

Students complete foreign internships

Last fall, two Mechanical Engineering students had international internships with Delphi Packard Electric Systems, a division of General Motors. The students - Cliff Denson, a junior from Gainesville, Florida, and Thomas Darwis, a senior from Indonesia - were among the first students to receive overseas assignments from the Ohio-based company. Denson spent the fall term in Singapore while Darwis divided his time between Singapore and Australia, spending two months in each country.

Both students had positive experiences with their international internships. "This was such a tremendous opportunity for me on many different levels," Denson said. "I had a chance to travel abroad and live in a different country—something I hadn't done before. That, in itself, was a fantastic learning experience, one that gave me a great deal of confidence in my ability to succeed on my own.

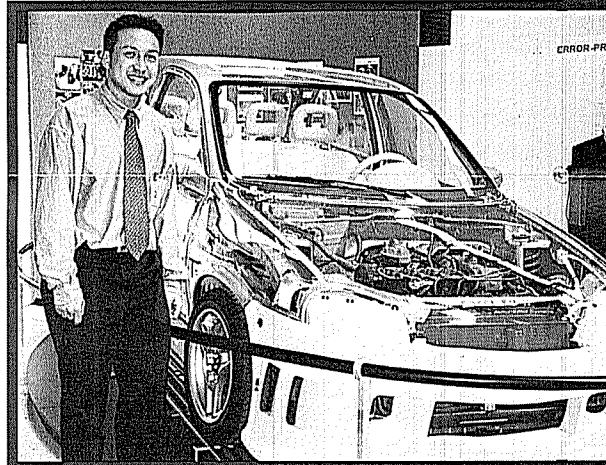
"I was incredibly surprised at the caliber of the project I was given," he continued. "I coordinated the work of 12 engineers in Singapore and the United States. I can't talk about our specific assignment except to say that we were looking at a new wiring system for the 2000 Corvette."

Darwis, too, was surprised at the level of his involvement in Delphi projects.

"Most of the engineering activity for my project was happening in Germany and Australia," Darwis said. "Since there was a limit to what I could do in Singapore, my boss encouraged me to go one place or the other so I could get more deeply involved in my project. Since I don't speak German, I chose to go to Australia.

"I was suppose to be there for only a week or two," Darwis continued. "That stretched into a month, a month and a half, and finally two months. I'm glad it worked out that way, though. I really felt I contributed to the projects I was on by working closer to the action."

One of the performance objectives for the College of Engineering is an international, engineering-related work or educational experience of at least two months



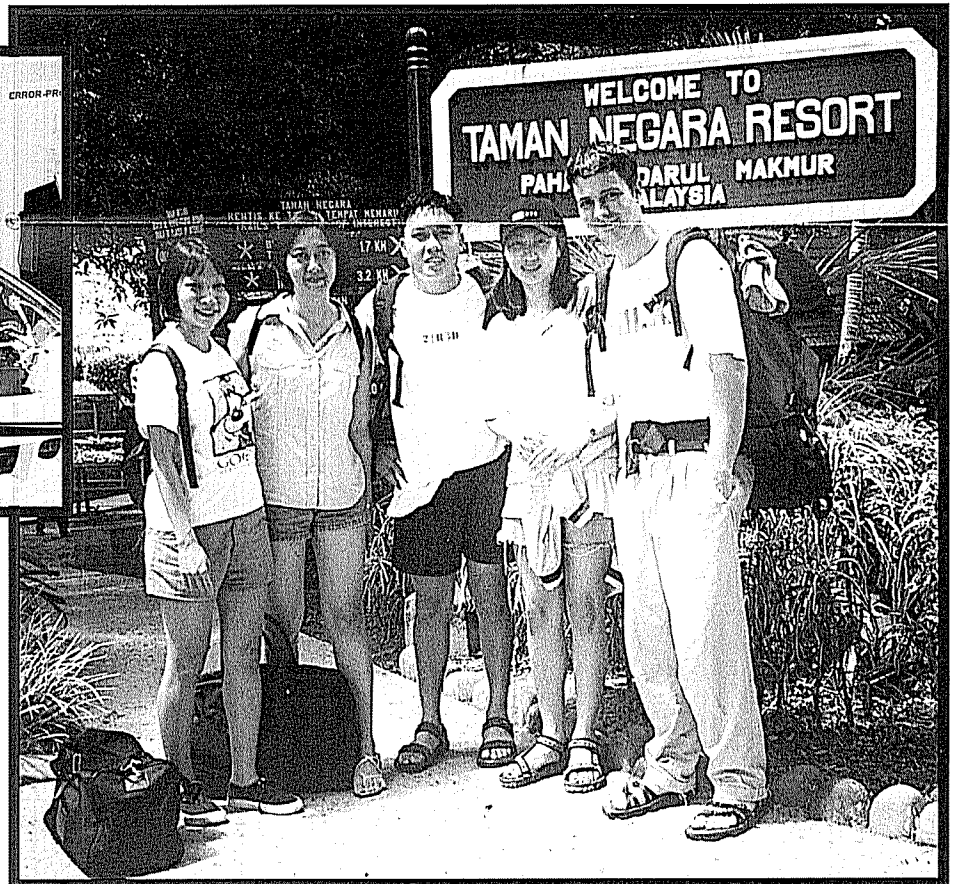
Thomas Darwis spent two months in Singapore and two months in Germany working on wiring systems for the 2000 model year cars.

for 25 percent of graduates. The objective is communicated to engineering students in various ways. Denson learned about international work opportunities in his ME 302 class from guest lecturer Larry Hanneman, who is director of engineering career services.

"I'd been thinking about studying abroad but I'd heard that it can be difficult for a mechanical engineering student to get courses that transfer," said Denson. "When I heard about overseas internships I thought, 'What a great way to learn, make some money, and travel!'" Denson did travel throughout Asia. His parents joined him at Christmas and the family spent the holidays backpacking in Malaysia.

Prior to his internship, Denson never considered working abroad after graduating from ISU. Now, he said, he'd definitely consider an overseas assignment. A return visit to Asia will come before he completes his studies, however. This summer, Denson will spend six weeks in Beijing, China. His stay will be partially funded by a new Cargill grant. Darwis will work for Delphi in Warren, Ohio. He hopes to continue his association with Delphi after graduating from Iowa State.

Students aren't the only ones who have benefited from the internship program with Delphi. The company is equally pleased with the arrangement.



Cliff Denson, far right, was one of two ME students to complete an international internship with Delphi Packard Electric Systems, a division of General Motors. During his time in Singapore, he met several students his age, who served as willing tour guides.

"We've had a very positive experience with this program, so we'd like to see it grow," said Lynn Long, BSIE'84. "It gives us an opportunity to see what a student can do, and it gives the student an opportunity to understand what it means to be a part of a corporation that has worldwide operations."

Long is a senior product business planner with Delphi. She gets occasional breaks from her regular duties to recruit student interns for all divisions of General Motors.

"Increasingly, engineering graduates will be asked to consider overseas assignments," Long added. "Our program gives students a chance to discover if that's something that might interest them."

Next year, Delphi hopes to place four interns, two in Singapore and one each in Germany and Australia. The college and the department are actively working to provide other co-op and educational opportunities for engineering students. **ME**

In this issue you will see several articles on the Department's international activities. While the state of Iowa is always our first priority, the global nature of engineering practice has our graduates and alumni practicing and managing engineering activities around the world. Some of these were international students who came to Iowa State because of the quality of the program, and returned to their home country. Today a significant percentage of all engineers will spend part of their career working outside North America. The College of Engineering and the Mechanical Engineering Department provide opportunities for students to gain an international work or educational experience. Our approach uses an international co-op or internship, and possibly combining it with a semester in a university at the same time. We have been teaming with the firms that hire our students for co-ops, for example, GM-Delphi. We are also piloting a program with John Deere for students going to Ukraine, and are actively working with firms like Fisher Controls to broaden our international education and co-op opportunities. Our goal is to give students the chance to choose an international experience because we think it gives them a competitive advantage in the engineering job market. Of course the best way to encourage students to participate in these activities is by example. As you will read, ME faculty are already active in international programs, and are welcomed in other countries because of their knowledge.

A couple of news items on alumni and students. In the ASME's class of Fellows for the society year 1996-97, Mike Jensen, one of our alums and a former colleague of mine at Rensselaer, was recognized with this grade of professional achievement and distinction. Kristi Rude, one of the most recent to join the alumni ranks, is the Wallace E. Barron Outstanding Senior in Engineering for 1998. This is the top student award in the College! Please let us know what you are doing too.

Now some comings, goings and things of note in the Department. At the end of the spring semester, Professor Bill Bathie, the first Associate Chair of the Department, retires after 40 years of service to the Department and Iowa State University. Bill helped me immensely by teaching me the ropes here. He also helped many, many students - in recent years co-op students were his specialty. In terms of student participation in co-op and internship programs, ME has the largest participation in the College. In large part this is attributable to Bill's tireless efforts. In recognition of Bill's outstanding service to Iowa State University, he will receive the Alumni Association's Faculty Citation at the Fall '98 awards banquet.

We are fortunate that when one retires, someone joins us, and that person is Mark Bryden from the University of Wisconsin-Madison. Last January, Jon Van Gerpen took on the responsibility as Director of Graduate Education from Robert Brown. When Bill Bathie retires, Don Flugrad will assume the position as Associate Chair of the Department. Other awards and distinctions of our faculty include: Professor Shyam Bahadur and I joined the class of ASME Fellows, Ivan Maldonado received the American Society for Engineering Education's MIND award, and Greg Luecke received the SAE's Faculty Advisor Award.

Warren R. DeVries

ME faculty making international connections

Several members of the ME faculty have traveled to Asia as part of a university-wide effort to discuss many initiatives, including international study and scientific exchange opportunities.

Trips were made by professors Shyam Bahadur, Robert Brown, and Palaniappa Molian, assistant professor Daniel Fang, professor and ME chair Warren DeVries, and professor and associate engineering dean Ted Okiishi. Most traveled as part of a larger delegation. For example, Fang traveled with a group of officials that included President Martin Jischke, and Brown was part of a team that included Provost John Kozak.

The Iowa State group led by Jischke spent nearly two weeks in Beijing, China last summer. According to Fang, one purpose of the trip was to finalize plans for an ISU student study abroad program at the Chinese Academy of Agricultural Sciences. The group also visited Tsinghua University (Fang called the institution the "Chinese M.I.T.") to lay the groundwork for a faculty exchange.

"All members of the delegation realized that China is a great market with a tremendous demand for U.S. technology and products," Fang said. "Because of the strength of its growing economy, it's important for faculty and students to increase their awareness of Chinese culture."

Fang made a second trip to China in mid-April 1998 as a member of a delegation that included Iowa State Engineering Dean Jim Melsa and University of Iowa Engineering Dean Richard Miller as well as representatives from Rockwell Avionics in Cedar Rapids, Iowa.

Last fall, DeVries and Okiishi traveled to Asia, this time to Singapore, where they attended a conference and visited with two students participating in a first-ever international co-op with Delphi Packard Electric Systems. They also met with the head of the Singapore Economic Development Board and paid a visit to engineering graduate Dan Button who is a vice president with Fisher-Rosemount.

"China has many outstanding educators and scientists with whom we'd like to collaborate," said DeVries. "We make these connections when we travel. International travel is also a good way to meet prospective students and to interact with foreign faculty who are looking for places to take their sabbatical leaves."

China sends more students to ISU than any other nation. Currently, 17 percent of ISU's international students come from China. Students from other nations make up just over 10 percent of ISU's total enrollment. There are more than 130 Chinese students enrolled in the Engineering College. ISU hopes to send about a dozen students to China this spring.

The Engineering College is committed to international travel for students and faculty alike. The college's performance objectives for the year 2000 include two goals centered on international travel:

- At least 25 percent of bachelor's graduates will have an international, engineering-related work or educational experience of at least two months.
- At least 60 percent of the faculty will have significant international, engineering-related experience of at least three months.

"We want to expose students to international travel before they leave here because they almost certainly will get the exposure after they graduate," said Okiishi. "You no longer have to be a senior employee to get an overseas assignment. Students need to know what it's like to live, travel, study, and work in a different country."

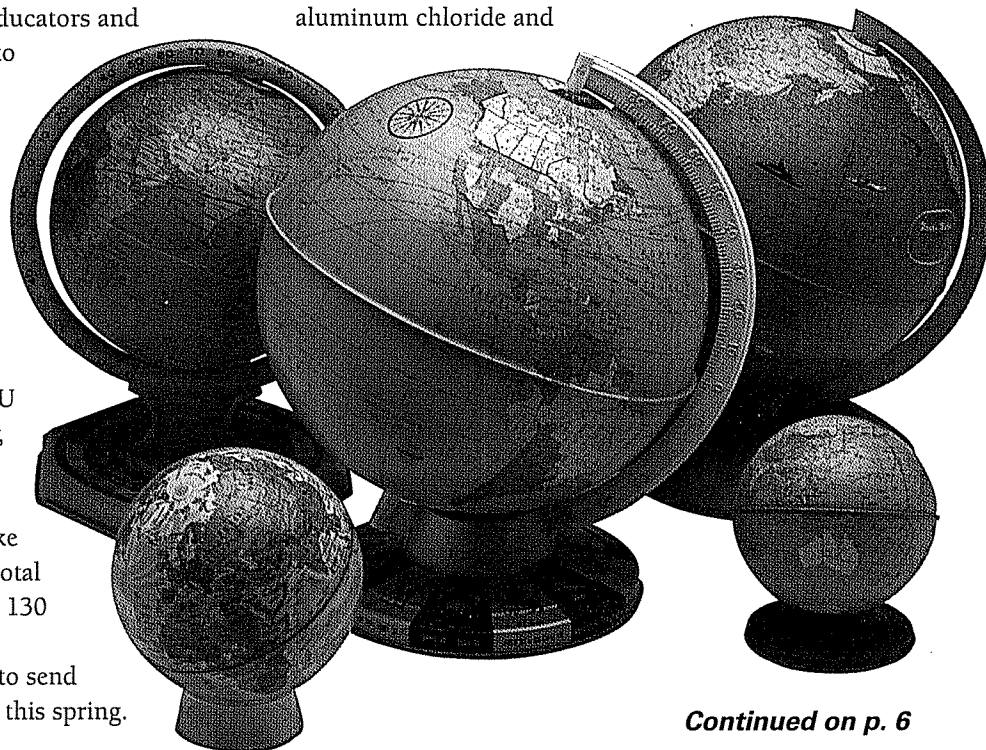
International travel is not a one-way street leading to educational exchanges exclusively for foreign students. There are interesting opportunities for ISU students in China as well.

Brown traveled to Nanyang City, Henan Province last spring as part of a team of scientists studying air and water quality issues. The team also explored ways to establish stronger connections to science, education, and development agencies of the central government. He returned with ideas for projects that could utilize the skills and knowledge of ISU engineering students.

Brown said Iowa State students can play a critical role in improving operations in Chinese factories.

"China has missed out on the whole quality movement. The magnitude of the problem there is so large that students can easily identify concerns and develop solutions. In the U.S., it's difficult to make improvements in technology because most factories are already quite sophisticated."

In his travels to Asia, Brown also noted opportunities to transfer Chinese technology to the United States. For example, the Chinese are leaders in the study of the role between water treatment agents like aluminum chloride and



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Department Dynamics

ASEE honors Maldonado

Dr. Guillermo Ivan Maldonado, Assistant Professor of Mechanical Engineering, has received the American Society for Engineering Education (ASEE) Minorities in Engineering Division's New Faculty Award. The national award complements Maldonado's recent NSF Faculty Early Career Development award in that it recognizes and reinforces his efforts in teaching, research, and service as a mentor to minority students.

Oliver receives patent

Associate Professor Jim Oliver and his collaborator Huang Yunching were issued a patent on "NC Milling Simulation and Dimensional Verification via Dixel Representation. The patent describes a method for evaluating the accuracy of NC milling processes analytically, using computer graphics output rather than cutting physical prototypes. A commercial implementation could allow a variety of manufacturers to machine parts more efficiently. Oliver is a recent recipient of a Young Engineering Faculty Research Award.

Alumni honor for Bathie

Professor William Bathie will receive an ISU Alumni Association Faculty Citation at the University Honors and Awards Ceremony in October. The award recognizes Bathie long service to Iowa State and its students. A profile of Bathie appears in this issue of ME Update.

Vance is subject of paper

Associate professor Judy Vance was the subject of an award-winning essay by Roland-Story seventh grader Meghan Miner. The essay was an entry in this year's "Write Women Back into History" contest co-sponsored, in part, by Iowa State's Women in Science and Engineering program. Vance is the first female mechanical engineering professor at Iowa State and a recent recipient of the Professor of the Year Award from Pi Tau Sigma.

Faculty honors

Professor William Cook was elected as a reviewer for the Accreditation Board for Engineering and Technology. IES Utilities has named Professor Ivan Maldonado to its Nuclear Safety Committee. Associate Professor Dan Bullen was appointed by President Clinton to the Nuclear Waste Technical Review Board. Professor Palaniappa Molian was named Outstanding Reviewer of ASME's *Journal of Manufacturing Science and Engineering*. Professor Michael Pate received the Best Technical Paper Award from the American Society of Heating, Refrigeration and Air Conditioning Engineers.

Luecke receives patent

Assistant Professor Greg Luecke and his collaborator Jim Patterson were issued a patent on their "System for Controlling Energy Through Windows." The patent is for a microprocessor-controlled window shade that optimizes energy flow through windows. The work was a collaborative effort between Iowa State and Pella Windows. Patterson was formerly with the Iowa State College of Design and now is a faculty member at the University of Oklahoma, Tulsa. The patent was issued on October 7, 1997.

ME has agreement with William Penn

ISU and William Penn College has signed an articulation agreement for a "3+2" program in mechanical engineering. Qualified students will study at William Penn for three years before transferring to Iowa State for two years of study. Graduates will receive a dual degree - a BS in mechanical engineering from ISU and a BA from William Penn. The new program represents the first such agreement between Iowa State's College of Engineering and a private institution, and is the first for the mechanical engineering department at ISU.

ME student is outstanding senior

Kristi Rude was recently named the Wallace E. Barron Outstanding Senior for 1998. Rude, a Mapleton, Iowa senior in mechanical engineering with an emphasis on manufacturing. Kristi will be married June 6 and on July 1, she will start work as a procurement engineer in the materials division of John Deere, Des Moines.

This year, Kristi served as president of the Society of Women Engineers. She is a member of Phi Kappa Phi, Alpha Lambda Delta, and the ME Student Advisory Board. She is also a peer minister at Memorial Lutheran Church and a member of the student recruitment committee of the ISU Student Alumni Association.

ME staff honored

Two ME staff members were recently honored for their key role in re-engineering the personnel action process. Rod Simpson, administrative specialist, and Rosalie Enfield, secretary, worked on the electronic forms used in the process. ISU is the only university to complete this type of project and the team, including Simpson and Enfield, have been nominated for a national award for their work on the project.

A day at the races

ME students demonstrated the mini Baja car in February as part of Iowa State's observance of National Engineers Week.



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Generous gifts from ISU ME alums, industry, and others enable our department to continue our tradition of academic excellence. Our ongoing success is linked closely to your contributions which are used for the following.

- Scholarships and fellowships
- Start-up funds to attract top-notch new faculty
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- Laboratory equipment

The Black-Hilstrom Mechanical Engineering Development Fund grew out of a fund started more than 30 years ago by Hollis "Pete" Hilstrom, ME'34. In 1980, Henry Black, department head from 1946 to 1972, joined with Hilstrom to invite other alumni to contribute to the fund. Since then, the endowment has grown to more than \$2 million with gifts from more than 475 alumni.

You can participate in the Black-Hilstrom Fund using the form included here. Or call us at (515) 294-1423 to learn about other ways you can support ISU ME.

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To provide support for the Department of Mechanical Engineering, I enclose \$_____ by check made payable to the ISU Achievement Foundation and designated to the Black-Hilstrom Fund.

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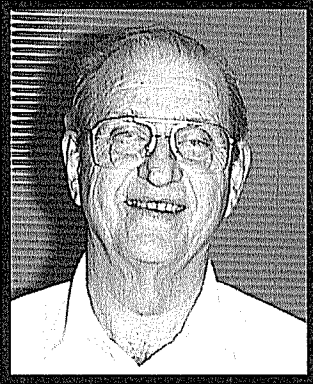
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Bathie to retire

Professor William Bathie will retire this spring, ending a teaching career at Iowa State that spans four decades.



"Forty years, and I've enjoyed every minute of it," he said, recently. "OK, maybe not every minute but most of my time here has been very fulfilling."

Bathie joined the ISU faculty in 1958, a year after receiving his bachelor's degree from Iowa State. He has served as an instructor (1958-1962), assistant professor (1964-1975), and associate professor (1975-1984). Bathie has been assistant chairman of the ME department since 1983 and a full professor since 1984. He has been an active member of the American Society of Mechanical Engineers (ASME) for 25 years and has assisted the National Council of Examiners for

"For me, it's always been about helping students, so I've tried to involve myself in activities that will directly benefit them."

Engineering and Surveying (NCEES) for nearly 20 years. His work with the mechanical engineering cooperative education program, prospective students, and transfer students covers three decades.

"For me, it's always been about helping students, so I've tried to involve myself in activities that will directly benefit them," he explained.

To further underscore his commitment to students, Bathie and his wife have endowed a scholarship in his name. Beginning this spring, the first \$750 William W. Bathie Mechanical Engineering Scholarship will be awarded. He was faculty advisor to the ISU ASME student section for 13 years.

Bathie's commitment to his students has not gone unnoticed. He has been the recipient of numerous awards and honors, including a Student Alumni Association Outstanding Academic Advising Award. This fall, he'll receive an Iowa State University Faculty Citation from the ISU Alumni Association.

In his 40 years at Iowa State, Bathie has witnessed a number of changes. Enrollment has grown from 9,500 students to more than 25,000 undergraduates. There's been a transition from "just teaching to teaching and research," and there's more support for women in many programs, including engineering.

Bathie is still finalizing his retirement plans. He'll continue his association with ASME and NCEES. In fact, he'll serve as chairman of the mechanical engineering exam committee of NCEES next year. He'd like to do some traveling – a trip to Australia and New Zealand is planned – and he hopes to write a history of the mechanical engineering department.

"I'd also like to see if I can recapture what used to be a pretty good golf game," he added. **ME**

Kimball Stoufer legacy lives on

The achievements of women graduates in mechanical engineering are commemorated in a special way: with a certificate of recognition named for Iowa State's first female ME graduate, Florence Kimball Stoufer.



Last year, six women representing one of the largest classes of female graduates in ME history received the award. They were: Alice Marie Yannotta Bear, Janna Leigh Carlson, Kari Lea

Daubenberger, Sally Ann Hopkins, Anne Stevanie Kusuma, and Amanda Jane Myers. This year, the Florence Kimball Stoufer Recognition Award could go to four women.

Kimball Stoufer graduated from ISU's mechanical engineering department in 1908. She entered the engineering program at Iowa State at the end of her junior year in high school. She was encouraged to study mechanical engineering by her father who felt

she needed to pursue a career "because she would probably never get married."

She was married in 1911 to Donald B. Stoufer, who was captain of the football team and also an engineering student. He joined her family's business - the Kimball Elevator Co. - and she applied her talents to maintaining and managing their real estate holdings. In 1940, she took over as manager of the historic Ogden House hotel, a legacy from her father. Don Stoufer died in 1955, and she continued to manage their properties until her death 1977. She was 91 when she died.

All three of Kimball Stoufer's children graduated from Iowa State. Three of her seven grandchildren attended ISU. In addition to home, family, and business responsibilities, Kimball Stoufer gave generous amounts of time to many worthy organizations. Friends and family alike admired her joyous, affirmative attitude toward life. "How lucky I've been!" was her frequent remark.

The recognition award that carries her name is given in "the expectation that her significant accomplishments will hold meaning to those women who follow in her footsteps." The Florence Kimball Stoufer Recognition Award to women in mechanical engineering has been presented annually since 1979. **ME**

Left to right: Anne Stevanie Kusuma; Alice Marie Yannotta Bear; Amanda Jane Myers; Sally Ann Hopkins; Kari Lea Daubenberger; Janna Leigh Carlson; and Judy Vance, Associate Professor of ME.

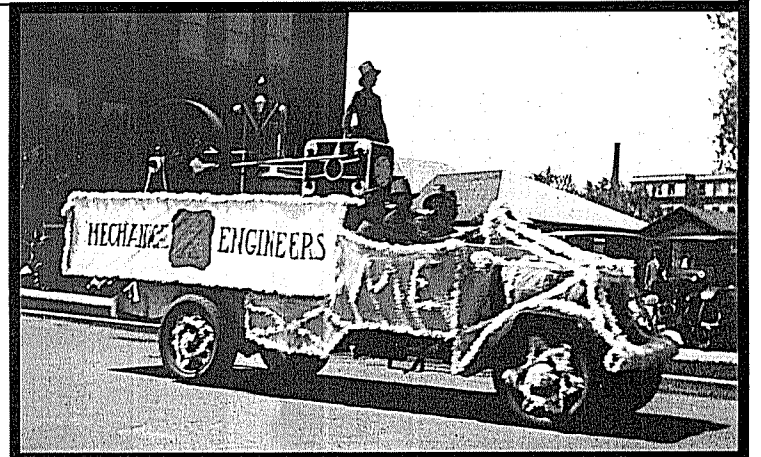


1922 ME entry was VEISHEA winner

The Mechanical Engineering Department took top honors among engineers for their float in the first-ever Veishea parade. The theme of the float was "Mechanical Engineers: The Captains of Industry."

The first Veishea was celebrated 76 years ago on May 11, 12 and 13, 1922. The success of the event can be measured by participation in it. Every hotel in the city was filled to capacity. Three hundred high school athletes were in Ames to compete on golf, track, and tennis tournaments. Prospective students came from all parts of the state to visit the campus. Special events during the inaugural three-day event included two one-act plays, a vaudeville performance, and a mock battle that involved the ROTC unit constructing a pontoon bridge across Lake LaVerne.

Ames historian Farwell Brown captured the excitement of the first Veishea parade on film. A number of his photos from the parade, including the picture reprinted here, are part of a permanent collection donated to the Ames Public Library. The photos can be viewed during regular library hours. **ME**



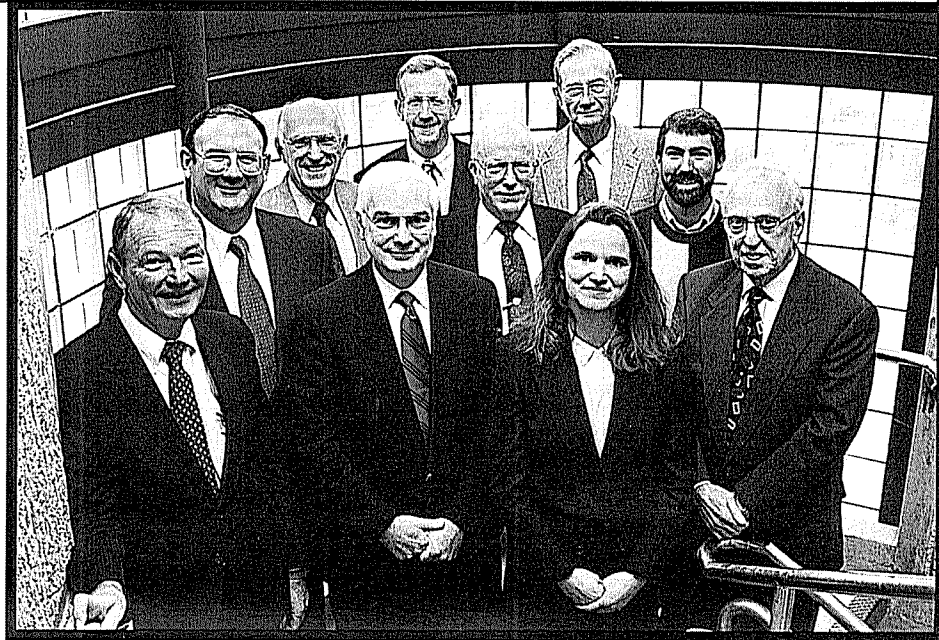
Two join ME Advisory Council

The Mechanical Engineering Advisory Council has two new members, Robert Fox and John Pinkerton.

Robert Fox, Minburn, Iowa, graduated from Iowa State in 1967 with a BS degree in agriculture engineering. He earned his master's in 1969. Fox has been employed by John Deere for nearly 30 years, as a design engineer, administrative engineer, manager of product tests and, most recently, manager of customer services. Fox and his wife Barbara have two children. Their son graduated from Iowa State in 1991 and is a design engineer at John Deere. Their daughter lives in Wyoming and works as a medical technologist. Fox enjoys his family, work, fishing, and gardening.

John Pinkerton lives in Ames, Iowa, where he is director of hydrostatics engineering at Sauer-Sundstrand. He is involved in all phases of the design, development, and product support of hydrostatic transmissions. Pinkerton joined Sauer-Sundstrand in 1962, after a brief career at Motec Industries. He received a BS in agricultural engineering from Iowa State in 1959 and an MS from the University of Illinois in 1961. Pinkerton is married and has two sons, one in social work and the other in engineering. He is active in community service and his church.

The ME Advisory Council is comprised of representatives from business and industry who serve three-year terms. The group meets twice a year to advise members of the ME department on issues dealing with industry, changing technology, educational programs and research directions. **MP**



Industrial Advisory Council members are: First row (left to right), Marvin Bigbee, John Pinkerton, Yvonne Lund, and Mike Mack. Second row: Robert Fox, Richard McGaughy, and Keith Van Maanen. Third row: Bill Binger, David Ellingson, and Fred Rixe.

Mischke staying busy

Although Dr. Charles Mischke ended his teaching career at Iowa State five years ago, he hardly considers himself retired. "In order to be retired, you must first be tired," he said, "and I'm not. Retirement should be based on the tread, and not the mileage."

Mischke has traveled many miles since leaving ISU in 1993 and he believes he still has some distance to go.

Mischke was a professor and chairman of the department of mechanical engineering at Pratt Institute when he was recruited to come to ISU by Henry Black in 1964. He provided the leadership under which a non-elective curriculum was changed to a program that included core courses plus electives. Under his guidance, a fundamental course was created to acquaint students with the ten achievements of empiricism and the morphology of the design process as well as a statistical and computational segment. He also developed the IOWA CADET algorithm for computer-aided design. But his most influential contribution to the Iowa State program was his "follow me" style of leadership.

Numerous awards were earned by Mischke during his lengthy teaching career. In 1986, he and co-editor-in-chief J.E. Shigley received "best book in engineering and technology" honors



from the Association of American Publishers for their work on the Standard Handbook of Machine Design. In 1991, the American Society of Engineering Education presented Mischke with the esteemed Ralph Coats

Roe Award for his efforts as "an outstanding teacher of mechanical engineering who has made notable contributions to the engineering profession."

Since many of his design problems were drawn from the field of railroading, Mischke's colleagues based his retirement dinner on a railroad theme. He was presented a railroad watch, engineman's garb, and a pin with the slogan, "Real engineers drive locomotives." A few years later, a board member of the Iowa Railroad Historical Society, which supervises the operation of the Boone & Scenic Valley Railroad, encouraged Mischke to take motorman and diesel engineer training. Now, he now takes an occasional turn at the helm as the train makes its way down the valley to Fraser, Iowa, and back. Sometimes, he's the man in charge of No. 50 of the Charles City Western to downtown Boone and back.

"People will recognize me and ask 'Aren't you a real engineer?'" he said. "I just smile, turn back my lapel, and show them my pin." **MP**

Bryden joins faculty

Mark Bryden joined the faculty in January as an assistant professor of mechanical engineering. He came to Iowa State from the University of Wisconsin-Madison, where he completed his doctoral work.

Bryden considered other campuses before choosing Iowa State.

"This was the best fit for me," he explained. "I want to be fully engaged in teaching and research, and there aren't many schools that let you divide your time between both areas."

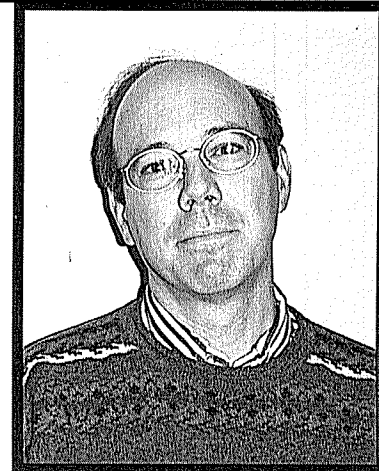
Bryden's research interest is biomass combustion. "People are concerned about the release of greenhouse gases and carbon emissions," he said. "At the same time, however, there are lots of people in the world who don't have electricity and want it. For them, biomass combustion can be a way to achieve the lifestyle we had in the '40s and '50s while minimizing the release of greenhouse gases."

"Researchers in my field are looking at alternative fuel sources, like crops that can be grown for energy purposes - hybrid poplars, switchgrass, and bamboo, for example," he continued. "This is biomass and when it burns, some CO₂ is released but it's done using dedicated energy crops in a closed loop process, so a significant portion of the CO₂ that is released was previously removed from the environment by the crop as it grew. Because of this, biomass combustion is cleaner and better for the environment."

Two factors related to Bryden's research contributed to his decision to accept a position at Iowa State: ISU has an existing biomass program and the Iowa legislature has a clear interest in the topic.

Bryden received an undergraduate degree in general engineering from Idaho State University in 1977. He spent the next 14 years in the private sector, working for Westinghouse in Idaho and Pennsylvania. He received a master's in mechanical engineering in 1993, and completed his doctoral thesis on "Computational Modeling of Wood Combustion" on January 8, 1998.

Bryden's wife Kristy and sons Aaron and Ben still reside in Madison. They will join him in Ames at a later time. **MP**



Commencement Reception

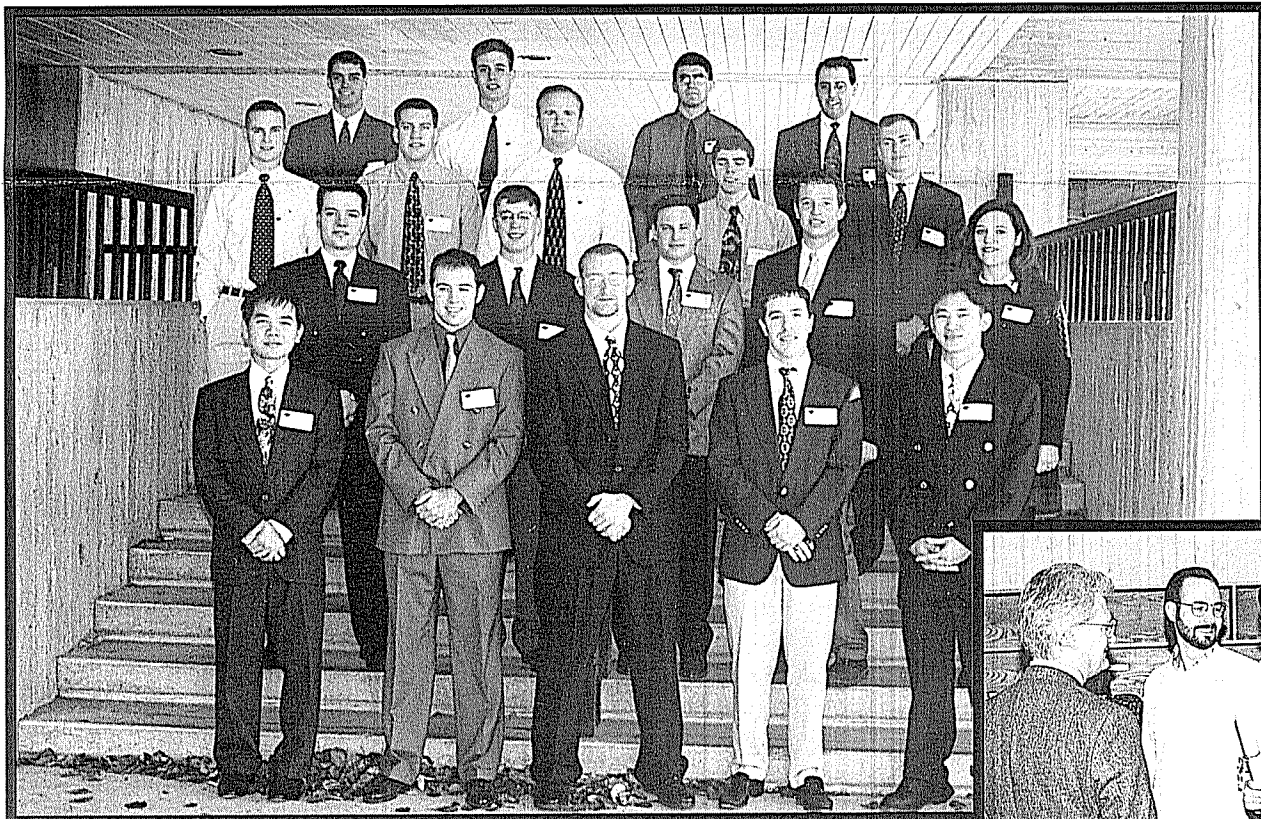
Members of the most recent class of mechanical engineering graduates were honored at a reception December 20, 1997. The event was held in Scheman. Many of the graduates and several of their family members and friends were able to take part in the festivities.

The ceremony included a presentation by ME chair Warren DeVries. Several members of the ME faculty attended to share their best wishes with graduates. Participants received a commemorative publication with a complete list of their fellow graduates.

The newest ME graduates included: Jennifer Darlene Benesch, Andrea Christine Brandt, Oivind Brockmeier, Per Christian Bunaes, Gregory Alan Carlson, Clifford E.

Cotton III, John David De Leon, John Alexander Fleming, Patrick Scott Fortner, Mark Peter Gyskiewicz, James William Hilleman, Daniel Joseph Huegerich, Mark Peter Jankowski, Steven Andrew Johnson, Darian Paul Johnston, Michael Lewis Kent, Greg Joseph Klein, Jonathan Lee Kounkel, Peter Joseph Labore, and Joonsang Lee.

Also: Keith Allen Leisinger, Chong Kheng Lim, Lloyd Ralph Luck, Quang Minh Ly, Steven Allan Madden, Misty Lee Maixner, Grant Warren Mandernach, Matthew Mial Mason, Jeremy Paul Maus, Benjamin David McClain, Jason Darwin Miller, Jaime Patrick Ogbourne, Scott Andrew Robinson, Teru Ronnette Rorabaugh, Douglas John Schoo, Patrick Joseph Stebly, Douglas Matthew Svestka, Mark Robert Swim, Nathan Coye Thomas, Scott Allen Thompson, Ted Thomas Underwood Jr., and Walter Daniel Worth.



MEupdate

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Send comments, questions, and news items to Warren DeVries, ME Department, ISU, 2025 Black Engineering, Ames, IA, 50011-2161; Phone: (515) 294-1423; Fax: (515) 294-3261; e-mail: isume@iastate.edu; <http://www.eng.iastate.edu/me>

ME International Travel Continued from p. 2

Alzheimer's disease. They're making moves to use alternate flocculating agents which is something Brown believes the U.S. should emulate.

Although much of ME's recent travel has been to Asia, exchanges with China have been underway for several years. Bahadur has a relationship that goes back nearly a decade. In 1988, he received a grant to study the "Role of inorganic particulate fillers in the tribological performance of polymers." Some of the grant was used to bring a postdoctoral research assistant from Lanzhan Institute of Chemical Physics to Ames. Subsequent NSF grants covered other exchanges.

"In China, there is tremendous interest in my research area," Bahadur said. "The surface analysis facilities there are better than the facilities at ISU. Traveling to China broadened my perspective, and gave me a chance to work with a leading institution. I made many contacts there so I can make arrangements for our students to visit these labs, when the time comes.

"It is so important for our faculty and students to see first-hand what's being done in China and other parts of the world," Bahadur concluded. "We have become a global market. Many of our students will be working for U.S. companies with offices worldwide. They need to prepare for that." 

Department of Mechanical Engineering
Iowa State University
2025 H.M. Black Engineering Bldg.
Ames, Iowa 50011-2161