I am pleased to have this opportunity to share with you some recent and important developments in the College of Engineering. These major actions include a reorganization of the college, a commitment to move the college forward in computing resources, and progress in expanding the physical plant available to the college.

The administrative structure of the college has been changed from a matrix structure to a departmental structure. Before January 1, the structure was an organizational grid consisting of four divisions and seven academic degree programs. Each faculty member was a member of only one division but could be a contributing member of more than one of the academic degree programs.

The matrix structure was abolished and the college reorganized into six departments: biomedical engineering, chemical and materials engineering, civil and environmental engineering, electrical and computer engineering, industrial and management engineering, and mechanical engineering.

The departments have the full range of academic, fiscal, and administrative responsibilities associated with traditional university departments. Each department offers an undergraduate degree program, and with the exception of biomedical engineering, each offers graduate degree programs.

The departmental organization offers the principal advantage that faculty, staff, curriculum, laboratories, and students are all entirely associated with the resource centers of the college—the departments. Thus, departments aligned with the academic programs serve to enhance student identification with their professional engineering field, increase commitment of faculty and staff to the development and maintenance of a contemporary curriculum, strengthen all undergraduate curricula for accreditation, increase the likelihood of recognition by academic and professional peers of the developing academic excellence of the academic programs, and improve administrative efficiency.

Last academic year, the College of Engineering Computer Committee recommended a farsighted plan to substantially upgrade the computing facilities available to students and faculty. The plan was endorsed by the faculty and is now referred to as the Iowa Computer Aided Engineering Network (ICAEN). The plan is to establish a network of personal-computer-based work stations connected to a host superminicomputer as well as to other computers on campus. About 125 work stations would be available for student use in two clusters—one of these principal clusters will be the Howard J. Elder Laboratory for Engineering Computing which is described later. In addition, the network is to include a personal computer work station for each faculty member and an advanced work station in each department for development work.

You are aware from my earlier messages that the college has a severe shortage of space. The University has elevated the college's request for a major addition to the Engineering Building to the top of the list for new construction of academic buildings on the campus. An addition has been requested with 142,000 gross square feet (85,000 net square feet) at a total estimated cost of $27 million. The staff of the Board of Regents is not recommending to the board that funding for this construction be sought now because of the poor economic forecast for the state in the next year. The University is pressing, however, for construction planning funds in the next budget year.

The significant success of the College of Engineering Development fund is reported to you elsewhere in this newsletter. The fund is designed as a long-term effort to improve the campus life and to enrich the educational experience of our engineering students through private gifts. Through their gifts, alumni and friends of the college are making the fund one of the most successful endeavors the college has ever embarked upon. On behalf of our faculty, staff, and students, I wish to thank each of you who have contributed to the fund. To those who have not contributed, I ask you to examine the materials sent to you about the fund, to reflect upon your career, and to consider the impact your contributions will have on the education of our students.

I invite you to use the enclosed form to provide us with information about you and your career. Moreover, I hope you will find the time to visit us on campus, to renew acquaintances, and to share your career experiences with us.

Robert G. Hering, Dean
Three Who Will Be Remembered

Three distinguished emeritus faculty members died this year.

Professor Emeritus Joseph W. Howe, hydraulic engineering, died in October 1983 in Iowa City. Howe, who served as chairman of the Department of Mechanics and Hydraulics from 1942 until his retirement in 1970, gained international recognition for supervising the Ralston Creek Project—one of the most thorough hydraulic studies of its kind.

From 1937 to 1979 Howe also directed the UI's voluntary collection of weather data for Iowa City.

Born in Omaha, Howe received his undergraduate and graduate degrees from the UI. After serving as an instructor at the University of Illinois, he came to The University of Iowa as an assistant professor in 1929.

Howe wrote several articles on hydraulics and coauthored a book, Basic Mechanics of Fluids, with Professor Emeritus Hunter Rouse in 1953.

Professor Emeritus Lawrence A. Ware, electrical engineering, died in May in Iowa City.

Born in Bonaparte, Iowa, Ware received his undergraduate and graduate degrees from the UI and taught electrical engineering from 1937 until his retirement in 1969.

Ware significantly influenced the development of the electrical engineering program as well as the careers of its graduates. He introduced course work in emerging technologies, coauthored a pioneering textbook, directed the research of more than 100 graduate students, and inspired an unusually large number to choose teaching careers.

Last year the electrical and computer engineering program established the Lawrence Ware Scholarship Fund to assist and encourage promising students. Two scholarships will be awarded each year, beginning with the 1985-86 academic year, to recipients selected on the basis of need as well as academic achievement.

Professor Emeritus John J. O'Mara, civil and environmental engineering, died in September 1983 in Iowa City.

O'Mara, who was born in Terre Haute, Indiana, received his undergraduate degree at Rose Polytechnic Institute in 1930 and a master's degree at Purdue University in 1946. He taught at the UI from 1946 until his retirement in 1975. Early in his teaching career at Iowa, he established courses in soil mechanics, transportation safety, and city planning. Among his numerous professional activities, O'Mara was a fellow of the American Society of Civil Engineers, served on national committees for the Highway Research Board, and was a member of the board of directors of the Educational Division of the American Road Builders Association. He testified before several congressional committees on transportation safety issues.

New Board Members

Five new members officially joined the College of Engineering Advisory Board at its September meeting. They are:

Dr. Chun H. Cho, Fisher Controls, Marshalltown (Ph.D. in M.E. '73);
Ronald W. Dunmire, Iowa Manufacturing Company, Cedar Rapids (B.S.M.E. '61);
Dr. Carl T. Egger, Grain Processing Corporation, Muscatine (B.S.Ch.E. '59, M.S. in Ch.E. '60, Ph.D.in Ch.E. '62);
Glenn L. Medhus, Deere and Company, Moline;
Ralph H. Wallace, retired from Wallace, Holland, Kastler, Schmitz and Company, Mason City.

The five were selected to replace Dr. Robert L. Cook, Bud Gode, and Terry Shuck, whose terms expired in 1984, and to fill other vacancies.

Faculty Members Honored

Professor Ronald G. Askin, industrial and management engineering, has been honored by the National Science Foundation with a 1984 Presidential Young Investigator Award which carries a five-year, $25,000-per-year stipend. In addition, the National Science Foundation will match up to $37,500 per year in funds awarded by industry to support Askin's research.

Professor Dong H. Chyung, electrical and computer engineering, was cited by Scholastic Update in September 1983 as one of "ten to watch in the computer age" for his work in developing "a new generation of robots." Chyung is developing software that will allow robots to perform tasks cooperatively.

Professor John F. Kennedy, civil and environmental engineering and director of the Iowa Institute of Hydraulic Research, was among three Iowans awarded the 1984 Governor's Science Medal for his outstanding contribution to Iowa's scientific community. Kennedy was cited by Governor Terry Branstad for his "international reputation" in the field of fluid mechanics and hydraulics.

Professor Emeritus E. O. Macagno, right, has been awarded a grant from the National Endowment for the Humanities and the National Science Foundation to complete his work in editing 12 volumes of Leonardo da Vinci’s notebooks into a book da Vinci planned but never executed. By identifying, interpreting, and classifying all the drawings and writings related to fluid flow, Macagno expects to show that much of da Vinci’s best work was done, not as an artist or scientist, but as an engineer studying the flow of water and other fluids. Since he first became interested in the notebooks 25 years ago, Macagno has traveled across much of Europe to examine nearly all of the estimated 30 volumes of da Vinci’s notebooks that remain in existence. Also pictured is Frank Paluka, UI special collections librarian.
UI Professor Leads Acid Lakes Research

Acid rain is a problem in the United States, but not for the reasons usually given, according to Professor Jerold L. Schnoor, civil and environmental engineering, who has received an Environmental Protection Agency grant to study and evaluate the damage done to U.S. lakes by acid rain. Schnoor told a U.S. Senate committee and House subcommittee last spring that the creation of acid lakes is not the most pressing reason for cleaning up the pollution responsible for acid rain. “Other effects of sulfur dioxide include diminished visibility, materials damage, and corrosion, as well as effects on humans, especially emphysema and asthma. There are also possible severe effects on vegetation, though the initial reports are just now coming out on this,” says Schnoor.

Schnoor has compiled a comprehensive survey which shows that acid lakes exist in the United States, primarily in the Northeast and upper midwest, but that combined they total an area of about 7,000 to 8,000 acres.

“So there is good news and bad news. The bad news is that there are about 300 acid lakes. The good news is that they aren’t large lakes, in general, and they don’t occupy a large percentage of the water resources,” he says.

About two-thirds of the cause of acid rain can be attributed to sulfur dioxide emitted from coal-burning power plants and factories. The remainder results from nitrogen oxides emitted by automobiles and various industries. Schnoor says that if current trends persist, U.S. lakes may already have seen the worst assault of acid rain.

“In general, in the northeastern United States, projections show that the amount of sulfur dioxide emitted from smokestacks in industry and power plants will be at the same level or slightly less over the next 20 years,” Schnoor says.

In the Midwest, predicting the sulfur dioxide emissions over the next 20 to 30 years is less certain, Schnoor says, but increased emissions would be expected to increase the number of acidic lakes in the upper Midwest, in the eastern part of the upper peninsula of Michigan, and in north central Wisconsin, he says.

Schnoor currently serves as a member of a panel on lake acidification under the direction of the Natural Research Council, National Academy of Sciences.

Introducing the Elder Laboratory for Engineering Computing

The college has taken another step forward in its commitment to becoming a national leader in the use of computer technology in engineering education. The Howard J. Elder Laboratory for Engineering Computing, part of a proposed network of personal computers that are interconnected with one another and with the college’s superminicomputers, will provide 60 sophisticated work stations for students and faculty.

One of two planned work station clusters, the lab will feature high-level personal computers, hard copy units, and communication equipment. It will capitalize on the growing computer literacy of engineering students by providing opportunities to work with word processing, computer graphics, database management, and communications with larger data systems and computing networks.

The financial impetus for the laboratory was provided by a generous gift from Manuel A. Villafana, chairman of the board of GV Medical Incorporated of Minneapolis. Villafana has been a pioneer in the development of innovative medical products in the United States in recent years, particularly those relating to cardiovascular surgery. Early in his career, Villafana participated in the development of an improved artificial heart valve and lithium-powered pacemaker. He is currently involved in research to enable lasers to clear blocked coronary blood vessels.

The contribution for the computer lab was made in memory of Howard J. Elder, a 1959 graduate of the college and the father of Villafana’s wife, Elizabeth. She graduated from The University of Iowa College of Business Administration in 1980. A dedication ceremony is planned for next spring, and work on the second cluster of 60 work stations will begin the following summer.

College Contributions on a Rapid Rise

Following an outstanding response in the first year, alumni and friends continued their generous support of the College of Engineering Development Fund in 1983. Responding to a Development Fund mailing and a follow-up telefund conducted by The University of Iowa Foundation, prior benefactors and an encouraging number of new contributors responded to the college’s needs with more than $192,000 in gifts.

Many contributors’ gifts were multiplied by corporations that provide matching funds for charitable contributions made by employees. These matching gifts both increase support for the college and reflect corporate awareness of the interdependence of business and educational institutions.

The generosity shown to the college through the Development Fund has made resources available on a yearly basis for such programs as student financial aid, campus visits by distinguished individuals in industry and academics, faculty development, research, and improved communications with the college’s alumni and friends and with industry.
Department Highlights: A Sampling of Recent Activities and Accomplishments

Biomedical Engineering

Krishnan B. Chandran was promoted from associate professor to professor and David J. Skorton from assistant professor to associate professor.

Professor Jai H. Ryu resigned in July to accept a professorship in the College of Medicine, Wake Forest University, Winston-Salem, North Carolina.

The program is currently recruiting two professors in the area of bio-electrical engineering and one in the area of biomaterials.

Faculty Activities

Professor Krishnan B. Chandran's research project on the assessment of left ventricular passive elastic properties has been renewed by the National Institutes of Health for another three years for an amount totalling more than $300,000. In April, Chandran was appointed a member of the Editorial Consultants Panel of the Journal of Biomechanics. He presented a paper on left ventricular mechanics at the Antwerp-La Jolla Research Conference on Cardiac Function in Belgium in July.

Professor V. K. Goel presented a paper at the Ninth International Society for Biomechanics Congress held at the University of Waterloo, Waterloo, Canada, in August 1983, and was an invited participant in the 1984 Gordon Research Conference at Andover, New Hampshire, in August.

Professor Roderic S. Lakes has returned from his spring 1984 University Faculty Development Assignment which he spent conducting research on bone fracture at Queen Mary College of the University of London and lecturing in France and Greece.

Professor Y. King Liu was the keynote lecturer for the annual Japanese Orthopaedic Biomechanics meeting in Tokyo in September. Earlier, a lecture tour took him to Calcutta, India, where he was the keynote lecturer at the First International Symposium-Workshop on Bioengineering in December 1983.

Professor Joon B. Park served as a biomechanical consultant for the Korean Advanced Institute of Science and Technology in Seoul, Korea, for two weeks during the past academic year.

Professor Kwan Rim presented an invited lecture at the University of London in March 1984 and attended the board of directors meeting of the Saudi Arabian National Center for Science and Technology in Riyadh, Saudi Arabia.

Student Activities

A UI chapter of the Biomedical Engineering Society was chartered in the spring of 1984.

Deana Bodnar (B.S.E. '84) from Clinton presented a paper at the national meeting of the Society for Neuroscience in Boston in November 1983.

The BME Professional Seminar took a field trip to Chicago to visit Baxter-Travenol and Underwriters Laboratories.

Special Accomplishments and Projects

Three required courses—Biomaterials, Biomeasurements, and Microcomputers—have been added to the curriculum by the Biomedical Engineering Undergraduate Program Committee. A biomaterials instructional laboratory is being developed by Professor Joon B. Park and a biomeasurement instructional laboratory by Professor Roderic S. Lakes.

A major breakthrough in research was celebrated in the Center for Materials Research headed by Professor Y. King Liu. In collaboration with Professor Park and Drs. Clark and Nishiyama of the College of Medicine, Liu has successfully developed a method for facilitating bone ingrowth into PMMA (bone cement). The innovation will be patented.

Park has also developed a new idea for the design of the next generation bone plate which will be patented and introduced to medical practitioners in the near future.

Chemical and Materials Engineering

Faculty Changes

The program will gain two new faculty members this year.

Professor David W. Luerkens, who has been granted a charter at the UI. As one of its first projects, the group has helped organize the Engineering Open House during the spring 1984 semester. Founding officers are Rhet Livengood, president; Paul D. Guidotti, vice-president; Joel R. Jensen, treasurer; and Andrea L. Wolf, secretary.

Fine Particles Research Activities

The program is recruiting two new faculty members this year.

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Professor David W. Luerkens, who received his Ph.D. degree in chemical and materials engineering from the UI in 1980, left an industrial career at Du Pont Savannah River Laboratory to join the department this fall. Luerkens' research interests are in morphological analysis of fine particulates and in chemical separation and production processes.

David G. Reithwich, who will receive his Ph.D. from the University of Wisconsin, has accepted an appointment as assistant professor beginning in January 1985. His research interests are in the area of catalytic reaction engineering associated with transport effects, reactor design, and catalyst design.

Faculty Activities

Professor J. Keith Beddow has been appointed cochairman of the First World Conference on Particle Technology to be held in West Germany in 1986. He directed a National Science Foundation workshop at the annual meeting of the Particle Society in Honolulu in August 1983, and conducted seminars on particle shape characterization at several industrial laboratories during the academic year. He recently edited a book on particle systems technology and was coeditor of a book on powder technology.

Professor Gregory R. Carmichael, department chair, returned from Japan after six months of research in connection with his University Faculty Scholar grant. While in Japan he presented seminars at several universities; at two environmental studies institutes; at the Fifth Symposium of Environmental Engineering, Kyoto University; and at the Seventeenth Autumn Meeting of the Japan Society of Chemical Engineering at Sendai, Japan; and at the Joint Symposium of the Air Pollution Study Association, Tokyo.

Professor Arthur F. Vetter presented a paper with Paul Swanson of Deere and Company at the annual meeting of the American Society of Lubrication Engineers in Chicago in April. He continues to collaborate with Swanson on abrasive wear research. The Tau Beta Pi District 11 meeting in St. Paul last April was named The Arthur Vetter Spring Conference in honor of Vetter's service as district director from 1979 to 1982.

Student Activities

The Alpha Phi Chapter of Omega Chi Epsilon, an honorary chemical engineering society, has been granted a charter at the UI. As one of its first projects, the group helped organize the Engineering Open House during the spring 1984 semester. Founding officers are Rhet Livengood, president; Paul D. Guidotti, vice-president; Joel R. Jensen, treasurer; and Andrea L. Wolf, secretary.

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been very active this year. Current areas of research interest in the group include advanced particle morphology, dust explosion phenomena, metallic wear, particle shape and process variables of fly ash characterization, and shape separation techniques. In December 1983, a student member of the group, Russell Ogle, presented a paper at the annual meeting of the Combustion Institute, in Providence.

Civil and Environmental Engineering

Faculty Activities

Professor Dan E. Branson traveled to Paris to present an invited lecture at the Workshop on Partial Prestressing: From Theory to Practice, sponsored by the NATO Scientific Affairs Division and the National Science Foundation. He also recently presented invited talks on long-span bridges to the Iowa Engineering Society, the Iowa Academy of Sciences, the Structural Engineers Associations of Central and Eastern Iowa, and the ASCE Student Seminar. He has contributed chapters on deflections to Concrete Engineering (Van Nostrand Reinhold Publishing Company) and to the Portland Cement Association handbook on the 1983 ACI building code.

Professor Robert E. Ettema presented three papers at the International Association for Hydraulic Research Symposium on Ice last August in Hamburg, West Germany.

Professor Forrest Holly received the Arthur A. Ippen Award, International Association for Hydraulic Research, Moscow, in September 1983 and was appointed to the Computational Hydraulics Committee, ASCE, in November 1983.

Professor John F. Kennedy was selected to be a member of the Advisory Council of the International Research and Training Center on Erosion and Sedimentation, Beijing, China, in April. He was also an invited participant in the joint American Institute of the Taiwan-Coordination Council for North American Affairs Seminar on Research for Multiple Hazards Mitigation, held in Taipei, Taiwan, during January 1984, and in a workshop sponsored by the East-West Environment and Policy Institute on the Management of River and Reservoir Sedimentation in Asian Countries held in Honolulu in May.

Professor Jerald L. Schnoor is an adviser on acid rain to EPA administrator William Ruckelshaus and is a member of the National Research Council of the National Academy of Sciences Panel on Processes of Lake Acidification. Schnoor has been a guest professor at the Swiss Federal Institute of Technology in Zurich and is a participant in a two-year joint Swiss-NSF project on acid rain effects on Swiss lakes and forests, which began in October of 1983. He is also editor of a new book, Modeling of Total Acid Precipitation Impacts, published by Butterworth in 1984. In September, Schnoor was named the first president of the Iowa Groundwater Association, which was organized to improve communication between state regulatory officials and other persons involved with issues of development, use, allocation, and protection of groundwater.

During 1983-84, Professor James W. Stoner was on a University Faculty Developmental Assignment to continue his research in the field of transportation engineering. He has received several grants to support his work on public transportation funding, routing, and costing.

Professor Richard L. Valentine, who has been appointed a member of the American Water Works Project Advisory Committee, presented a paper at the Fifth Conference on Water Chlorination held in June at the College of William and Mary, Williamsburg, Virginia.

Student Activities

Ph.D. student Inbo Park was named 1984 Paul C. and Sara Jane Benedict Fellow for his study of alluvial river processes.

Paul H. Robbins, national president of Tau Beta Pi, was flanked by presidents of the six engineering honorary society chapters at Iowa during the seventy-fifth anniversary of the chartering of Iowa's Beta chapter. Left to right are Rhett Livengood, Omega Chi Epsilon (Chemical Engineering); Steve Sherman, Pi Tau Sigma (Mechanical Engineering); Kathy Carlson, Alpha Pi Mu (Industrial Engineering); Robbins; Kathryn Yaeger, Chi Epsilon (Civil Engineering); Sam Mullins, Tau Beta Pi (all engineering majors); and Dave Conyers, Eta Kappa Nu (Electrical Engineering).

Electrical and Computer Engineering

Faculty Activities

Professor Dong Chyung traveled to Budapest, Hungary, in July to present a paper at the International Federation of Automatic Control Ninth World Congress.

Professor Adrian Korpel will spend the 1984-85 academic year at the University of Erlangen, Nuremberg, combining his University Faculty Developmental Assignment with a Von Humboldt Scholarship awarded by the government of West Germany.

Professor Karl Longren, who has been awarded a two-year National Science Foundation Creativity Grant, presented a paper at the International Conference on Plasma Physics in Lausanne, Switzerland, in June 1984.

Professor Sudhakar Reddy presented a paper at the First International Conference on Computers and Applications in Beijing, China, in June.

Student Activities

Junior Duane Jacobson has been awarded the State of Iowa Consulting Engineers Scholarship for 1984-85 and has also received a Most Promising Student Award from National Cash Register Company.

(cont. on next page)
Research Facilities

The department's major laboratory development effort in 1983-84 was the super-minicomputer lab. Two VAX 11/750 systems with an average of 5 Mb random access memory, a 450 Mb hard disk, a magnetic tape drive, and a line printer have been installed. Current development plans include the addition of over 25 new terminals, two graphics stations for VLSI circuit design, and a laser printer. The systems are connected by an Ethernet and run under a UNIX operating system.

Gifts

John Fluke and Company awarded an equipment grant of $13,000 to the department. The donated equipment includes digital multimeter, frequency counters, and a 68000 microprocessor-based systems troubleshooting pod.

Industrial and Management Engineering

Faculty Changes

Ronald G. Askin was recently promoted from assistant professor to associate professor with tenure.

Professor Edward Mielnik retired in the spring of 1984 and is currently writing a textbook on materials processing.

Faculty Activities

Professor James Buck has recently published two books. One of the books, coauthored with Chen Park of Auburn University, deals with the impact of inflation on business decisions and has been published by the Institute of Industrial Engineers. The other, Economic Engineering Decisions, was published this fall by the Iowa State Press.

Professor Voratas Kachitvichyanukul and Professor James Buck recently received a three-year, $100,000-a-year National Science Foundation grant to work on methods engineering in automated industry.

Part of Professor John Liittschwager's 1984-85 University Faculty Developmental Assignment will be spent in Europe where he plans to visit several industries and academic institutions. The primary focus of his leave will be to study and develop instructional materials related to quality control and reliability.

Professor Tzvi Raz was recently awarded a National Institutes of Health grant to study hospital costs relative to new Medicare requirements. Under an Old Gold Fellowship, he spent the summer of 1984 doing the preliminary work in developing a new microcomputer laboratory for the department.

Student Activities

A delegation of 20 undergraduate and graduate students went to Chicago this spring to attend the national conference of the Institute of Industrial Engineers. Robert Wallas was presented with the top M.S. thesis of the year award given at the conference.

The department's Society for Computer Simulation student chapter was quite active this year. One of the highlights was a field trip to Pritsker Associates in Lafayette, Indiana, and Purdue University.

The Alpha Pi Mu, an industrial engineering honorary fraternity, inducted five new members this year.

Special Accomplishments

One of the special accomplishments of the department this year is the development of a new Computer Integrated Manufacturing Laboratory. The lab contains three small-scale robots and two small-scale CNC machine tools, which will be integrated with the robots. There are also model forms of material handling equipment that can be put together to physically simulate the handling of materials in a manufacturing operation.

A number of microcomputers will be used in conjunction with the material handling equipment, the robots, and the machine tools. There are plans to add a digital television camera which will be used to recognize and classify parts and to determine part orientation relative to the robots.

Mechanical Engineering

Faculty Activities

Professor C. J. Chen, department chair, was honored with a $30,000 award by the YOSIN Foundation for his excellence in teaching and research. He was a committee member of the ASCE Specialty Conference at the University of Wyoming in August and will serve as a member of the ASCE Specialty Conference on the Advancement of Aerodynamics, Fluid Mechanics, and Hydraulics to be held in Minnesota in 1986. He is also organizing an international symposium on...
refined flow modeling and turbulence measurement scheduled for 1985. The Japan Central Research Institute for Electrical Power Industry has published Chen's book, Prediction of Turbulent Flow, which is based on the short course he offered when he served as a guidance consultant at the institute in the summer of 1983. Under the exchange program between the Iowa Institute of Hydraulic Research and the Wuhan Institute of Hydraulics and Engineering, Chen was invited to lecture in China during the summer of 1984. He was also an invited speaker at the Numerical Computation of Fluid Flow and Heat Transfer workshop sponsored by the ASME Heat Transfer Division last April in Philadelphia.

Professor E. J. Haug assumed permanent editorship of the Journal of Structural Mechanics and was elected to a two-year term as chairman of the ASME Design Automation Committee. He has also completed a book with Professor K. K. Choi, Structural Design Sensitivity Analysis, to be published by Academic Press, and has edited a book, Computer-Aided Analysis and Optimization of Mechanical System Dynamics, that will be published by Springer-Verlag.

At the invitation of the French Ministry of Education, Professor V. C. Patel served as visiting professor at the Laboratoire d'Hydrodynamique Navale, Ecole Nationale Superieure de Mechanique, Nantes, France, during June. Patel also presented a paper and chaired a session at the EUROMECH Colloquium on Turbulence Modeling in Karlsruhe, West Germany, in July.

Professor B. R. Ramaprian presented two papers at the Fourth Symposium on Turbulent Shear Flow in Karlsruhe, West Germany, in September 1983. He was also the keynote speaker for the Symposium on Unsteady Layers and Friction at the ASME Energy Source Technology Conference in New Orleans in February. In 1984, for the fourth consecutive year, Ramaprian received a National Academy of Applied Science grant of $2,500 to supervise high school student summer research under the Research and Engineering Apprenticeship Program.

Professor R. I. Stephens presented papers at the Fatigue 84 International Conference in Birmingham, England, in September, at the International Symposium on Fracture Mechanics in Beijing, China, in November 1983, and will present a paper at the upcoming International Conference on Fracture in New Delhi, India, in December.

Special Accomplishments

Since joining the department two years ago, Professor L. D. Chen has developed a new undergraduate elective course in combustion engineering and has set up a new combustion laboratory.

A new computer-aided teaching software package for the undergraduate core course in fluid mechanics has been developed by Professor Fred Stern and two graduate students, K. Obasih and J. Wu. The software package was used successfully during the spring semester 1984. Professor T. F. Smith also developed a computer-aided graphics software package for use on microcomputers in the junior-level experimental engineering class.

Student Activities

At their first get-acquainted meeting with undergraduate students held in April, faculty members introduced their research work and explained their interests to students.

Junior and senior students redesigned their Mini-Baja vehicle for competition in the summer of 1984. This year's vehicle came in eighth out of 29 entries at the Mini-Baja Competition and Race held at Dayton, Ohio, finishing the endurance race with no mechanical failures.

Transplant Support Fund Established

The college's students and faculty rallied quickly last spring to raise $12,000 for a senior electrical and computer engineering student in need of a liver transplant. The money was raised through pledges and a benefit basketball game played by teams of faculty and students from electrical and computer engineering and mechanical engineering.

What's New with You?

To help us keep our files up-to-date and accurate, please use this return form to provide information on your current career status.

Name ____________________________

UI Degree(s) and Years ____________

Home Address ____________________

Work Address ____________________

Position Title ____________________

Recent career information about yourself, or comments you'd like us to see:

□ Please send me information on the Engineering Development Fund.

□ Please send me information on how I may help Iowa engineering students through the UI Alumni Association's Career Information Network.
Alumni Distinctions

A 1982 UI chemical engineering graduate has become the first woman in the United States to be designated a licensed nuclear engineer. Jenny Jacobson, formerly Jenny Son of Fort Madison, received her license this summer and is employed at the U.S. Navy Shipyard at Mare Island, California.

Chen-Hsing Yen (M.S. '38 and Ph.D. '41 in M. & H.) has been awarded a 1984 The University of Iowa Distinguished Alumni Achievement Award. Yen is chairman of the Republic of China's Atomic Energy Commission.

Shuen-Wei Tu (Ph.D. in M.E. '81) won the Straub Award, an international competition for the best hydraulics-related Ph.D. dissertation. Tu's adviser for his thesis, "Study of Periodic Turbulent Pipe Flow," was Professor B. R. Ramaprian.

Student Awards

Seniors Dean R. Breuer (B.S.E. in M.E. '84) from Estherville; James A. Brucher from Waterloo; John Y. Choe from Mount Prospect, Ill.; and Richard A. Pope from Cedar Falls won first place in the annual Society of Automotive Engineers Mississippi Valley Section paper contest in April.

Audrey D. Ah-Chin (B.S.E. in Ch.E. '84) from Keokuk, received the third place paper award at the AIChE Mid-America Section student chapter spring 1984 meeting.

Samuel R. Mullins (B.S.E. in E.E. '84) from Eldora, won a Tau Beta Pi Fellowship. Mullins, who is employed by Bell Laboratories, began graduate study at MIT this fall. A UI student has been the recipient of one of these prestigious awards every year save one since 1979.

Three M.S. students in civil and environmental engineering, Mohamed Nagib (B.S.C.E. '83) from Reston, West Virginia; Lama A. Farsakh (B.S.C.E. '82) from the United Arab Emirates; and Paul H. Breckner (B.S.C.E. '83) from Burlington, coauthored a paper selected for presentation at the annual meeting of the American Concrete Institute.

Placement Progress

After continuing to drop off during the fall of 1983 because of the sluggish economy, recruiting activity on campus picked up in the spring of 1984 with the number of student interviews up 37 percent from the previous spring term.

"If the spring 1984 rally is any indication, this fall we should see a significant increase in campus recruiting," says Corrine Hamilton, director of placement services.

Reunion Weekend

Alumni Reunion Weekend, June 1-2, 1984, reunited alumni from the classes of 1924, 1934, 1944, and 1959. This weekend also provided a time when alumni showed their appreciation in a tangible way for what the college has meant to them. Coordinated by The University of Iowa Foundation, the Individual Class Gift Programs raised more than $5,000 toward furnishing a new conference room for the college. Committee chairs for their classes were Howard E. Noble ('34), Donald M. Kehn ('44), and H. William Lichtenberger ('59).

Among the special guests present at the college's open house June 2 was Mary Sheedy, secretary to the dean from 1928 until her retirement in 1969. Alumni from the class of 1974 were honored at a homecoming reception in September. James A. Kalina serves as chairperson for the class of '74 gift fund, which will also be used for the college's new conference room.

This issue was written by Diana Saluri, Iowa City, Iowa, free-lance writer.