



# **M.E. VIBRATIONS**



## **The KU Mechanical Engineering Department Alumni Newsletter**

January 2003

### **A Message from the Chair**

This issue has a wide range of news items regarding our current students, our alumni and our faculty (past and present). Projects, updates and historical stories are just some of the subjects of the included articles - - all showing that our ME people are the very best.

During May of 2002 in Pontiac, MI, our Formula team demonstrated the capabilities of its sleek competitive vehicle which placed 23<sup>rd</sup> in a field of 125 university teams from across the world. Our Human Powered Vehicle team traveled to Reno, NV in April of 2002. Even though they did not fare as well as the Formula team, the HPV team came away from the competition with an excellent educational experience. Other groups of our seniors participated in projects for clients, wherein they designed, fabricated and installed solutions for various companies and organizations. One team designed and installed an up-to-date controller system for the turbine gates of a small local hydroelectric power plant. Three teams worked on biomechanical problems. One team developed an automated book reading/handling system for a wheelchair; another team developed an apparatus for measuring the coefficient of friction between a small brush [used in Lasik surgery] and the eye; and the last team developed an ergonomically improved system for an assembly line product boxing/wrapping/transport system. All of these senior project experiences have given our students some of the best exposure to problems that are as "real world" as possible.

Our faculty have received several awards and acknowledgements of the achievements; and these are outlined herein. As of the beginning of classes in August of 2002, we had a significant increase in the enrollment of undergraduate and graduate students. The Fall of 2001 enrollment in Mechanical Engineering was 188 undergraduates and 37 graduate students. In September of 2002, the total was 220 undergraduates and 48 graduate students. These represent a 15+ percent increase in our undergraduate population and a 30 percent increase in our graduate population. In addition, we were able to attract 7 new National Merit Scholars to our freshman class, with an average freshman class math ACT of 29.2. We attribute these accomplishments in part to aggressive recruitment by the Department and in part to the efforts of our alumni (You!) in "getting the word out" about the great ME educational experience at KU.

As you know, from living through the past two years in the US, the next couple of years promise to challenge us in maintaining our upward trends in student and faculty achievements; but we are confident that the ME Jayhawk spirit will carry us through these times. Our work could not be done without you. Thus, we thank you for your tremendous support and enthusiasm in promoting KUME!

To help us recognize all of this academic year's achievements, I want to extend a personal invitation to each of you to attend our Awards Banquet on April 25, 2003. In addition to acknowledging the above milestones, we will be honoring our outstanding student achievers, our donors, and specifically, the individual accomplishments of two of our prominent alumni: Charlie Salanski and Jim Straight. Please join us for this occasion as we continue to build upon the heritage that you've provided. There is a reservation form on the last page of this Newsletter. We look forward to seeing you at the Banquet!

*Ron Dougherty*

### **The School of Engineering Welcomes Our New Dean**

Most of you know that, as of August, we have a new Dean of the School of Engineering, Dean Stuart R. Bell. He is a Mechanical Engineer who obtained his degrees from Texas A&M University. Dean Bell hails most recently from the University of Alabama in Tuscaloosa, where he was the Head of Mechanical Engineering. While at UA, he established and directed the Center for Advanced Vehicle Technologies. He has exciting ideas concerning the promotion and advancement of the School of Engineering, and we look forward to his leadership in the coming years. Dean Bell will be at the Engineering Alumni Receptions across the country in the spring, and will also be at our Awards Banquet on April 25. Thus, we hope that you'll be able to attend the Receptions and the Banquet so that you can meet Dean Bell in person. (Please refer to the website: <http://www.engr.ku.edu/welcome2.htm> for additional background information on Dean Bell.)

### **Four Generations of Jayhawks Attending KU**

Tyler Docking represents the fourth generation of Dockings attending KU. Tyler is a freshman in Mechanical Engineering and is also on the KU golf team. He is an honor student who comes to us from Olathe East High School. His parents, Griffith and Cynthia [Arboe] Docking, graduated in 1980 from KU, in Journalism and Business, respectively. They reside in Overland Park, KS. Tyler's grandparents, George and Marcia [Horn] Docking, graduated from KU in 1952/1957 (Business/Law) and in 1953 (Journalism), respectively. Tyler's great-grandparents, George and Virginia [Blackwell] Docking, graduated from KU in 1925 (Liberal Arts and Science) and 1924 (Education), respectively.

What a great heritage for the Docking family! We're proud to have Tyler here this year, and look forward to the future as he and his children continue this impressive tradition.

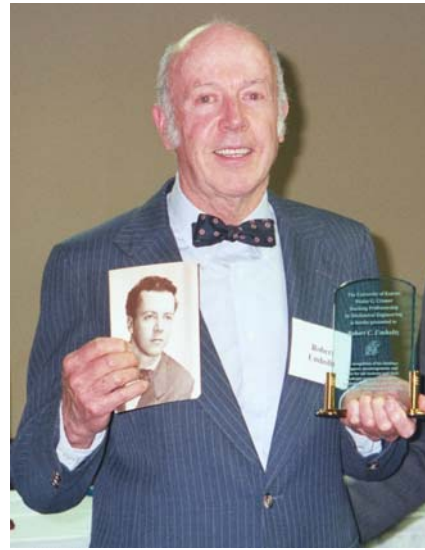
### **ME Advisory Board Notes**

Among the eleven Advisory Board members at the last meeting, ten have their P.E. license. One is registered in fourteen states, and two are registered in two states.

## M.E. Spring 2002 Awards Banquet

The Spring 2002 Awards Banquet was a great success, with an audience of 160, honoring outstanding students, faculty and alumni. Two more students and two new faculty were inducted into Pi Tau Sigma. Eighty-four scholarships were awarded or announced. Three students received special recognition for service or accomplishments. Thirty-one seniors were recognized, and two faculty and staff awards were given. Four of the six Mechanical Engineering Distinguished Alumni Award recipients were present to receive their plaques. Dr. Frank Gordon was a masterful MC, and Charles Salanski, on behalf of the KUME Advisory Board, presented the alumni awards. Many of the eighteen Advisory Board members were present; and the spouses and friends of recipients made this one of the largest ME awards programs ever. It represented a chance to see some of the most talented students that the School of Engineering has.

Following are some pictures taken during the Banquet and lists of the student, alumni, faculty, and staff awardees



Professor Umholtz shows off his Teaching Professorship plaque and his [much] earlier photograph at the Awards Banquet.



Four of the six Distinguished Alumni Awardees were able to attend the Spring Banquet. From left to right, they are: Jim Adam, LaRoux Gillespie, Bob Umholtz, and Forrest Hoglund.



As our Dean, Carl Locke makes his final presentation to the KUME Spring Banquet. From left to right: Frank Gordon, Carl Locke, and Sammie Locke.

Pi Tau Sigma  
*Fall 2001 ITTS Initiates*  
 Tamatane Aga  
 Bethany Anderson  
 Dr. Lisa Friis (Honorary)  
 Dr. Sara Wilson (Honorary)

Charles J. Baer Scholarship  
 Scott Chapman  
 David Harold

Robert M. Carey Scholarship  
Undergraduates  
 Tamatane Aga  
 Bethany Anderson  
 Michelle Avila  
 Blaine Barnard  
 Jonathan Bridges  
 Scott Chapman  
 Gregory Denton  
 Ryan Dodd

Henry Nottberg, Jr. Scholarship  
 Casey Lauer  
Hoglund Fellowship  
 Amith Pulla  
Strobel Scholarship  
 Shweta Bhola

Roger T. Blades Scholarship

Benjamin Brown  
Matthew Grise

Wesley G. Cramer Scholar Award

Ghazi Abdulfattah  
Chadd Clary  
Scott Chapman  
Brian Hannon  
David Harold  
David Latta  
Joe Tuck  
Brandon Warner

ExxonMobil Award

Vicente Avila

Lindquist Family Memorial Award

Ahmad Abu-Ali  
Bethany Anderson  
John Igo  
Patrick Laufenburger  
Nathaniel Lenz

Mechanical Engineering Scholarship

Ghazi Abdulfattah  
Josu Galdos

Outstanding Service

Bethany Anderson

Outstanding Senior Award

Justin Rajewski

Outstanding Leadership

Justin Rajewski

Graduating Seniors

Ghazi Abdulfattah  
Vicente Avila  
Lisa Basuino  
Chadd Clary  
Brendan Dingman  
Matthew Dunkin  
Brandon Eastland  
Joseph Fanska  
Randall Forbes  
Brian Hannon  
Katherine Hannon  
Carl Holden  
Caleob King  
Scott Kitsmiller  
Andrew Larson  
David Latta

Carey Scholarship (cont'd)

Brian Hannon  
Matthew Harvey  
Charles Henry  
Andrew Knopp  
David Latta  
Lindsay Morris  
Patrick Nuss  
Clinton Rahjes  
Justin Rajewski  
Tyler Stone  
Brandon Warner  
Jason Wilson

Graduates

Ali Ahmadi  
Sachin Angal  
Trent Guess  
Min Hou  
Gregory King  
Pratya Levan  
Hua Liu  
Liliana Ortega  
Sarika Pappala  
Carlos Schenstrom  
Antonis Stylianou  
Junyi Sun  
Feiqi Zhang  
Feng Zhang

Outstanding Staff Award

Penny Hodge

Outstanding Faculty Award

Bedru Yimer

Graduating Seniors (cont'd)

Toby Lunn  
Robert Mohan  
Richard Nickell  
Tyler Nordquist  
Wade Palmberg  
Michael Patterson  
Douglas Pierson  
Justin Rajewski  
William Scott  
Thomas Southern  
Gregory Steele  
Robert Stites  
Joshua Talley  
Philip Templet  
Joseph Tuck

Phillips Petroleum  
Scholarship

Chadd Clary  
James Cronin  
James Lohrmeyer  
Kyle Schafersman

Wilbur E. & Mina Wyatt  
Memorial Scholarship

Bryce Baker  
Shweta Bhola  
Kedar Deshpande  
Abhijit Dumbre  
Venkata Gade  
Trent Guess  
Brunda Kattakola  
Imran Khadari  
Srinivasarao Madduri  
Rajesh Maduri  
Tejukiran Murthy

Zimmerman Graduate

Fellowship

Srikanth Allu  
Sachin Angal  
Kedar Deshpande  
Abhijit Dumbre  
Priyank Gupta  
Brunda Kattakola  
Imran Khadari  
Amanullah Mohammed  
Tejukiran Murthy  
Feng Zhang

Wesley G. Cramer  
Engineering Faculty Award

Terry Faddis  
Kenneth Fischer

Mechanical Engineering  
Distinguished Alumni Award

P.J. "Jim" Adam  
Robert J. Eaton  
LaRoux K. Gillespie  
Forrest E. Hoglund  
Mou-Hui King  
Robert C. Umholtz

## Faculty News

Following is a list of selected achievements by the KUME faculty over the 2001-2002 academic year.

| <u>Professor</u> | <u>Award</u>  |
|------------------|---|
| Terry Faddis     | Wesley G. Cramer Mechanical Engineering Faculty Award   |
| Ken Fischer      | Research Experience for Undergraduates Site Director<br>Wesley G. Cramer Mechanical Engineering Faculty Award   |
| Lisa Friis       | Elected Chair of the Biomaterials Education Special Interest Group<br>of the Society for Biomaterials for 2002  |
| Lorin Maletsky   | Center for Teaching Excellence: Teacher Appreciation Award  |
| Karan Surana     | Frank Walk Award for Outstanding Contributions - - ASME International Petroleum Div.                            |
| Robert Umholtz   | Wesley G. Cramer Mechanical Engineering Teaching Professorship<br>ME Distinguished Alumni Award                 |
| Bedru Yimer      | Excellence in Teaching Award - - Center for Teaching Excellence<br>Outstanding Faculty Award (from ME students) |

## Distinguished Alumni Awards

On Friday, April 25, 2003, the Mechanical Engineering Department will hold its annual Awards Banquet. In addition to student, faculty, and staff awards, this will be our second year for recognizing distinguished alumni.

This year's Distinguished Alumni Awardees are:

- Charles W. Salanski, President and Chief Operating Officer of Wire Rope Corporation of America, Inc., St. Joseph, MO (retired)
- Dr. James W. Straight, Leader of Experiment and Diagnostic Design Group, Los Alamos National Laboratory, Los Alamos, NM

The 2002 Distinguished Alumni Awardees were:

- Jim Adam, Chairman, Black and Veatch, Kansas City, KS (retired)
- Robert J. Eaton, Chairman, Chrysler Corporation, Detroit, MI (retired)
- Forrest E. Hogle, Chairman of the Board, EOG, Houston, TX (retired)
- Mou-Hui King, President and Chairman of the Board, China Steel Corporation, Taiwan (retired)
- LaRoux K. Gillespie, Manager, Technical Operations, Honeywell, Kansas City, MO
- Professor Robert Umholtz, Associate Professor of Mechanical Engineering, Kansas University, Lawrence, KS

We provide brief biographies of this year's Distinguished Alumni in the following paragraphs and ask you to join us on Friday evening, April 25, 2003, to honor these two individuals as well as our outstanding students, faculty and staff.

### Charles W. Salanski, PE

President and Chief Operating Officer (retired)  
Wire Rope Corporation of America, Incorporated  
Headquarters in St. Joseph, MO

BS Mechanical Engineering, 1957

Charlie Salanski is an unusual example of a lifetime of success, an engineer rising to the top of a large closely held company and solving the myriads of issues that face such executives and companies, and becoming an icon in his city for community involvement.

Charlie Salanski joined Wire Rope Corporation of America (the largest producer of wire rope in North America and a major employer in St. Joseph, MO, with plants located in 6 states) as a student prior to graduation from KU. He became a full time employee after graduating and after 23 years became a vice president. He advanced steadily through the company in eight different roles until he achieved the very top and most challenging position of Chief Operating Officer. His experiences provided him with detailed insight into national and international political and technical issues, helped mold him into an international negotiator, and provided him with a COO style and ability that lets you

know you are with a leader. During his career, he has gained experience in developing new products, establishing an R&D department, and establishing WRCA's first Sales Engineering function.

As COO, Charlie Salanski led a growth strategy that brought the company from about 20,000 tons of product produced per year to 100,000 tons and \$200 million in sales. He also initiated a joint venture in the Peoples Republic of China (PRC) and established collaborative agreements with Korean and European companies. He dealt with countries and international companies involved in the wire rope industry, which required political skill as well as professional and leadership abilities.

Charlie Salanski is a Registered Professional Engineer and member of the National Society of Professional Engineers and the Missouri Society of Professional Engineers. He is a full member of ASME (American Society of Mechanical Engineers). In addition to his Mechanical Engineering degree, he completed the Management Program for Small Business at the Harvard Graduate School of Business.

Charlie Salanski has served the industry (wire and wire rope) in many capacities. He has been chairman and spokesman for the Committee of Domestic Steel Wire Rope and Specialty Cable Manufacturers, which represents the domestic wire rope industry in all matters related to international trade. In the field of engineering, he directed the wire rope industry's research programs, utilizing the facilities and staff of Southwest Research Institute in San Antonio, TX. He has authored several technical papers and presented them in such settings as the Offshore Technology Conference in Houston and Wire Association Meetings. He led the writing of the first Wire Rope industry handbook, and represented the industry in many of the standard writing organizations. He served three years as president of the American Wire Producers Association (AWPA) which represents 70 to 80 percent of the producers of carbon, alloy, and stainless steel wire and wire products in the United States plus suppliers of wire rod, dies, machinery, and equipment used in the wire industry.

Charlie Salanski is a past member and committee chairman for the Wire Rope Technical Board and liaison and contract officer for industry research. He is a member of the Industrial Sector Advisory Committee on Ferrous Ores and Metals for Trade Policy Matters (ISAC7) and a member of the Advisory Committee to U.S. Trade Representatives and International Trade Administration of the U.S. Commerce Department. He served as chairman and spokesman for the Committee of Domestic Steel Wire Rope Producers, representing the industry in all matters related to international trade. He met with the European counterpart organization and acted as liaison between these two organizations. He represented the U.S. Bureau of Mines in a joint research program on deep shaft mining in Poland (University of Mining and Metallurgy in Krakow) and Germany (Bochkem Laboratories in Stuttgart).

He has been chairman of the University of Kansas Mechanical Engineering Advisory Board for many years, and is a member of the University of Kansas Greater University Fund Advisory Board.

He has been a leader in the city of St. Joseph by virtue of his company position and by active personal civic involvement. His local work includes: chairman of the Board for the Community Health Plan (HMO for Northwest Missouri), a member of the Heartland Health Systems Ethics Committee, vice president of the St. Joseph Allied Arts Council, president of the St. Joseph Symphony Board, a member of the St. Joseph Sports Board, past president and chairman of the Finance Committee of the YMCA, and past board member and chairman - Finance Committee of Interfaith Community Services. He is a past president of the St. Joseph Kiwanis Club, and is a past president and former chairman of the Finance Committee of the St. Joseph Country Club. He is a past councilman of the City of St. Joseph, chairman of the Board of Directors of St. Joseph's School District Foundation, and past campaign chairman of the Advisory Board for United Way in the St. Joseph area. In addition, he serves on the Board of the Farmers' Electric Coop. in Chillicothe, MO.

Charlie Salanski is clearly a role model for his leadership in one of the most challenging businesses in the US over the past three decades. In addition, he is a role model for service to the community and industry.

### **James William Straight, PhD, PE**

Leader of Experiment and Diagnostic Design Group  
Los Alamos National Laboratory  
Los Alamos, New Mexico

BS Mechanical Engineering, 1963  
MS Mechanical Engineering, 1963

The career of Jim Straight spans several technologies. He has been and is an experimentalist. He has performed thousands of laboratory and field experiments over his career. He has almost 40 years of structural dynamics, strength of materials, stress analysis and material science experience. His research on high explosives makes him one of a handful of experts in this arena who can combine physics, chemistry and engineering in an understanding of how explosives work. His work on national defense systems bolsters the protection of the US from several aspects.

Jim Straight works with others who are writing code for some of the largest and fastest computers in the world. His experiments provide benchmark data for their codes and, in some cases, point to aspects of the codes that need to be re-evaluated. These codes are some of the most complex in the world since many of them calculate events that happen in billionths of a second and create material pressures on the order of millions of atmospheres. To provide a measure of the magnitude of the code writing and the equipment used for analysis, note that in 1995, the Department of Energy and its defense laboratories - - Livermore, Los Alamos, and Sandia - - were directed to undertake the activities necessary to ensure continued stockpile performance in the absence of underground nuclear testing. These activities include a combined experimental/computational program. DOE's ASCI program is developing a series of ever more powerful, massively parallel supercomputers that employ thousands of processors working in unison to simulate the performance of weapons in an aging nuclear

stockpile. Today's computers perform up to 12 trillion operations per second (teraflops). That is 30 billion times faster than the Univac-1. Even at that, many of the models will require hundreds of hours of computer time to run.

Many of Jim Straight's experiments probe aspects of high explosives and materials behavior that even these computers and codes cannot predict. These experiments require the creation of unique diagnostic techniques operating in the most hostile of environments. They must measure phenomena in nanosecond temporal scales and micrometer spatial scales. Along these lines, he has been involved with projects such as: designing and testing containment and confinement vessels for high explosive blasts, understanding the effects of impact loads on high explosives, studying and developing improved armor and anti-armor devices, modeling and experimentation in the area of hypersonic impact, and structural dynamics for larger laser systems.

In addition to all of these accomplishments, Jim Straight found time along the way to earn his PhD at the University of Arizona; and teach at the University of Arizona, Vanderbilt, Christian Brothers College, and the University of New Mexico at Los Alamos.

Jim Straight has also had an impact on the profession through his numerous publications, membership in ASME and ASEE (American Society for Engineering Education), registration as a licensed engineer in Tennessee and New Mexico, and being a KUME Advisory Board member. He has been recognized for his contributions through a variety of means, such as the 1999 DOE Defense Programs Award of Excellence, and the Society of Automotive Engineers' Ralph R. Teetor Award for teaching excellence. He is listed in: *Who's Who in the West*, *International Who's Who in Engineering*, *Who's Who in Technology Today*, *Who's Who in the South and Southwest*, *American Men and Women of Science*, *Who's Who in America*, *Who's Who of Emerging Leaders in America*, *Five Thousand Personalities of the World*, *Men of Achievement*, and *Who's Who in Executives and Professionals*.

This is just a partial list of his contributions, since most of his career involves actual engineering of systems that help gather more data. Jim Straight is an engineer who has brought significant contributions to his field and is clearly a distinguished alumnus.

### Alumni Update

We greatly appreciate any information that you are able to provide about yourselves. Everyone of us wants to hear how our colleagues are doing. So, please send your news and updates to: ME Vibrations Newsletter, University of Kansas, Mechanical Engineering Department, 1530 W. 15<sup>th</sup>, 3013 Learned Hall, Lawrence, KS 66045. Send email to [kume@ku.edu](mailto:kume@ku.edu) or visit our website at [http://www.engr.ku.edu/me/alumni\\_hdrpg.htm](http://www.engr.ku.edu/me/alumni_hdrpg.htm) to enter your information on-line. Please include your: class/year, degree, address, company, title, and news about yourself, your family, and/or your job. Thanks so much!

**Verne R. Hall** [BSIE 1934; 200 Village Dr., Apt. 403, Downers Grove, IL 60516] retired in 1977 from the Phoenix Armour & Co., where he had worked for 43 years. He moved to his present address to be near his family in 1998. At age 89, he still drives his car and passes the yearly driver's exam.

**Mittal Patel** [BSME 1998; 13821 Blackfoot Dr., Olathe, KS 66062] works for Milbank Systems, Inc. (MSI) as a regional sales manager. Since he was hired in 1998, he has worked in a few engineering positions before moving into sales. MSI is a custom finishing systems house that has been in business for 20 years. He has 15 states and Canada in his sales region and travels often.

**Marsha Gossett** [BSME 1993; 2005 Baker Dr., Corinth, TX 76210] worked for Black & Veatch from the period 1993-1997 as an ME. "We now have three daughters," she says, and moved from Kansas to Texas. "I've changed from a Mechanical Engineer to a Domestic Engineer," she adds.

**John M. Allison** [BSME 1928; 12941 Oleander Rd., North Miami, FL 33181] is retired now as a captain in the USNR. In December of 2001, he received a letter of commendation from the President of the United States, George Bush. President Bush also sent a picture of him and Mrs. Bush with the commendation.

### B25 Jayhawk

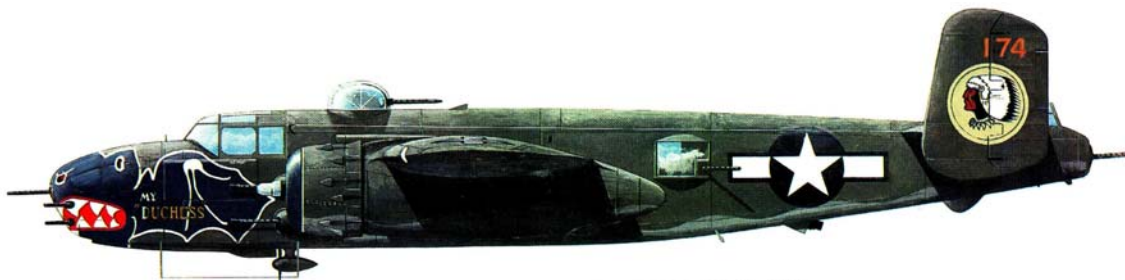
Col. **George L. Cooper** [BSME 1949, [glcooper20@earthlink.net](mailto:glcooper20@earthlink.net), 21476 219<sup>th</sup> Street, Tonganoxie, KS 66086] relays his unique Jayhawk story in the following paragraphs.

I was going through old papers and photographs and ran across the photograph of me and my B-25D crew of WWII. The photograph was taken in New Guinea, about July 1943. I am on the far left, the Aircraft Commander. The plane was built in Kansas City. I was one of seven first pilots assigned to the 345th Bomb Group, organized in Columbia, SC in 1942. Each crew was assigned an aircraft. I named it "Jayhawk". I flew all but three of my 55 missions in the "Jayhawk". When I completed my combat tour in February of 1944, it had 55 mission symbols painted on the left side and two Japanese flags indicating enemy shot down. It passed on to other crews and had over 150 missions before it was retired as "war weary" in late 1944.

I have included a color photo of another aircraft in my squadron to show the later nose decoration painted on all aircraft of the 499th squadron. I do not have a color photo of the "Jayhawk". The photo I am sending is to show you the change in nose painting made about September of 1943, after we were converted to strafers. It was a "bat". Our squadron was called "Bats Out of Hell". The painting was to confirm the name of the 499th squadron "Bats Out of Hell". The name "Jayhawk" was painted on the left side. The Jayhawk remained on the right side (pilot's side).

A year ago, my grandson, who likes to build model airplanes, excitedly told me, 'I found a B-25 model of your airplane, the "Jayhawk," with your name on it'. I am sending you some of the literature that came with the model.





30. B-25J-11 #43-36174, MY DUCHESS, 499TH B.S. AT BIAK, DECEMBER, 1944

### Edward J. McBride

Our request to submit memories of Dr. Edward McBride brought many interesting comments. Our ME Advisory Board members noted first that all of your equal signs (=) had to line up, or Dr. McBride would take off points. One of the Advisory Board members remembered that his ruler had a nick in it; so, when he used it to draw a straight line, it had a small dip in the line. That cost him two points.

**Jon Edmonds** [BSME 1962; edmondseng@cyberia.com] writes,

Hello from York, PA. The latest edition of ME Vibrations is very good. I just received it and read it cover to cover. You requested memories of Dr. McBride. I was not fortunate enough to have Dr. McBride for any classes. I don't recall the reason why, perhaps it was because I was a transfer student from a junior college. At any rate, sometime after I had been enrolled at KU and living in the old Theta Tau fraternity house at the top of Louisiana Street, I learned that Dr. McBride was a handball player and that there were handball courts on campus which must have been in the old Robinson gymnasium. I fancied myself a pretty good handball player and contacted Dr. McBride to see if he was interested in playing me a few games. This was 1962. He accepted the offer quite readily. Dr. McBride was then 49 years old, and I was only 21. I expected to clean up the court with him and felt very confident this would be a mild workout for me. Boy, was I ever surprised. It turned out to be just the opposite from what I thought it would be. Dr. McBride killed me in three very quick games, and I was humbled and learned a very good lesson not to take anything for granted. Dr. McBride was well respected not only as an educator but also as a teacher, athlete, and a human being.

**Herb Taylor** [BSME 1952, MSME 1956; 169 Bard Rd., Bennington, VT 05201] writes,

I know that Dr. McBride died two years ago, but your recent notice of that event and request for some stories about him prompts me to try the following:

I was a graduate student and instructor in the M.E. Dept. in 1952 when Dr. McBride first arrived and assumed the position of Dept. Chairman. So, he was not only one of my instructing professors, he was also my boss. At the time, I was still single and struggling to be able to afford continuing my education without any outside assistance. One of my chosen methods of minimizing expenses was to own a motorcycle, rather than a car, because it was so much cheaper to operate (50+ miles per gallon of gas). But personally, I did not embrace the "black leather jacket" culture of motorcycling that served as the stereotypical image of motorcyclists in most people's minds.

I wore slacks, a sport jacket and tie to the University and parked my motorcycle in an assigned spot. (At the time, there were 6 motorcycles on the campus, and 5 of them were ridden by engineering students, so I didn't really feel isolated.) In truthfulness, I did wear heavy engineering boots, as many other motorcyclists did, but engineering boots were popular with a lot of male engineering students, so that was not a give-away.

One day while I was in the M.E. Dept. office to talk to Dr. McBride about some administrative matter, at the conclusion of the business at hand, he set me back momentarily by telling me that he had seen me riding a motorcycle down Jayhawk Drive, and if he had known that I rode a motorcycle (back in September, at the start of classes), he would not have hired me to be an instructor in the Department. But on reflection, he recalled a time when he was younger and struggling to make ends meet, he had just settled into a new job (with Elliot Co., in Jeannette, PA, I think) and had taken an apartment with his wife and first-born baby, out in the boondocks. On one bad night, they discovered that they were out of milk for the baby's feeding, and not having a car (during the war), he had to walk several miles through the dark and cold and damp air to a store in order to buy some milk. As he started his walk back home, he said that a motorcyclist saw him trudging along beside the road and stopped to offer him a ride, which, under the circumstances, he happily accepted.

He paused then, and said he guessed that all motorcyclists weren't bad. So, I kept my job. And I owe that anonymous motorcyclist some thanks, as well as Dr. McBride for not only being a wonderful educator (with whom I stayed in touch clear up to the end of his life), but for having compassionate understanding for his students' and staff's personal problems.

**Earl M. Clark** [BSME 1973; earlmclark@email.com, P.E., Fellow ASME, Fellow ASHRAE] notes:

Just received my latest issue of Vibrations. I was happy to see Bullet Bob's article. I remember him well. Double-handed chalk writing was always his specialty. He taught me numerical methods when we had to keypunch all of our programs onto cards. I have written many thermodynamic programs over the years and every time I have to solve multiple simultaneous equations, I think of that tiny classroom in Fowler where he taught us. Thanks for the memory.

I was also saddened to see both Dr. Lindquist's and Dr. McBride's obituaries. Both were quite active when I was at KU.

You asked for stories about Dr. McBride. One I have told for years to my students and mentorees was one he told our class. He was working on Mt. Palomar early in his career. It had been a difficult Mechanical Engineering feat, and they had just torn down the structure "again" and it was in a pile "in a corner". Einstein walked up to Dr. McBride and said, "Dr. McBride, do you know the difference between engineers and physicists?" Now Dr. McBride was in no mood to answer that question and snapped back, "No, I don't." Einstein smiled and replied, "When we make a mistake, we wad it up and throw it in the waste basket."

Dr. McBride never allowed anyone to sleep in his classes. I and others were typical college students, never getting enough sleep. I fell asleep one time in class. I awoke to see Dr. McBride standing directly in front of me and the whole class silent. His words were: "Mr. Clark, if it's all right with you, we will continue the class." I stammered "Yes, that would be fine," and silently crawled into a hole. I saw many others fall asleep, but I never did in his class.

He was a very caring and dedicated teacher. I was probably at a real crossroad in my life when I took my first ever Thermodynamics class from him. He was tough, and I received my lowest ever grade in Thermo. Later, after I had left KU and had received my Master's, I returned for a visit. He asked how I was doing, and I updated him on my progress and my job. I noted that he had given me my lowest Thermo grade in my career. His reply was, "It worked didn't it?" Between him, Bullet Bob, Forman, Burmeister, Zerwekh, and others, I found a home in ME for my college time after wandering around trying to figure out what I wanted to do with my life. They inspired me and started me out into the world of engineering. I just want to say thanks for all of the time spent.

**Gregory L. Estes** [BSME 1982; Operations Manager, Tenaska Gateway Generating Station, P.O. Box 697, SH 315, Mt. Enterprise, TX 75681, (903) 898-2944 x1005 office, (903) 898-2945 fax, (903) 754-1992 cell, ggestes@tenaska.com] says:

Thanks for the February 2002 ME Vibrations newsletter. I thoroughly enjoyed it.

I was sorry to read of Prof. McBride's passing. I think about him and his Fundamental Thermodynamics class often. Following are a few observations.



1) It was hard to get to know Prof. McBride, and I think that's how he wanted it. I had his Thermo class at 0730 MWF. Living off campus at that time, I usually rode my bike or walked to classes. I found out very quickly, as did most of us, that you needed to be on time to Prof. McBride's 0730 Thermo class. That classroom door was closed precisely at 0730 (he had a pocket watch); and, if you attempted to come in at any point thereafter, Prof. McBride would put it to a class vote as to whether or not you should be admitted. Early in the semester I found myself in that position. To my great relief, the class voted to let me stay. I was never again late to that 0730 class.

2) I remember seeing Prof. McBride walking his dog (a Schnauzer) around campus, in his overcoat, with his umbrella or walking stick, white hair under a hat, and a perfectly trimmed white beard. I remember thinking, now that is what a professor looks like.

3) One of the best parts of his Thermo class (and subsequent Gas Dynamics course) was listening to him talk about his early days at Westinghouse. I believe a lot of what we were studying was developed in that era by men like Prof. McBride.

4) One of the reasons why I still think fondly of Prof. McBride is the CE Steam Tables that he gave me at the end of the Thermo semester. At that time, he also gave me the advice to keep a good journal throughout my career.

5) This last observation is regarding Prof. Umholtz. I had a couple of classes with him, but prior to that I remember some of the upper classmen never missing an opportunity to tell us how tough "Bullet Bob's" classes were. Despite my early fears, I found him to be a most accommodating instructor, one of the best I had on the Hill. It was nice reading of his successes.

**David Stone** [BSME 1977; 3530 Timber Lane, Cross Plains, WI 53528] adds,

It was with an anticipated sad heart that I read of Professor McBride's passing. I had the pleasure of taking three classes from Professor McBride. I enjoyed working with him so much that I offered to grade papers after completing his dynamics class. I was surprised to learn that he would not be providing the solutions with which we (I shared the job with a friend) were to grade his assignments. Not to worry, it was great to sit down with him and figure it all out.

Three memories.

1) Professor McBride enjoyed cigars. Every year during Lent, he would give up cigars for the duration. It brought a bit of twisted pleasure watching him suffer though withdrawal each year, kind of a payback for all those tough problems he assigned. Anyone who knew him and enjoyed his company ribbed him about it. One year we brought him an ice cream pie to help him along (and get some extra ribbing in).

2) My wife had gone into labor during the middle of the night with our second son. I called in to let the doctor know we were coming. So there we were, her in labor, me shooting the breeze with the OB/GYN. The conversation took some turns and ended up at when and where I went to school. It turned out that the doctor was married to Professor McBride's daughter, Ann. My wife was less than entertained by all this, but it prompted me to contact Professor McBride and renew the friendship. Small world.

3) I had sold my share of a business and was considering relocating. One of the places of consideration was the southern suburbs of Kansas City. My wife had never been there, so we jumped on a plane and went for a visit. I have some friends who live in Lawrence and arranged to have dinner with them. I arrived early enough to take a quick tour of campus to see what 20 years had done. Tears came down my face when I read Professor McBride's name on a door. I hightailed it to my friend's house and pulled out a phone book and dialed his number. His wife Helen answered and explained that his health was not the best and he may not remember me. She put him on the phone, and the same voice that had mentored me through engineering school immediately understood that I was somewhat surprised to find him alive. When I inquired how he was doing, he responded "still above ground" in the same witty voice I remember like yesterday.

Professor McBride was a tough nut. Many students dreaded his classes (he often taught thermo and dynamics), but I thrived in his environment and am thankful for the light he shed on so many areas that for me were gray until his friendship came into my life.

I miss him, but his memories brighten every day.

**Ronald L. Phillips** [BSME 1957, MSME 1959, JD at George Wash. U. and U. of Detroit Law Schools, 1964; now attorney-at-Law, 33 1/2 State Street, Charleston, SC 29401, (843)577-2455, BartsArt@BellSouth.Net] states,

I read with much sadness the passing of Dr. McBride in the February 2002 ME Department Alumni Newsletter. I would like to pass along a personal story about Dr. McBride. But first let me premise my story by saying I found Dr. McBride to be the finest and most brilliant and thoughtful teacher I ever had at KU, as well as my mentor and my faculty adviser in pursuing my MSME. Now, on to my story.

I first encountered Dr. McBride while taking a vibrations course from him. I understood from fellow students that he was a rather pompous, intimidating, no-nonsense professor with a Doctorate from Harvard. So I was understandably very apprehensive when Dr. McBride, several days following the first exam he gave us, asked me to come to his office after class, though I found the subject fascinating and believed I had done well on the exam. He directed me (not asked me) to sit down while he fired up his pipe and stared out the window for an ungodly amount of time, while I remained sitting on the edge of the chair. Eventually, he turned in quite slow motion and proceeded to tell me that he considered the exam he had given us a particularly difficult one. And, that following his grading, he had looked up my grades in other courses which were not particularly outstanding. He then told me that I had scored highest on his exam and was wondering whether it was an "abnormality" or did I possibly exhibit promise worth his exploring in the direction of graduate school for me. We talked for almost an hour in that first session in his office. Two pipe loads of time as I recall. As a result, my preconceptions of Dr. McBride were all dispelled and he immediately gained my greatest respect. Thanks to Dr. McBride and his encouragement, I did improve grade-wise across the board, took as many of his courses as I could and did eventually receive an MSME, with Dr. McBride as both my mentor and faculty adviser, while serving as a teaching assistant and again thanks to Dr. McBride.

As a sequel to the above story, Dr. McBride attempted to guide me on to Harvard for a Doctorate. He even obtained the admission application papers for me as well as showed me a letter of recommendation that he would send along. I regret that I disappointed him in that regard, as I ultimately choose General Motors Corporation, where I started as an engineer-in-training but

found it not to my liking and transferred to the GM Legal Staff. Several years later and thanks to GM, I obtained a law degree and thereafter served as a Senior Attorney on the GM Legal Staff and as Patent Counsel to several of GM's major divisions until my retirement.

When I last talked to Dr. McBride by phone, he did not speak of any ill health; and we reminisced as before about my long ago master's thesis and the many skull sessions in his office, while I pictured him still puffing away on his ever present pipe as we talked. He expressed what I believe was pleasant surprise when I told him that I had actually taught for a while. But then I felt obligated to tell him that I had taught law and not engineering, which probably brought on more pipe puffs. So then I told him that I was taking up the engineering baton again and designing and building a sports car, unlike some WWII tanks he once referred to in a long ago graduate class as having rivets which did more harm to the occupants than the shell that hit the tank!

My master's thesis, incidentally, sprung from Dr. McBride's conception of using some form of singular blade design for both the turbine blades and compressor blades in each stage of a gas turbine to perform the respective functions, to thereby allow substantially higher than normal inlet gas temperatures as the result of the blades experiencing cold as well as hot zones in each stage. My efforts in my thesis work to develop the blade design were based on the advanced fluid dynamics studies of a German engineering professor who worked on the WWII German U-Boat designs and under whom Dr. McBride said he had later studied. Ironically, the work on my thesis is what initially attracted GM to me and me away from a doctorate program at Harvard, to Dr. McBride's disappointment.

The bottom line is that I have enjoyed a very successful career and I owe much of my success to Dr. McBride. I feel very fortunate in having had benefit of his counseling on almost a one-on-one daily basis during my last two semesters in graduate school, as I worked to develop the blade design that he believed possible.

We conclude with "Memories of Dr. Edward J. McBride" by **Carol A. Bittenbender** [BSME, December, 1978].

I remember Dr. McBride in a dark 3-piece suit entering the Strength of Materials classroom each morning precisely at 8 AM and locking the door behind him. The first day of class he told us not to be late. He didn't like having his lectures interrupted. If you arrived after the door was locked, you were not let in. I don't remember anyone being an exception to this policy. Dr. McBride taught us discipline in attendance.

Homework was another exacting thing. For each mathematical solution, Dr. McBride insisted we write our equations very orderly with all equal signs lined up, one below the other, perfectly. If they weren't, he said he would take off points, especially on homework. Homework points counted toward our semester grade. I remember correctly presenting the equal signs line after line in solutions sometimes covering two or more pages. I never lost this skill and always appreciated the clarity in thinking developed by his requirement. Dr. McBride taught us discipline in presentation.

I did not have a particular interest in Strength of Materials (as I did Thermodynamics), but Dr. McBride's method of teaching seemed to fit me perfectly. He was very clear in explaining his vision in both the materials he presented and what he expected us to remember. I comprehended and retained what he taught. That semester with him I knew I would remember for the rest of my life Myosotis' Method and Euler's Column Theory.

I remember one time Dr. McBride apologized to me. On that day in class, he returned our graded tests. He went over the distribution of grades, and they were very low except for mine. Somehow, I had thoroughly studied the material he selected for that test. I had a perfect test paper, I thought, but he took off 1/2 point. Dr. McBride came to me at the end of class and said he was sorry he had to take 1/2 point off my test, but he found one minus sign that shouldn't have been embedded within my two-page solution to an equation. He said he knew everything flowed to the correct answer and that my thinking was correct, but, because he found the minus sign, he felt he had to take something off. I think he felt bad. Dr. McBride's apology impressed on my memory that he chose to devote a lot of time to detailed grading of each student's work. He motivated me to devote more time and self-discipline to my performance.

From 1975 to 1977, I was teaching in the ME department one class of ME 108, Engineering Drawing and Descriptive Geometry; so I was observant of how Dr. McBride presented material. I decided to emulate him and incorporate into my teaching his style, which I perceived as emphasizing clear major concepts, informing students what to remember, and using minor concepts only for variety and example. I hoped my students would think I was fair and effective in the way I experienced Dr. McBride to be.

I remember Dr. McBride as a professor who provided an environment that defined achievement and how to attain it. His classroom offered lessons in engineering, self discipline, and character development. The daily inspiration was his own presence. Dr. McBride's demeanor was such that, when he walked into the classroom, his students recognized immediately that here was a man of distinguished accomplishment and they should pay attention. I feel fortunate I was able to speak to Dr. McBride shortly before he died. Each memory of him I cherish because he brought out the best in me.

*Do any other readers have memories of Dr. McBride? Send them in and we will include them in future Newsletters.*

### **A Cub In Algeria**

This was written by one of our ME faculty. Can you guess who?

It was June 27, 1943. We had sailed from Boston to Northern Africa. It consumed about two weeks. This convoy of all kinds of ships was visible as far as the eye could see in all directions. Our ship (a former banana boat) must have been near the center of the flotilla because it was near the Battle Ship, **Texas**. This old World War I ship was the leader of the convoy because of the threat of German submarines in the Atlantic. We did not sail in a direct line to our unknown destination.

Every seven minutes, the **Texas** would blow its whistle and turn right, say about 15 degrees, and then all of the other ships would blow their whistles in acknowledgement and turn right by the same amount. Seven minutes later the **Texas** would blow its whistle and turn X degrees to the left with all of the others following suit. I think we did this all of the way to Gibraltar.

It took about two weeks to reach our destination, which was finally revealed to be Oran, Algeria. This is one of several Mediterranean port cities along the north coast of Africa. Our large convoy must have required that some of the ships land at other ports on the coast. Our equipment (large AA guns, trucks, jeeps, fire control devices, tents, etc.) came over on several ships, and it was about a week before we had assembled all of our stuff. We were also told that our naval escorts had dropped numerous depth charges and might have hit a sub or two.

Our 403<sup>rd</sup> AAA Battalion had four gun batteries, each with four 90 mm anti-aircraft guns plus several items of control, which helped us to “lock on” to enemy planes, plus machine guns, for perimeter protection. Different sizes of tents, mess hall (cooking and eating) equipment helped our well-trained cooks feed about 160 men per company.

There was also a headquarters battery that had tactical control of the firing batteries and a supply section plus a radio and wire section that laid wire to the gun and batteries. Our walkie-talkies were rather primitive, so it was important that all batteries be connected by wire. So we assembled and trained on the outskirts of Oran.

On July 7, we moved to a spot near Hammamet, which was an hour inland from Oran. We set up all of our equipment just as we had done in Texas and simulated an actual firing situation. A U.S. plane offered to pull a target (a long sleeve-like object) on a very long towline so that we could fire a few air bursts at the target. We were soon ready to fire at any German plane that should happen to fly into our area.

Not far away in this desert-like country, the allies had constructed a large airfield with several landing (and take off) macadam airstrips. Some of the airstrips were used by P-38 Lightning Fighters, and the other strips were used by B-25 two-engine bombers. These targets for the bombers were in Sicily and/or southern Italy. The P-38's would accompany the bombers most of the way.

Our 403<sup>rd</sup> AAA Gun Battalion had about 800 men, about 30 of them officers. I was in the headquarters and designated S-2 (Intelligence). One of my duties was to see that the daily password was given to each of the four batteries. This password was changed every day at around six p.m. Sometimes I had to use a jeep to get this word to one or more of our firing batteries if their C.O. hadn't been to battalion headquarters late in the day. One evening, I was looking for a Battery and couldn't find it. It turned out that someone had cut the wire from our headquarters to the Battery and taken a few yards of wire.

A number of runways were needed to facilitate getting a couple of hundred planes in the air over a short period of time. These planes were the B-25 Mitchell two-engine bomber and the P-38 Lightning Fighter. It was a beautiful sight to see these planes taking off, the earlier ones circling around to form a formation of Vees with the later ones, and all of them flying north.

One night a German night fighter flew over our area, and three of our batteries locked onto it and fired. There was a flash and some noise, down. We didn't know which battery actually hit it. I guess each battery got one-third credit for destroying a plane. There was a small Arab community not far away. There might have been as many as a hundred people living in 15 or 20 non-descript tents. The men would sit out in front, and there would be some children of various ages running around. We hardly ever saw any women. They seemed to be inside the tents. There continued to be pieces of telephone wire cut and removed. We decided that the natives nearby did this. The reason for this remained a mystery. (They didn't have electricity.)

Everything seemed to be going smoothly. The Colonel decided that everybody should get out at carefully scheduled times to see a little of that part of Africa. The cities of Tunis and Oran were a short drive as were the ruins of Carthage. Our major, Ralph Campbell, and I were permitted a two day trip with a jeep and driver and a small trailer. We put cots and a change of clothes and c-rations in the trailer and headed north for Oran. The first night we went to a bar set aside for allied officers. It was a mob scene, and all you could buy was red wine or white wine, so we didn't stay till the wee hours. Surprisingly, I met up with two D.U. brothers from KU. Gordon Van Riper and Larry Caywood looked good in their Navy whites.

We went back to the large parking lot. It had an armed guard and large coils of barbed wire all around the perimeter. So back to the motor pool we went to get a night's sleep. We set up our cots, including mosquito setting. First we put our shoes on the ground under our cots, then our undershirt over that, and so on. It was warm, so we practically had nothing on. We both went to sleep rather quickly. Sometime in the night, I heard a rifle shot, then “Halt, who goes there!” Then nothing. Some minutes later, I went back to sleep. When we awoke in the morning, I started to dress. My clothes were in a neat pile, but My Shoes Were Gone. I had everything else, including my billfold. The major had all of his clothes and belongings. What a blow! No place very near where I could buy shoes! So we ate a cold breakfast. For some reason the major wasn't very sympathetic. He wanted to get to Carthage. Its ruins are very near Tunis. Some of the monuments and baths are visible, and we were able to walk among them for about an hour. It was pretty tough on a stocking-footed guy! Damned natives!

On July 10, American forces under General George Patton landed on the southern shore of Sicily. This was a “new” Seventh Army composed of several divisions which had been rested and re-stocked from the troops that had fought in Africa plus a couple of new divisions. Everyone knows how this Army sped from its landing near Gaeta on the southern coast to Messina on the northeast corner in 38 days. There were British and Canadian troops on the invasion team. They landed much closer to Messina, but George S. was waiting for them in the town square of the city. We were supposed to go from the port of Bizerte on D + 15 to the port of Palermo in Sicily. On August 8, we moved to Oundna, rather close to Bizerte, a rather crowded port. For a few days, we set up for defending an airfield from which B-17s were doing “precision” bombing of targets in Europe. We were very close to an ancient aqueduct. Our headquarters people discovered that a large pyramidal tent would fit under the arch of the large structure. So we spent our last few nights in Africa living and sleeping in these cool, mostly shaded, quarters.

On August 11, we received “March Orders” at 10:30 p.m. We struck camp, revved up our trucks, and at 5:00 p.m. a day later, we loaded into an LST at Bizerte. After a day plus on the water, we debarked at Palermo, 15 days after our original schedule of D + 15. It turns out we weren't needed, thanks partly to George S. Patton. And it turned out we exchanged Arabs for the Mafia.

We debarked on the upper side of Sicily not far from its capital, Palermo. The terrain was hilly. We had to find a place to stay. There was a long highway along the north coast from Palermo to Messina. Somehow, we were able to get the whole battalion complete with many jeeps, our 90 mm guns, all of our 2½ ton trucks and kitchens lined up on this highway - - some 120 vehicles. Then our C.O., Col Harwell, a fine West Point graduate, called for his staff and battery commanders to search around on foot for an open, fairly flat piece of ground that would accommodate five batteries in open space(s) ready to fire on an occasional hostile marauding airplane. Here's where our

colonel made a grave mistake. No officer was put in command of the troops and vehicles parked along the highway. It was a hot summer day, sleeves were rolled up, shirts were unbuttoned, legs were hanging out of the tailgate, et cetera. But who should happen by at this moment but old George S., himself, in (I believe) a command car (sort of a sedan). When asked where the convoy commander was, no one could tell him. No one knew exactly where the colonel and his staff were. Actually, the ranking lieutenant (by length of time in service) was Lieutenant Paul Zook. He was in a jeep at the back of A Battery, where there was always an officer, often the second in command. And Zook didn't think about this. Harwell received an official reprimand. This was a paper that was put in his official file, a serious thing for a regular army officer. Later we were to go across the Straits of Messina. It was the southern part of Italy, up the west coast of Italy into the combat zone not far from Cassino. When VE day was declared, we were in the foothills of the Italian Alps.

Many of you guessed our mystery professor by the title, but many never knew him by the name "Cub". **Charles J. Baer** is the author of this little piece of the history. Thanks Professor Baer. Charles Baer taught Engineering Drawing for 38 years and as noted above was a Lt. Col. in the Army. He has BS and MS degrees in Civil Engineering. Professor Baer also contributed significantly to the book: **A History of the School of Engineering at the University of Kansas 1868-1988**. It provides an excellent history of ME related items as well as for the other degrees.

### ME Awards Banquet Reservation Form

The Banquet will be held in the Ballroom of the Kansas Union from 6:30 to 8:30 pm on Friday, **April 25, 2003**. Dinner includes salad, entrée, vegetable, dessert and coffee/tea; and the cost is \$15 per person, \$25 per couple. Please fill out this form and return it along with your check to: ME Vibrations Newsletter, University of Kansas, Mechanical Engineering Department, 3013 Learned Hall, 1530 W. 15<sup>th</sup>, Lawrence, KS 66045.

Name \_\_\_\_\_ Class (Year) \_\_\_\_\_

Address \_\_\_\_\_

Phone/Fax/Email \_\_\_\_\_

Number of People \_\_\_\_\_ Amount Enclosed (\$15 each or \$25 per couple) \_\_\_\_\_