



M.E. VIBRATIONS

The Mechanical Engineering Department Alumni Newsletter



September 2001

Message from the Chair

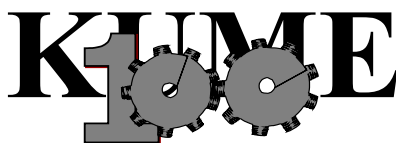
It seems that I'm always telling you how exciting the past year has been, but due to all of the students' and faculty's accomplishments in 2000-2001, I think I can truly say that *this* past year has been extraordinary! Because of the 100+ year heritage on which KUME is built, and the fact that neither the students nor the faculty are willing to rest on past achievements, the resulting activities in 2000-2001 yielded "no dull moments."

KUME students have been quite busy this last year with classes (of course), a variety of design/build/test projects, and volunteer activities. The projects have ranged from the Formula SAE vehicle competition (placing 18th out of 108 universities, our best ever finish!) to the Clean Snowmobile Challenge (CSC) to a manufacturing project for Hallmark Cards in Lawrence. As you are aware from hearing about (or participating in) past projects, each project is designed to simulate many of the actual situations that an engineer encounters: technical aspects, business aspects, communication/teamwork aspects, and ethical/moral aspects. The CSC team demonstrated the value of perseverant teamwork in the face of disaster. Even though beset by countless obstacles, including a "cratered" engine, the eight person KUME team did not give up, but devised solutions to the problems that arose, taking home a first place award in the acceleration run and the sportsmanship trophy. "Hats off" to a superlative team effort!

KUME students willingly gave up their time to help with a variety of events, including Parents' Day, the Engineering Exposition, and High School Engineering Design Day. Our students also actively participated in the student sections of the Society of Automotive Engineers and the American Society of Mechanical Engineers, as well as Pi Tau Sigma, the national ME honor fraternity. Our students have freely given time and energy to promote the Mechanical Engineering profession to a wide variety of audiences, letting people know what an exciting career a degree in ME can provide. The students of today have continued to build upon the strong heritage of committed Jayhawk engineers of which all of you are an important part.

*In Our Second 100 Years
of Excellence*

University of Kansas Mechanical Engineering



1900-2000

In the fall of 2000, two new faculty members joined the Department, bringing our total number to eleven. Drs. Ken Fischer and Lorin Maletsky have brought with them an enthusiastic love for teaching and a dedication to maintaining currency in their fields through leading-edge research activities. Already, their contributions to the overall well-being of KUME are obvious. (Please refer to separate articles on them and their work elsewhere in this newsletter.) This fall, two additional faculty members have joined us. Drs. Lisa Friis and Sara Wilson have added their respective expertise areas of material science and controls to our Department. Both are applying their interests to our major Biomechanics thrust in KUME. We're happy to have all four of our recent faculty additions, the new perspectives that they bring, and the leadership they provide in their skill areas. In addition, we believe that our two new female faculty members will provide valuable role models for young women who are interested in the mechanical engineering profession.

In 2001, we will search for one additional faculty member in order to bring us to full strength. However, our *greatest* emphasis will be upon recruiting new Mechanical Engineering students, both at the undergraduate and graduate levels. As you know, quality students are our "life blood." We will be making the benefits of being a KUME graduate known through our web site, by distributing brochures to high school students and guidance counselors, Engineering Exposition, and through visits to area high schools. Even with these methods of getting the word out, alumni word of mouth is one of the most powerful tools in promoting KUME as *the* place to be. Please feel free to let us know if you are aware of a potential ME student preparing to make that all-important decision of where to attend college. We thank you for your enthusiastic support and look forward to hearing from you or welcoming you to campus for Homecoming (October 13, 2001), our annual Awards Banquet (April 26, 2002), or any other opportunity that you may have.

Let's Rock Chalk, ME Jayhawks!!

**DON'T FORGET TO PUT THESE
DATES ON YOUR CALENDAR:**

**HOMECOMING
ON
OCTOBER 13, 2001**

**KUME AWARDS BANQUET
ON
APRIL 26, 2002**

Meet the New Faculty Members



Kenneth Fischer

Dr. Ken Fischer's research interests are in bone biomechanics and adaptation, soft tissue mechanics, and upper extremity mechanics. Dr. Fischer received his B.S. in Mechanical Engineering from Oregon State University in 1985. After four years of industrial experience at Boeing Commercial Airplane Company, he returned to school for his Masters and Doctoral degrees in Mechanical Engineering from

Stanford University, in 1990 and 1995, respectively. During his graduate studies he began his work in experimental and computational bone and joint biomechanics. During five years as an assistant professor of Orthopaedic Surgery at the University of Pittsburgh, Dr. Fischer also became familiar with soft tissue mechanics. His research is currently funded by an NSF EPSCoR First Award and a Whitaker Foundation Transitional Award. His biomechanics courses include Bone Biomechanics, Continuum Mechanics for Soft Tissues, and Basic Tissue Mechanics and Biodynamics. When he's not immersed in biomechanics, he can most often be found working in the yard or playing with his daughters, ages 1, 2, and 3. For more information about Dr. Fischer, his teaching and his research, please email him at fischer@ku.edu or refer to his web page at http://www.engr.ukans.edu/me/kf_homepage.htm.



Elizabeth Friis

Dr. Lisa Friis is excited about joining the Mechanical Engineering Department at KU. Her research and experience in the fields of Bio-materials and Biomechanics will fit well with the expertise of other KU faculty. For the past six years, Dr. Friis has been performing composite materials related re-search on the spine and spine replacements. At KU, she plans to build a fully functional research lab facility

to study the human spine and help provide the means for repairing vertebrae and disks. Dr. Friis' biomedical background began with her B.S. in Biomedical Engineering in 1985 and M.S. in Mechanical Engineering at the University of Iowa in 1987. She then joined the research team at the Orthopaedic Research Institute, Inc. (ORI) in Wichita, KS. In this position, she worked with engineering students from Wichita State University and orthopaedic surgeons, residents and medical students from the University of Kansas School of Medicine - Wichita on orthopaedic-related research involving biomaterials and biomechanics. While continuing to work full time at ORI, she attended Wichita State University as a part-time student and completed a Ph.D. in Mechanical Engineering in 1994. Dr. Friis' research has included topics such as evaluating the rigidity of external pelvic fixation, patella stresses following bone block removal, and the development of composite bone cements. She also had the opportunity to coauthor a book entitled "A Primer of Biomechanics" that was written primarily for education of

orthopaedic surgery residents and engineers new to the biomedical field. Currently, her main areas of research involve development of and testing with mechanical analogue spine segments and mechanical evaluation of bone cement. Dr. Friis is looking forward to working with students and faculty at KU and KUMC. For more information about Dr. Friis, her teaching and her research, please email her at lfriis@ku.edu or refer to her web page at http://www.engr.ukans.edu/me/eaf_homepage.htm.



Lorin Maletsky

Dr. Lorin Maletsky was excited to join the faculty in August of 2000 in the mechanics and design area and as part of the new biomechanics research group. As director of the newly created Experimental Joint Biomechanics Research Laboratory, Dr. Maletsky and his research students will be investigating the mechanics of the joints of the human body, initially focusing on the knee joint. The centerpiece of his lab will be a dynamic knee simulator that was designed

by Dr. Maletsky and is currently under construction. This machine will be able to duplicate the loads and motions of a human knee during different activities such as walking or running. A current project involves examining sports injury of the anterior cruciate ligament and different reconstruction techniques. Dr. Maletsky hails from New Jersey where he received his Bachelors degree from Rutgers University, The State University of New Jersey. He continued his graduate studies in mechanical engineering at Purdue University where he earned his doctorate in 1999 and acted for one year as a Visiting Assistant Professor. At KU Dr. Maletsky is teaching Mechanics of Materials, Mechanical Engineering Design Process, and Applications of Biomechanics. As new homeowners in the Lawrence community, Dr. Maletsky and his fiancée Rebecca seem to be spending all of their time happily fixing up their new home. For more information about Dr. Maletsky, his teaching and his research, please email him at maletsky@ku.edu or refer to his web page at http://www.engr.ukans.edu/me/lm_homepage.htm.



Sara Wilson

Dr. Sara E. Wilson comes to us from her post-doctoral position at the University of Virginia. Dr. Wilson's primary research interests are in the motion of the spine and control of that motion by the torso musculature. Her research has implications in the study and treatment of low back pain, scoliosis and osteoporotic vertebral fractures. Her research will

fit in quite well with that of the faculty in the Orthopedics Department at the KU Medical Center in Kansas City. Dr. Wilson has also conducted extensive studies in ethics—an increasingly

important topic for engineers. It is likely that Dr. Wilson will be developing a course in Engineering Ethics for KUME students. She received her B.S. in Biomedical Engineering from Rensselaer Polytechnic Institute in Troy, N.Y in 1992. This was followed by an M.S. in Mechanical Engineering and a Ph.D. in Medical Engineering from Massachusetts Institute of Technology. She claims no hometown, having lived in twelve cities in nine states (including Alaska and Hawaii). She is teaching classes in Biomechanical Systems and Control Systems. In her spare time, Dr. Wilson plays the piccolo, bicycles and kayaks. For more information about Dr. Wilson, her teaching and her research, please email her at sewilson@ku.edu or refer to her web page at http://www.engr.ukans.edu/me/sw_homepage.htm.

For more information about the Biomechanics program at KU, or to contact our new faculty members, you may also refer to our web page at <http://www.engr.ukans.edu/me>.

Professor Robert Sorem Named Associate Dean

ME professor Dr. Robert Sorem recently took on the position as Associate Dean for the School of Engineering. Although he will be handling many administrative tasks, including the admission of undergraduate and graduate students as well as student recruitment activities, Dr. Sorem will still teach one course per semester in Mechanical Engineering and will continue to advise the student section of the Society of Automotive Engineers. Dr. Sorem takes with him to his new position a strong commitment to make the students' experience in engineering most rewarding by adequately preparing them for the work environment.

Design Project Team Results

Formula SAE Team Takes 18th

In May of this year at the annual competition in Pontiac, Michigan, the FSAE team, led by KUME senior Chris Dundon and advised by Professor Robert Sorem, placed 18th out of 108 university teams from across the world! This is simply outstanding, and our best performance to date. Through extensive planning and hard work, the thirty+ team members, 14 of them seniors, had their fully composite chassis car (the only fully composite chassis at the competition) ready for testing six weeks before the May 16-20 competition. This allowed them to have time for "ironing out the bugs" before race days and get comfortable driving the vehicle -- to their commendable finish. At the competition, they had to defend their design, present a marketing/manufacturing plan, pass several safety requirements (such as rollover, braking, noise, and speed of driver egress), and compete in four dynamic events: acceleration, skid pad, autocross, and endurance/fuel economy.

Congratulations to the senior team members:

Meshal Alshammari, Jeff Bluvus, Neal Camber, Sean Dolyk, **Chris Dundon - Team Captain**, Sean Fransen, Peter Gillespie, Scott Kitsmiller, Mike Meakins, Mike Mercer, Scott Osburn, Stuart Peck, Tom Southern, and Doug Vanhooser.

And many thanks those who contributed financially to a very successful year:

Leo Abels, Brian R. Dundon, Mark Dundon, Robert Dundon, Aaron T. Becker (Sauer-Danfoss), Stephen F. Bowyer, John Eckhardt, Ford Motor Company, Robert P. Feighner, O.J. McDonald, Jr., Midwest Wind Tunnel Models, Kristopher Mixwell, Richard L. Rajewski, M.D., Raytheon Aircraft, Red Ink Racing, James Sorem, Gregory E. Welch, KU School of Engineering, KU Mechanical Engineering Department.

For more information, please see the KUME FSAE web site: <http://www.engr.ukans.edu/~formula/> and the FSAE standings web site: <http://www.sae.org/students/fsaeresu.htm>



Human Powered Vehicle Team Takes 7th

The six person HPV team (Jake Davis, Jessica Lemberger, Robert Lewis, **Billy Price - team captain**, Sam Samman, and Toshihar Takashima; advised by Prof. Dougherty) took their aerodynamically designed "bi-cycle" to the Reno, NV competition this year on April 27-29, 2001, coming away with a tie for first in the esoteric category and 7th place overall out of 26 competitors. The team worked together and raised funds to support their project. They first designed and built a prototype, through which they gained valuable experience for the final design. The resultant composite aerodynamic fairing brought them several very positive comments at the competition. Obviously, design and human conditioning were important. The vehicle was judged on the basis of appearance, quality of engineering design, 100-meter speed, and 40-mile endurance. The team gained valuable experience giving a formal engineering presentation as another component in the competition.

The team would like to thank their contributors for financial support this year:

Boeing Co. Charitable Trust, General Plastics Mfg., Johnson Controls, New Belgium Brewing Company, Inc., KU School of Engineering, and KU Mechanical Engineering Department.

For more information, please see the KUME HPV web site at: <http://www.engr.ukans.edu/~hvp> and/or the ASME HPV standings web page at: <http://www.asme.org/hpv/>



Snowmobile Team Takes Home Sportsmanship Trophy

The eight person Clean Snowmobile Challenge team (Star Anderson - AE, **Milburn Berends** - team captain, Richard Coughlin, Tim McNulty, Robert Richards, Mike Unruh, Gonzalo Valdovinos, and Jörgen Wahlquist; advised by Prof. Sorem) took their vehicle to Jackson Hole, WY from March 26th through April 1st of this year to show off the qualities of their Jayhawk design. As with our other vehicle teams, they had to learn to work together and raise funds to support the project. At the competition, KU took first place in acceleration, but had the misfortune of a blown engine. Although this took the team out of contention, they did not give up, but worked night and day to repair their vehicle to complete the remaining events (such as the hill climb) and were able to make their design presentation. For not surrendering in the face of overwhelming odds, they were awarded the Sportsmanship Trophy. We're proud of this team for venturing into "untried territory" with a snowmobile in Kansas; and we're extremely proud of how they represented us at the competition.

The team would like to thank their sponsors:

Anchorage Snowmobile Club, Boeing Co. Charitable Trust, Brainerd Snodeos, Inc., Four Seasons Rental, Inc., Forrest and Sally Hogle, Johnson Controls, Lewis Clark Snowdrifters, Nebraska State Snowmobile Association, Oregon State Snowmobile Association, Pocatello Pathfinders, Salmon River Snowmobile Club, City of Sheridan CVB Commission, Snowcountry Explorers, Vermont Association of Snow Travelers, Incorporated, KU School of Engineering, and KU Mechanical Engineering Department.

For further information, please see the KUME Snowmobile web page at: <http://www.engr.ukans.edu/~snowmob> or the SAE CSE standings web page at: <http://www.sae.org/news/csc2001win.htm>



Hallmark Senior Design Team

A four-person team made up of seniors Brian Irvan, **Adam Liebergen** (team captain), Agnes Rémond, and Loletta Wong had the opportunity to solve a real manufacturing problem for Hallmark Cards in Lawrence. The team's charter was to help in developing an assembly line piece of equipment so that it would become much more versatile and capable of quickly being reconfigured to handle a variety of setups - - instead of needing one setup for each process. This was a real engineering job with real potential payoffs if successfully completed. It was also a challenge, since simplicity and cost effectiveness were mandatory. Although this team did not have to raise funds for their project, they had to propose a technical approach and budget - both satisfactory to the client. The team was also responsible for meeting design specifications of the client with a reasonable cost-benefit ratio. The design that these seniors developed was quite successful and is currently in use at Hallmark. The team and the ME Department are grateful to Hallmark for supporting KUME and for the opportunity to work on a real engineering problem.

ROTC Boat Trailer Senior Design Team

Seniors Robert Allison, **T.J. Flora** (team captain), and Justin Poplin worked on designing and building a trailer for the KU Navy ROTC program capable of safely transporting [laser] boats for the Navy training/competition. Just as with Hallmark team, fundraising was not an issue, but a proposed technical approach and a closely followed budget were required. The engineering challenge was real, requiring the solution to be held within budget and keeping the design as straightforward as possible. The Navy was pleased with the resulting trailer, and it is currently in use. The team and Department appreciate the Navy's support, and the opportunities/learning experiences provided.

KU-Wide Open House on October 6, 2001

This newsletter should arrive just around the date for which the open house is scheduled. Just one month after the latest KU Capital Campaign (KU First) was initiated, KU is to hold its campus-wide open house. We hope that you could make it to Lawrence that Saturday, and see the exhibits of the School of Engineering and Mechanical Engineering. A large tent would be set up on the south lawn of Learned Hall where many of the student and faculty activities are on display and demonstrated. This is a great time to see what's changed since you graduated from ME and maybe meet up with some old friends. We definitely enjoy showing everyone around the ME Facilities. If you are not able to attend, we'll look forward to seeing you at the next KU or School event, and be happy to provide a tour then.

Biomechanics Option in Mechanical Engineering

By Professor Carl Luchies

Biomechanics (the application of mechanics to biological systems) has officially arrived in KU-Mechanical Engineering. The department recruited Dr. Luchies in 1996 with the goal of fostering research and educational programs in biomechanics. Clearly, we've come a long way since 1996. With the addition of Drs. Fischer and Maletsky in 2000 and Drs. Friis and Wilson in 2001, each with expertise in biomechanics, the department's goal has become a reality. A new undergraduate biomechanics option has been established and a graduate level curriculum is being developed with the goal of offering a graduate level degree in biomedical engineering in the future. Undergraduate/graduate courses are being offered such as: Basic Biodynamics and Tissue Mechanics, Senior Capstone Design Projects in Biomechanics, Biomechanics of Human Motion, Experimental Methods in Biomechanics, Bone Biomechanics, Continuum Mechanics for Soft Tissues, Applications in Biomechanics, Biomaterials, and Biosystems. Research students at the undergraduate, graduate, and post-doctoral levels are involved in ME Biomechanics. The biomechanics faculty are conducting research in collaboration with researchers at the KU-Lawrence campus, the KU-Medical Center in Kansas City, and other research universities. More information can be found at: www.engr.ukans.edu/~biomech/.

KUME Graduates of 2000-2001

The Mechanical Engineering Department would like to congratulate its graduates of this year and wishes them the very best in their careers and life. They were:

Summer 2000

Thammasid Chindahporn; Iain Shigeoka, PhD; Antonis Stylianou, MS; and Matthew Thomas

December 2000

Phil Brown; Joel Carlberg; David Cytrynowicz; John Dreher, PhD; Dan Gonzales; Timothy Ledbetter; Jianhua Li, PhD; Scott McVey; Kusol Prommul, PhD; Keith Rodgers; Jean Sarver; Michael Swofford; Bradley Trees; Jason Wendel; Cuiping Zhao, MS;

May 2001

Robert Allison III; Meshal Alshammari; Christy Asher; Richard Barraclough; Milburn Berends; Chris Bidnick; Jeremy Bodecker; Richard Coughlin; Bassam Delbany; Christopher Dundon; Andrew Fairchild; Thomas Flora; Peter Gillespie; Kenneth Irvan; Abel Leon-Fuentes, MS; Adam Liebergen; Jessica Lemberger; Timothy McNulty; Michael Meakins; Michael Mercer; Stuart Peck; Allen "Justin" Poplin; Aditya Shiralkar, MS; Michael Unruh; Douglas VanHooser; Yongseok Won; and Loletta Wong.

Annual Awards Banquet

At the April 26, 2001 Awards Banquet, the following students were acknowledged for their outstanding achievements while pursuing their academic careers in KUME. We are proud of these students and grateful to the donors who've made possible the following awards, allowing us to honor our outstanding students.

Pi Tau Sigma Initiates

Ghazi Abdulfattah; Robert L. Allison, III; Chadd Clary; Chris Dundon; Andrew R. Fairchild; Joe Fanska; David Latta; Allen Justin Poplin; Justin D. Rajewski; Robert C. Richards II; Samer Samman; Ricardo Santos Izaguirre; Philip Andrew Templet; and Loletta Wong

Charles J. Baer Scholarship

Scott Chapman

Roger T. Blades Scholarship

Ross Lohrmeyer

Wesley G. Cramer Scholar Award

Robert Lewis and Michael Swofford

Exxon Educational Scholarship

Kenneth Irvan; Scott McVey; and Michael Swofford

Zimmerman Graduate Fellowship

Peng Geng; Min Hou; Jian Kong; Hua Liu; Yong Seok Wong; and Feiqi Zhang

Phillips Petroleum Scholarship

Chazi Abdulfattah; Jacob Albers; Chadd Clary; James Cronin; Matthew Grise; Andrew Pull; and Michael Unruh

Wilbur E. & Mina Wyatt Memorial Scholarship

Juan Cordova; Min Hou; Jian Kong; Hua Liu; Liliana Ortega; Aditya Shiralkar; Pushpal Swarnkar; Yong Seok Won; and Feiqi Zhang

Outstanding Senior Award

Michael Swofford

Outstanding Leadership

Chris Dundon

Outstanding Service

Andrew Fairchild

Robert M. Carey Scholarships

Undergraduate:

Tamatane Aga; Bethany Anderson; Jeremy Bodecker; Scott Chapman; Bassam Delbany; Ryan Dodd; Brian Hannon; Charles Henry; Jameson Jones; Andrew Knopp; David Latta; Robert Lewis; Andrew Lockwood; Patrick Nuss; Molly Pape; Justin Poplin; Justin Rajewski; Clinton Rahjes; and Brandon Warner

Graduate:

Ali Ahmadi; Max Bona; Bryce Baker; Trent Guess; Nayak Hebri; Greg King; Melissa Kirk; Jianhua Li; Amyn Rajwani; Carlos Schenstrom; Antonis Stylianou; and Cuiping Zhao

Henry Nottberg, Jr. Scholarship

Robert Allison III

Lindquist Family Memorial Award

Jeremy Bodecker; Thomas Flora; and Scott McVey

At that same banquet, Dr. Robert Sorem was recognized for his service to the Department as he took on his new Associate Dean's position. Dr. Carl Luchies was recognized with the Cramer Award, Dr. Terry Faddis received the Outstanding Faculty Member Award from the students, and Charles Gabel was given the Outstanding Staff Member Award by the students.

The 2002 Awards Banquet will be on **April 26, 2002** (a Friday evening). We would like to **extend a special invitation to you** to attend this Banquet. Please put this date on your calendar, and plan to help us celebrate our students' accomplishments. We will be sending official invitations in March of 2002.

KUME Memoirs by LaRoux Gillespie

(Please write down your memories and send them to LaRoux directly or to him care of the Department; and we'll get them to him)

Who is this professor from the past?

He was born in a stone house in Marshall County, the son of a Civil War veteran born in Wales and the son of an immigrant Norwegian mother who was orphaned on the trip across the Atlantic. He was the first member of his family to attend college. He recalls Kansas at such an early time as to have seen wild wolves and he recalls his mother having had at least minor difficulties with wandering Indians.

After finishing high school in Frankfort, he attended Baker University because he didn't have sufficient entrance requirements to enter KU. Later he notes, "While I was still in high school they were

building a railroad from Topeka to Marysville, Kansas, and ultimately to Lincoln, Nebraska, as a shortcut from Kansas City to Denver, which previously had to go to St. Joe and then west to Denver. And, it was very interesting to high school kids to go out whenever possible and watch those fellows with that transit work." That led to his going into the School of Engineering.

"I went to Idaho in the fall of 1911 and joined some schoolmates at the construction of Magic Dam on the Wood River about 40 miles north of Shoshone. I went in to see Dean Marvin and told him about this opportunity and he said, 'with Raymond's consent you can do your English composition by correspondence and you could go to Idaho now.'

After a year I returned to KU and I went in to see Dean Marvin and pay my respects and he wanted to know what I had been doing. And I told him about Magic Dam and Wood River. And he said, 'Well, that is very interesting. Can you teach?' And I said, 'Yes sir.' And, he said, 'Well, we have a man here that wants to quit and he'd be better off and we'd be better off if we let him quit. Can you teach descriptive geometry?' And, I said, 'Yes sir.'

When I finished the term teaching descriptive geometry, apparently with the success of everybody concerned, I was looking for another job and I went in to see Dean Marvin and he said, 'Why do you want to quit?' And, I said, 'Because I have to have a job to live.' And, he said, 'We thought you were going to stay on here and teach.' After teaching two years, or a year and a half at KU, I talked with an alumnus who had been at Cornell for two years, a fraternity brother, and I asked his advice about continuing to teach at KU. And he said that after two years you are practically stuck with what you are doing. It would make a big difference if you'd go someplace and get a second degree. And he suggested that I attend Cornell and get an advanced degree."

In June 1914, our mystery professor married Anna Barber, a girl he had known all his life. They moved to Cornell at Ithaca, New York where he got a Master's Degree in Civil Engineering with a hydraulics thesis.

This professor was a faculty member at KU from 1912 until retirement in 1955, except for a brief period of consulting work at Nitro, West Virginia, during World War I, and a period on the engineering faculty at the University of Minnesota from 1922-1928. He taught mechanics and in particular fluid mechanics. He was soft spoken, but loved to tell stories. He was a cigarette smoker and had a good supply during the war. During final exams he allowed students to smoke.

He notes, "They started a stadium in the Fall of 1921. Student help was unavailable generally, as it sometimes is. To get some assistance in making the usual surveys around a construction, I went over to see if I could get Paul Endacott. And, I found him at work up in the loft building horse collars out of rye straw. Paul Endacott and I were responsible for the setting of pegs here and there for the construction of the stadium."

During World War II, he says, "Most of the men who could serve in the military capacity were already in uniform, and we got teaching help from wherever we could get it. We even had Professors of English teaching descriptive geometry."

He was regarded as one of the best teaching faculty members in any of the schools. For 60 or more years, the students under him continued to make contact with their old professor.

Two specific individuals who were closely connected with him in his student days included Alexander Wetmore, for many years at the Smithsonian, and Wallace Pratt, Chief Geologist of Standard Oil of New Jersey.

This is a tough challenge since he was one of our earliest professors and he only taught a few classes that ME students took. Who was this early pioneer?

It was Jacob Oscar Jones, Professor, and from 1943-1947, the Acting Dean of the Engineering School. J.O. Jones died Feb. 2, 1982 in Lawrence. Do any of our readers have any memories of this professor?

Corrections

In the last newsletter, we incorrectly stated the date of graduation for Matt Black. Matt was [at that time] part of the newest edition of Father and Son graduates from ME. Matt graduated with his BSME in 1996. Pete, the older half of this duo graduated with a BSME in '65, and an MSME in '72. Matt is currently Product Engineer with Fairbanks Morse in Kansas City, Kansas. Pete Black recently retired as Director of Program Management from Kansas City's Honeywell plant and continues to serve on KU's Engineering Advisory Board.

Another Father and Son Combo

Peter Gillespie graduated in May 2001 in ME following his father some 35 years earlier. LaRoux Gillespie graduated in 1965 and garnered his BSME from KU in 1968. LaRoux works at Honeywell in Kansas City and Peter is relaxing this summer in China. Peter said that, after this year's Formula One effort, he needed a break.

ME Alumni Reminisce...

Mou-Hui King, BSME '44, responded to both our January and our July 2000 articles. He notes, "Your January 2000 issue arrived yesterday. I immediately opened it. As I read the memories of David Gray and the others, scenes of my most formative years at KU passed in front of my eyes like a slide projector."

"I was a student between 1940 and '44. Mr. Gray's article said things I was not aware of, and I thank him for bringing them up in this article.

Regarding the slide rule: For some unknown reason it was the fad to 'wear' it dangling from a clip attached to one's belt. Before the V-12 program came on, all the students were in civilian clothes. Corduroy pants were the 'correct' dress, and the more soiled the better. So a clipboard in hand, a slide rule dangling from a belt holding up soiled corduroy pants. There you have a student in the 'Engine School.'

I remember the smoking area in the basement. It was inside the front basement entrance (old Marvin Hall). Of course that was used only on days of nasty weather. On days of beautiful weather, smoking was on the front steps. In those days it was considered 'cool' to hold the cigarette between the thumb and middle finger and to flip away the butt. The last time I did that was when the butt flew toward the eye of a fellow Marvinite. His name was Stimson. I don't remember his first name. Fortunately no harm was done and I apologized properly to him. Incidentally, I have quit smoking and haven't lit up for the past 40 years (I am 76)."

King's descriptions of the professors Brown, Jones, Tait, and others brought back fond memories. "I have had the occasion to return to the campus several times over the past few years; and time and time again, in private and in public, I have said and I feel deep in my breast that those professors made me what I am today. What little I did in my career, those men gave me the impetus."

"This letter is to encourage you to publish more articles like the one by Mr. Gray. There must be corners in some alumnus' memory where things may be shared by all of us."

He later notes, "In the section 'Oldest Alumni,' I noticed two names, Tsyn-Kai Fung and Kuo-Chih Hsu, both with the class of 1949. Both gentlemen now have different spellings for their names to follow the standard Chinese Romanization. Mr. Fung is now known as Junkai Feng. Dean Locke now has his address. Mr. Hsu's name is now Guozhi Xu."

Mou-Hui King is one of KU's Distinguished Engineering Service Award winners and an excellent speaker.

Kenneth Razak, B.S.M.E., 1939, M.S.M.E., 1943 notes, "I read with much interest the remembrances of David Gray in the January Newsletter. I must say, however, that his recollections are recent history. Let me give you some earlier ones."

"I enrolled in engineering in the Fall of 1935, fresh off the farm in Collyer, Trego County, in Western Kansas. Lawrence was the farthest east I had ever been. I had been there in the spring taking Summerfield exams (I didn't get a scholarship), and, with dust storms raging in Western Kansas, Lawrence looked like an oasis.

I continued my farming during my freshman year. I received a CSEP (College Student Employment Project) job and was assigned to the buildings and grounds gang. We were given the task of moving most of a potato field east of the airport to the front lawn of Watson Library. Not all of the potatoes had been harvested and the gang managed to scrape up a basket or two.

My first class recollection was Descriptive Geometry. Professor George J. Hood was the teacher and the author of the textbook. I did well enough that Hood remembered me and when I was a senior he had me teach a section. Talk about getting an early break. Professor Hood was also my freshman counselor and I still remember some of the advice he gave me about study habits.

I also took mechanics, both statics and dynamics, from Professor Frank Brown, again from the textbook he had written. I recall only one other teacher in my college career that could present such clear and explanatory drawings on the chalkboard.

A little vignette including Hood and Brown resulted from a no-smoking rule in University buildings, about 1938 as I recall. Prof. Hood appointed himself as a hall monitor and posted himself at the front exit from Marvin Hall. Woe to a student who lit up before leaving the building! Hood would snatch the cigarette with a strong admonition to not repeat. Prof. Brown was coming from his office and saw Hood at his post. He ducked back in the hall and lit up his pipe. After fogging the corridor he walked to the entrance hall, paused in front of Hood, took the pipe from his mouth and inquired 'Catch anybody yet, George?'

This no-smoking rule resulted in an appropriate Halloween prank. A group of students transported a two-holer outdoor privy and planted it on the front lawn of Strong Hall. It was a beauty, complete with Victorian carvings and filigree. Across the front was a sign reading, 'Mallott Hall, No Smoking.'

I had the additional good fortune to take Hydraulics from J.O. Jones, also using his textbook (I still have all three of these textbooks). J.O. Jones is not to be confused with Frank E. Jones who taught engineering drawing. F.E. Jones was a stickler for lettering--a dividend that paid off when I wrote my thesis.

The buildings for Engineering were Marvin Hall, Engineering Labs and Fowler shops. All of the engineering labs were in one building, electrical engineering on the north and Mechanical and Hydraulics in the southern portion. A mezzanine balcony was located in the M.E. lab dedicated to aeronautical engineering. This was my primary interest and I spent many hours building my models for my master's thesis. Hanging on the wall were the wings of the TravelAir Mystery S with the number of 1313. This was from the airplane flown by Frank Hawks.

On the main floor were the M.E. machines, including a Unaflo and a Corliss steam engine. I was a lab assistant and taught how to time the Unaflo D-slide valve engine and take indicator diagrams. There was something about a steam engine that exuded the impression of power. I still remember the huge steam engine that we saw when we were seniors and took a week for field trips to Kansas City. We went through the Corn Products plant where a steam engine furnished all power and process steam. It had a flywheel about 24 feet in diameter and as I recall was about 300 h.p.

Professor Hay was head of M.E. and was my thesis advisor. He was either horribly overworked or exceptionally inefficient because his roll-top desk

looked like it belonged to W. C. Fields, almost to the angle of repose. One small drawer, about 3x5-card size, was labeled A-Z, and I often wondered what it could possibly contain.

The Engineering Open House was an annual event and all departments competed for the best operating exhibit. The M.E. department had a popcorn popper that featured individual attention for each kernel. Only one kernel was popped at a time, salted, buttered and dumped in a sack. Quite an assembly of rotating platforms, cups heaters, plungers, etc. The main problem was quality control. It took most of the exhibit time to get the heat adjusted to prevent burning, to retain the kernel when it popped, to not over-salt it, etc.

I had the good fortune to room in the same rooming house as Fred Gustafson who was a graduate student and instructor in Aero engineering. Aero at that time was in the M.E. Dept. as an option. It was the option I chose, and Gustafson accepted my offer to help him keep the wind tunnel clean. He was doing research on rotating wing systems, autogiros and helicopters, and I picked up much knowledge from him, including knowing how to run the wind tunnel. It was under the west side of the football stadium and few students, other than those who chose the aero option, knew about it. I understand that it has been torn down in the past couple of years. The tunnel was built in the late 20's and financed, at least partially, with a Guggenheim grant. When Gustafson completed his degree and went to work for NACA (predecessor to NASA), I was the only one left who knew how to run the tunnel, and I became an assistant instructor in my senior year.

In 1939 KU was one of 13 or 14 universities that was selected to participate in the Civilian Pilot Training Program. The idea was to start developing pilots since a strong indication existed that we might be drawn into the war. Professor Earl Hay had been responsible for developing the aero option in M.E., and I was one of the few students taking the program. Under Professor Hay, I was asked to be the coordinator for the program. The program consisted of both ground school and flight training. KU was to give the ground school, and the Ashcraft Bros. at the Lawrence airport gave the flight training. Since I was the only one around with even minimal qualifications, I taught the ground school. This included topics of meteorology, navigation, engines, aerodynamics, etc. All were taught from the standpoint of a pilot--not engineers. I immersed myself in the texts, took an examination over each and received a ground school instructor rating in 7 subjects.

Flight training consisted of Primary and Secondary. Primary, about 40 hours, resulted in a private pilot's license. Secondary was given in Waco UPF biplanes and consisted of acrobatic training. I definitely wanted to fly so I registered for the flight training. However, all persons taking the flight training had to also take the ground school. I was therefore in the unusual position of taking a course I was teaching. I was sure that I could ace the final in the course, but the FAA double-crossed me by sending me to Kansas City to take a special experimental exam. I still passed.

I think the opportunity to get a pilot's license and take aerobatic training was almost equal to the opportunity to get an engineering education. I have profited from both.

I graduated in midyear 1939-40 and was assigned to the class of 1939. I completed my Masters degree in 1942 and was appointed assistant professor in the newly organized department of Aeronautical Engineering. In 1943 I was asked to come to Wichita to teach aeronautical subjects to non-aero engineers in the local plants and did so, joining the faculty of University of Wichita. I was the first full time professor in engineering at U.W. After the war, returning veterans inundated us, and the local companies provided funds to build a 7x10 wind tunnel. I state without reservation that my engineering education, in conjunction with flight training, prepared me very well for a productive career."

Ken Razak went on to serve as a Dean at Wichita State University, was head of the Kansas Industrial Extension Service, and also taught at K-State.

Alumni News

Carl McClung, BSME '62, Manager of Large Engine Technology for Caterpillar, and a former member of KU's Mechanical Engineering Advisory Board, is responsible for the large engines (500-4,000 kW, diesel and gas) and the new engine design and product development activities. He has just completed his term as Chairman of ASME International's Internal Combustion Engine Division. His wife Beverly and he are enjoying life as Jayhawkers in the heart of Purdue Boilermaker country.

LaRoux Gillespie, BSME '65, MSME '68, was part of the team that explored merging of the ASME and the Society of Manufacturing Engineers in 1999. That provided an exceptional insider's view of the strengths of both ASME and SME. Both are leaders in their field and are supported by local, regional, national and international experts. Both have been supported by many KUME grads. There are many similarities and many differences in how they expand the fields of their excellence, but our ME alumni are among the leaders in both groups. For many graduates, their involvement is a significant part of their professional development as well as a source of many life long friendships. KUME in the past had student chapters of both (SME was previously known as the American Society of Tool Engineers and later as the American Society of Tool and Manufacturing Engineers). LaRoux recently finished a second stint as Director of SME, and in 1965 received ASME's Arthur L. Williston Medal and Award. He credits Prof. Elmo Lindquist with encouraging him to write, which resulted in the Williston and many other awards. He now has published 16 books and 180 articles and reports. He now has material for another 40 books.

James Amos Wiley, BSME '51 and MSME '60, is a retired aerospace engineer for NASA MSFC. He resides in Las Cruces, NM. Jim is the father of two children and grandfather of two.

Gordon Sieker, BSME '60, is a retired Defense Contract Administration Chief Quality Assurance Division. He has been married to his wife Sara for 37 years, has 3 sons, all of which are CPAs. In 1998 he and his wife rode bicycles along the Danube River from Deggendorf, Germany to Vienna, Austria. It was full of beauty and history.

Robert M. Shurtz, BSME '64 of Wichita died December 29, 1999.

Charles W. Clutz, BSME '33, died April 21, 1994. (Charles was listed as missing in the KU alumni database until recently.) He was a supervising engineer in the equipment Manufacturing Division of Eastman Kodak.

John Calvin Sells, BSME '48, died January 24, 2000 in Encino, CA. John was born in Effingham, KS on September 8, 1924

John Sells was the youngest of four sons of Bertha and William Sells. He played the coronet in the high school band and participated on the debate team. He won the second place medal in the Kansas State Spelling Contest. He was a member of the high school track team, specializing in the long jump.

John delivered newspapers on his bicycle in the rain and snow, throughout the farming community. He was also the delivery boy for the family grocery and hardware store.

John received a scholarship to the University of Kansas before serving as an army lieutenant in World War II. The highlight of his professional career was spent at Hughes Aircraft Company working on the Surveyor Surface Sampler for the moon landing.

He met his wife Nancy while working at Westinghouse Corporation in Philadelphia. They were the parents of Heather, children's librarian, and Peter, now deceased. Peter and Heather were active in the church youth group and sang in the choir. During Peter's illness with Aplastic Anemia, a bone marrow disease, John worked diligently in educating other patients and families throughout the U.S.

John's hobbies included tending his roses, listening to big band music, barbecuing, reading mystery novels, and being a sports enthusiast (especially with his Kansas Jayhawks). He made friends easily from various social, political, and business groups. He will be sorely missed.

We would love to hear from you, so drop us a note at Mechanical Engineering, 3013 Learned Hall, Lawrence, KS 66045. You can also email us at kume@ku.edu or visit our website at <http://www.engr.ku.edu/me>.