff are responsible for over 240 manufacturing research/process characterization efforts for special valves and pressurized assemblies. In addition to directing $2 million of annual process development, and guiding new products into production, he also is active in plant environmental health and safety efforts, and is responsible for Quality Engineering for his products.

Gillespie’s technical efforts set him apart from many. He has focused his career on developing better machining and deburring processes for precision miniature components (+/−0.0001 inch tolerances), and along the way, led in purchasing mechanical components, large part machining, miniature machining, robotics, flexible manufacturing systems, and computer aided process planning efforts. He developed the first mathematical theories of burr formation in metal cutting, has published more research on burr technology than any other person in the world, and has developed an engineering approach to solving burr problems based on data. He has written or edited 17 books and 180 articles or reports on precision machining, deburring, and the development of young engineers, student engineers and other subjects.

After completing two ME degrees at KU, Gillespie joined Kansas City’s Bendix plant and immediately began researching machining and deburring. He returned to school in 1972 at Utah State University to earn a Manufacturing Engineering degree. It was there that he developed his theories of how burrs form. He returned to Bendix to lead deburring and finishing efforts. In over three decades of research, application, and teaching, Gillespie has become the leading authority on the full breadth of burrs and deburring. In addition to documenting how they form, how big they will be and how various cutting factors affect them, he has explored 109 burr removal processes, defined the economics of removal, developed training manuals and videos, compiled the known literature into easy to follow books and bibliographies, and led improvement efforts around the world. Some of his publications have been translated into Japanese and others can be found in German, Chinese and Korean sources. Gillespie’s work is distinguished by its industrial application. Everything he does is focused on how engineers, managers and shop owners can use the results. For 20 years, he has been a full time manager who still finds a way to lead international technical efforts.

Gillespie is a Fellow of the Society of Manufacturing Engineers (SME) and has served in 56 local and regional positions, including Director of SME, Chairman of the SME National Education Committee, Honor Awards Committee, Burr Technology Division, Manufacturing Engineering Education Foundation’s Student Development Committee, the Profile 21 Study, and the SME Subcommittee for Certification Examination Maintenance. He was Chairman of the Board of Advisors for the Machining Technology Association of SME, and is a member of the KU’s Engineering Advisory Council and the Mechanical Engineering Department’s Advisory Board, and is Chairman for the Worldwide Burr Technology Committee, an international group dedicated to improving understanding of the $5 billion edge finishing industry. He is a world leader in metal finishing. He has received 27 local, regional and international honors and awards. In 1995, SME named their Outstanding Young Manufacturing Engineer Award after Gillespie.

He is a Registered Professional Engineer, a Certified Manufacturing Engineer, an Able Toastmaster and a frequent motivational speaker for college engineering students.

LaRoux Gillespie, his wife Judy, and their five children live in Kansas City with their five computers, pets and a house full of friends of their children. His hobbies include writing, genealogy, and motivational speaking.

More Father-Son ME Combos

Paul Joseph Van Benthem (BSME ’85) notes that his father Francis Van Benthem was a 1949 KUME graduate. Paul is a Senior Project Engineer with General Motors in Michigan.

David Suptic (BSME ’74; MBA ’82) of Overland Park, KS is Sales Manager of Marley Cooling Tower Company. His father, John M. Suptic, received his BSME in 1949 and his MSME in 1954.

James T. Jennings, Jr. notes another father-son combo. James T. Jennings, Jr. (IE ’35) and son James T. Jennings, III (ME ’62). A History of the School of Engineering at the University of Kansas 1868-1988 notes that the Industrial Engineering option existed from 1915-1923 in Engineering Administration. From 1923-1938, Industrial Engineering was a degree program of its own; and, from 1938-1974, it was an option in Mechanical Engineering. KU’s Hugo Diemer taught the first IE course in any US engineering school. Most of the IE courses were taught by ME professors. Adrian Lindsey took IE courses in 1916, and, in 1932, he became KU’s football coach. This same book notes that James Jennings, Jr. became Chief Engineer of Design at Butler Manufacturing in Kansas City.

KUME Listings from Who’s Who in Technology
Raymond Cochrane (BSME '58) joined Southwestern Bell after graduation, then moved to Sr. Manufacturing Engineer at Rockwell Inst., became Capital Complex Engineer for the state of Kansas from 1971-1981, and later was a Cost Estimating Engineer for Phillips Petroleum in Bartlesville, OK. Raymond has an AA from Coffeyville College and an AB degree in Economics from Washburn University of Topeka, KS. He is a registered Professional Engineer.

Donald L. Creighton (BSME '54; MSME '61) left KU for his PhD from the University of Arizona. He was an instructor at KU from 1959-1961, and, in 1986, was Professor in Mechanical Engineering at the University of Missouri at Columbia. His primary fields of work are design, engineering materials, thermodynamics, and heat transfer. In 1986, he belonged to ASME, ASTM, AWS, ASM, ISA, American Society for Biomaterials, ASEE, Missouri Academy of Science, MSPE, and NSPE. Honors include Sigma Xi, Tau Beta Pi, Sigma Tau, Pi Tau Sigma, Ryan Aeronautical Foundation Fellowship, John Morse Foundation Fellowship, and an ASM Special Award. Professor Creighton was born January 3, 1932 in Hays, KS.

Roger Doty (BSME '56) was Vice President of Jenn-Air Co. (Indianapolis, IN) in 1986. After graduating from KU, he joined the Maytag Company. In 1966, he was Supervisor of Design for Philco-Ford, then Activity Manager for the same company from 1971-1973. He has seven appliance patents and was the designer of the first electronic control for clothes dryer as well as the developer of the double cavity side-by-side plastic liner for refrigerators. Roger was born on October 14, 1934 in Paola, KS. He resided in Connersville, IN in 1986.

LaRoux Gillespie (BSME '65; MSME '68). See the article on Outstanding KUME Alumni on page 9 of this issue.

Peter E. Jenkins (BSME '65) obtained his MSME from Southern Methodist University in 1969 and his PhD in ME from Purdue University in 1974. He was Professor of Mechanical Engineering at Northern Arizona University (1974-175) and Professor of Mechanical Engineering and Director of the Turbomachinery Laboratories Texas A&M (1975-1984). In 1986, he was Executive Vice President of Engine Corporation of America in Long Beach, CA. At that time, he had 45 publications, mostly in turbomachinery, turbulence and energy conversion; was the editor of five books; and had three patents. His areas of expertise include new seismic energy source, centrifugal compressor re-rating, pump evaluations, gas turbine monitoring devices, new diesel engine and turbo-charger design. He is a member of ASME, AIAA, ASHRAE, SAE, NSPE, TSPE, ASEE, Pi Tau Sigma, Sigma Pi Sigma. He is a fellow of ASME, and a TEES Research Fellow at Texas A&M and also garnered Purdue and NSF Fellowships. He was born on May 7, 1940 and resides in Los Alamitos, CA in 1986.

Raymond Anthony Lednicky (BSME '52) was a sales engineer for E.J. Nell Co. in Manila, Philippines after graduation. He joined Western Electric in Lee’s Summit, MO in 1960 as a design engineer and a production engineer. In 1974, he became a research and development engineer also at the Lee’s Summit facility. He was a member of ASME and the Society of manufacturing Engineers with expertise in molding techniques and marketing prototypes. He was born on September 15, 1923 in Manila.

John C. Lindholm (MSME '56; BSME '56) received his BSME and BS Business Administration from Kansas State University in 1949 and went to work for the air conditioning division of General Electric Company. From 1952-1954, he was a Senior Engineer with Midwest Research Institute in Kansas City. He was an instructor at KU from 1954-1957 and got his Masters there in 1956. From 1957-1960, he was an instructor at Purdue where he received his PhD in 1961. He went to Kansas State University where he was Department Head of Engineering Technology. His 23 publications are primarily in stress analysis and kinematics. Other areas of expertise included machine design, material properties and experimental stress analysis. He has been active in ASME, ASEE, SESA, and ASEE, as well as a member of Tau Beta Pi, Sigma Tau, Pi Tau Sigma, Phi Kappa Phi, Sigma Xi, and Tau Alpha Pi. He received fellowships from Ford and the National Science Foundation. He was born on June 8, 1947.

Leo F. Spector (BSME '49) was editor of Plant Engineering magazine in 1986. He had held many editorial positions in the magazine and associated magazines since 1967. Prior to that he was an editor of Machine Design magazine (1967-1970) and Assembly Engineering magazine (1962-1967). He has written over 300 articles, editorials and conference papers and speeches on technology. He has served as standing general chairman of the National Plant Engineering and Maintenance Conferences, with memberships in ASME and the Society of Professional Journalists. He is a Registered Professional Engineer. He was elected to Pi Tau Sigma, Sigma Tau and Tau Beta Pi and received the 1984 Peter Lisager Award for Outstanding Business Press Journalism. Leo was born on November 10, 1923 in Kansas City, MO and resides in Glen Ellyn, IL.

Long Tran Trieu (BSME '76) is a quality control engineer in General Electric Company, Louisville, KY. After leaving KU, he received his MSME from MIT in 1980. He applied computers to administrative assignments in a lamp division and implemented state of the art quality information systems at a large dishwasher manufacturing facility. He has been active in CASA/SME and Robotics International. He received GE’s LBG Outstanding Contributions Award and GE’s MABG Managerial Award. His expertise is in quality information systems, statistical process control, data capture and analysis, project tracking and scheduling, and grinding technology. Tran was born on October 10, 1956 in Saigon, Vietnam and resided last in Louisville, KY.

In Memory of …. 
Alumni 

February 2002 
ME Vibrations 
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The following entries were published in the Fall 2001 edition of the *Oread Engineer*. Mining Engineering and Metallurgical Engineering were disciplines that were folded into Mechanical Engineering.

**1920s**
- **Henry G. Schmidt**, a 1923 graduate (BSME) from Cleveland, OH, died on June 16, 1976. Born on April 2, 1900.

**1930s**
- **Glen A. White**, a 1931 graduate (BSME) from Westfield, IN, died on July 19, 2001.
- **John S. Page**, a 1939 graduate (BS Mining Eng.) from LaFayette, LA, died on May 7, 2001. Born on October 26, 1911.

**1940s**
- **Halbert E. Whitaker**, a 1940 graduate (BSME) from McPherson, KS, died on February 14, 2001. Born on September 6, 1915.
- **Melvin L. Hicks**, a 1944 graduate (BSME) from Bohemia, NY, died on April 2, 2001.
- **Frank Dardeen, Jr.**, a 1946 graduate (BSME) from Fort Worth, TX, died on March 1, 2001. Born on October 19, 1926.
- **John R. Murray**, a 1947 graduate (BSME) from Wichita, KS, died on October 19, 1998. Born on June 1, 1923.

**1950s**
- **C. Dean Hawley**, a 1950 graduate (BSME) from Tulsa, OK, died on April 16, 2001. Born on September 24, 1925.
- **Dale E. Bush**, a 1951 graduate (BS Metallurgy) from Yuma, AZ, died on August 24, 2000. Born on December 31, 1924.
- **Eugene W. Hixson**, a 1951 graduate (BSME) from Dayton, OH, died on September 11, 2001. Born on November 24, 1921.

**1960s**
- **Elwin Lee Miller**, a 1960 graduate (BSME) from Topeka, KS, died on April 15, 2001. Born on March 12, 1933.
- **Larry E Thorne**, a 1961 graduate (BSME) from Kansas City, MO, died on December 8, 2000. Born on March 1, 1937.

**1970s**

**Faculty**

- **Elmo Gaylord Lindquist**, 87, died Monday, January 24, 2000, at Lawrence Presbyterian Manor. He was born on November 24, 1912, in Kane, PA, the son of Anders and Helen Lindquist. Professor Lindquist taught engineering at KU for 27 years before retiring. He was a member of the American Society of Mechanical Engineers, American Institute of Industrial Engineers, Rolla Lodge No. 213, A.F. & A.M., Rolla, MO, Lotus Chapter No. 431, O.E.S., Sandwich, IL, and Valley of Grand Rapids, MI, Ancient Accepted Scottish Rite Lodge Council Consistory.

  Survivors include two grandchildren and two great-grandchildren. His wife, Doscia, died in 1983, and a son, Harry Maurice Lindquist, died in 1974. Elmo established the Harry M. Lindquist Scholarship Fund (Kansas University Endowment Association) in memory of his son a few years ago, and the family suggested any memorials be sent to that fund.

  Many MEs will remember Elmo’s Industrial Engineering passion, and at least one graduate has become a busy technical writer because of his encouragement. Perhaps a few alumni can send some memories of Elmo’s classes.

- **Edward J. McBride**, 86, died Saturday, February 5, 2000, at his home in Lawrence, KS after a long illness. Services were held at St. John the Evangelist Catholic Church in Lawrence. Internment was in St. Michael’s Catholic Cemetery, Chester, PA. Professor McBride was born May 9, 1913, in Chester, PA, the son of P.J. and Anna (Maguire) McBride. He earned an undergraduate degree from Villanova University in 1934 and a doctorate in ME from Harvard University in 1949.

  He was a professor at Kansas University from 1952 to 1982, and was Chairman of the Mechanical Engineering Department from 1952 to 1962. He received the HOPE Award for outstanding teaching from the senior class of 1973. Before coming to KU, he worked for Westinghouse Corporation and American Machine and Foundry Corporation. Professor McBride’s areas of specialization included power plant equipment and vibration and stress analysis. He was listed in “Who’s Who in America.” He was a Fellow in the American Society of Mechanical Engineers, and a member of Sigma Xi and Pi Tau Sigma fraternities, St. John the Evangelist Catholic Church, and the Knights of Columbus.

  He married Helen M. Corrigan on August 22, 1942, in Norwood, PA. She survives him; along with three daughters, Mary McBride of Des Moines, IA; Margaret McBride of San Antonio, TX; and Ann McBride of Middleton, WI; a son, Edward J., Jr. of Colorado Springs, CO; a brother, Thomas J. of Wallingford, PA; a sister, Margaret McBride of Swarthmore, PA; and nine grandchildren.

  We do not have many stories involving Professor McBride. Can some of you help us out?
Alumni Update

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, 3013 Learned Hall, Lawrence, KS 66045. Send email to kume@ku.edu or visit our website at http://www.engr.ku.edu/me.

Name_________________________________________________________ Class__________

Address_________________________________________________________

Company________________________________ Title_________________________

News about yourself, your family, and/or your job:

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ME Awards Banquet Reservation Form

The Banquet will be held in the Pioneer/Sunflower room of the Burge Union from 6:30 to 8:30 pm on Friday, April 26, 2002. Dinner includes salad, entrée, vegetable, dessert and coffee/tea; and the cost is $15 per person, $25 per couple. (Seating is limited to 200.) Please fill out this form and return it along with your check to: ME Vibrations Newsletter, University of Kansas, Mechanical Engineering Department, 1530 W. 15th, 3013 Learned Hall, Lawrence, KS 66045.

Name_________________________________________________________ Class (Year)_______

Address_________________________________________________________

Phone/Fax/Email_____________________________________________________

Number of People____________________Amount Enclosed ($15 each or $25 per couple)________________________