

# SPECTRUM

## Wuttig wins Weldon Spring award

A UM-Rolla professor whose basic research on metals may eventually have such diverse applications as the space shuttle or oil well drills is the winner of the University's fifth annual Weldon Spring Presidential Award for Research and Creativity.

Manfred Wuttig, professor of metallurgical engineering and a faculty member at UMR since 1966, was selected by President James C. Olson based on the recommendation of the graduate deans group and a review committee composed of faculty from the University's four campuses. Wuttig may use the \$10,000 prize in any way to support his continuing research.

Olson also announced that an additional \$994,904 in Weldon Spring funds has been assigned to research projects throughout the University system (see story on back). Investment income from proceeds from the 1979 sale of the University's Weldon Spring property in St. Charles County is used to support scholarly, artistic and creative instructional activities of UM faculty.

Wuttig, a native of Dresden, Germany, was educated at the Technische Universität

Berlin, where he received his Ph.D. in 1962. He lectured in physics in Berlin before coming to the United States in 1963, where he pursued postdoctoral work and served as research assistant professor of metallurgy at the University of Illinois in Urbana.

As a scientist, Wuttig studies the phenomena that occur when a material changes or is transformed from its original state into a material with superior qualities. His major interest is in understanding these transformations by studying structural changes in metals at the atomic level.

The metal in the space shuttle experiences extraordinary stresses during launch, stresses greater than those that could be withstood by any material in its ordinary state. The same is true of such tools as oil well drills. To get a metal with the desired qualities, the ordinary metal is transformed into one with greater strength.

Wuttig's research contributions in two areas — diffusion in solids and martensitic transformations — have earned him international recognition.

"Martensitic transformations are the ba-

sis for achieving the strength necessary for metals to reach the requirements for modern use," says Harry Weart, chairman of the UMR Department of Metallurgical Engineering. "Dr. Wuttig took a fresh approach to a long-standing problem and has made more progress toward solving it than had been made in the previous two decades."

"Dr. Wuttig is very perceptive in identifying the key unanswered questions in a particular research area," Weart says, "and he doesn't hesitate to tackle these questions in spite of their difficulty. He is an extremely skillful and ingenious researcher in an extremely complex field."

In 1979, Wuttig received one of two prestigious fellowships awarded by the Japan Society for the Promotion of Science. Much of his research has been funded by the National Science Foundation, which in 1981 gave him special extended funding in recognition of the "exceptional creativity" of his research.

Wuttig has also received grants from the American Iron and Steel Institute and the Department of Defense.



Manfred Wuttig

## Four scholars share this year's Thomas Jefferson Award

Thomas Jefferson, the third president of the United States, author of the Declaration of Independence and founder of the University of Virginia, had complete faith that people enlightened by education could govern themselves.

His faith in education and reason and his devotion to human rights and freedom contribute to what are known today as Jeffersonian principles and ideals. A Thomas Jefferson Award is given each year to a University of Missouri faculty member who best exemplifies these principles and ideals "through personal influence and performance of duty in teaching, writing and scholarship, character and influence, devotion and loyalty to the University." This year four awards will be presented by retiring President James C. Olson.

Recipients of \$1,000 awards sponsored by the Robert Earll McConnell Foundation are Martin Levit, professor of education and philosophy at UM-Kansas City; Carl H. Chapman, professor of anthropology and archaeology at UM-Columbia; Sioma Kagan, professor emeritus of international business at UM-St. Louis; and George McPherson, professor of electrical engineering at UM-Rolla.

**Olson will present the awards individually at each recipient's campus. The Kansas City, Rolla and St. Louis presentations are scheduled for the days Olson visits those campuses for public hearings on the University's 1985-86 appropriations request. UMC's recipient will be given the award at a ceremony May 14.**

Levit joined the UMKC faculty in 1949 after receiving his Ph.D. from the University of Chicago. "Dr. Levit has devoted a lifetime to promoting Jeffersonian ideals through his 35 years of service in the School of Education," writes a colleague in a letter of nomination. "I do not know who started the Thomas Jefferson Award. However, I feel certain that Dr. Levit was the type of person they had in mind to be a recipient."

A former student, in supporting the



George McPherson



Sioma Kagan



Carl Chapman



Martin Levit

nomination of Levit, writes: "...he takes life — as I think Thomas Jefferson must have taken life — to be examined and dealt with and changed as we need it to change. He fights when he sees unfair or cruel things happening. He stands up and works and goes after injustice. Thomas Jefferson could not have done more."

Recognized as a scholar nationally and internationally, Levit speaks Russian, German and some Dutch and has spent time in Holland, Denmark, Germany, Austria, France and England. In Holland, he was a Fulbright scholar. He has been a visiting professor at several universities in the United States and abroad.

He has been a member of the executive board of the Missouri-Kansas chapter of the American Civil Liberties Union; in 1970, he received the UMKC Faculty Service Award for promoting communications among races and other social groups.

Chapman was the first UMC graduate to receive a bachelor's degree in archaeology.

He joined the UMC faculty in 1946 after receiving his master's degree in anthropology. He established the American Archaeology Division in the Department of Sociology and continued as its director until 1965. In 1949 he established the Museum of Anthropology and served as director until 1956. He received his Ph.D. in anthropology from the University of Michigan.

Jefferson was often cited in archaeology textbooks as the father of American archaeology, writes one of Chapman's nominating colleagues. "Thomas Jefferson added to his other great achievements the initiation of scientific archaeological investigation. This established the basis of a profession Carl H. Chapman would begin to pursue about 150 years later. For the past 50 years, Carl H. Chapman has dedicated his life to the scholarly study of Missouri's cultural heritage and has given outstanding public service to his community, the University of Missouri, the state of Missouri and the nation."

His archaeological fieldwork, which began while he was a teenager, has taken him throughout Missouri and was the subject of a January cover story in the St. Louis Post-Dispatch Sunday Magazine. He is working on the third volume of "The Archaeology of Missouri."

Chapman helped prepare and successfully lobbied for congressional enactment in 1974 of the Archaeological and Historical Preservation Act, which provides money for the recovery of historical remains in locations where federally funded projects would destroy archaeological sites and their remains.

Kagan, a native of Russia, is UMSL's first emeritus professor and is a leading authority on world economic affairs. The

former French war hero joined the UMSL faculty in 1967 after an illustrious stint as a diplomat with the United Nations and teaching positions at Columbia University (where he received his Ph.D. in economics and international relations), Washington University and the University of Oregon.

As a consultant for corporate giants, he has traveled throughout the world. He has also conducted executive development programs for business leaders.

His life has included associations with such notables as economist John Kenneth Galbraith, French statesmen Charles de Gaulle and Jean Monnet, and Paul McCracken, former chairman of the Council of Economic Advisers.

It was while supervising an indigenous labor force of 5,000 workers in Africa that Kagan decided to devote his life to seeking the causes of such economic backwardness he found there as well as in segments within more developed societies.

"We believe to present in Sioma Kagan, emeritus professor of international business at UMSL, a nominee whose devotion to the Jeffersonian ideals of rationality applied to action and education qualify him for the honor," says Kagan's nomination. "Today, Si teaches, it is no longer husbandry alone, as in Jefferson's age, that calls for competence, i.e. human capital. Now, all skills and know-how, above all managerial know-how, supply the prerequisites indispensable for a nation wishing to assure a modern standard of living to its citizens."

(Continued on back)

# Researchers, projects win Weldon Spring competition

Several proposals from University of Missouri researchers, including three for multicampus projects, have been named winners in the 1984 systemwide Weldon Spring Fund competition. The projects will share \$994,904 with projects and activities to be chosen for funding at the campus level.

Earnings from the Weldon Spring Endowment Fund, created by the 1979 sale of the University's Weldon Spring property in St. Charles County, are used to support scholarly, artistic and creative instructional activities of UM faculty. More than \$4.5 million has been assigned to researchers throughout the University since the fund was created.

Winners of the systemwide competition:

"Life Testing and Reliability for Complex Systems," Asit P. Basu, statistics, UMC, \$14,250.

"A Detailed Study of the Technology of Teetered-Cyclic Pitching Rotor Operation," (multicampus proposal) Paul J. Bryant, physics, UMKC, and Stanley Niu, civil engineering, UMC, \$8,752.

"Post-Impact Static and Dynamic Response of Short-Fiber SMC Composites," Shive Chaturvedi, engineering mechanics, UMR, \$20,073.

"Deep Levels in Semiconductors," Wai-Yim Ching, physics, UMKC, \$13,818.

"Fluid Inclusion Microscopy Equipment for the Study of Mid-Continent Mineral Deposits," Raymond Coveney and Edwin Goebel, geosciences, UMKC, \$11,490.

"Establishing an Interdisciplinary Journal at the University of Missouri: *Oral Tradition*," John M. Foley, English, UMC, \$8,258.

"Mechanisms and Evolution of Acoustic Communications," H. Carl Gerhardt, biological sciences, UMC, \$31,000.

"Creation of an Original Opera: Pre-production Work by the Composer, Librettist, and Stage Director," William Graham and Gerald Kemner, Conservatory of Music, and Felicia Londre, theatre, UMKC, \$9,065.

"Electron Emission from Surfaces," Edward Hale, physics, UMR, \$30,214.

"Phase III, Weldon Spring Humanities Seminar," (multicampus proposal) \$26,600.

"Social, Cognitive and Technical Dynamics of Change in Modern Science: The American Astronomical Community, 1859-1940," John Lankford, history, UMC, \$10,098.

"Kataret Es-Samra: A 3500 Year Old Cemetery in the Jordan Valley," Albert Leonard, art history and archaeology, UMC, \$16,327.

"Reactivity of Laser-Produced Rydberg Atoms," Jacob J. Leventhal, physics, UMSL, \$10,000.

"Constitutional Litigation in English and American Courts," Joan Mahoney, law, UMKC, \$5,000.

"Characterization of Cyclic Delamination Growth in Fibrous Laminated Tough Composite," Shankar Mall, engineering mechanics, UMR, \$20,924.

"A Unique Method for Shape Memory Alloy Preparation: Non-equilibrium Electro-deposition," Thomas O'Keefe and Manfred Wuttig, metallurgical engineering, UMR, \$23,863.

"A Neurophysiological Study of Visuo-Motor Processing in the Superior Colliculus of the Brain," Carol K. Peck, optometry, UMSL, \$14,055.

"Genetic Analysis of Photosynthesis Mutants of *Anabaena variabilis* by Transduction," Teresa Thiel, biology, UMSL, \$11,500.

"Implications of Maternal Stress in Altered Fetal Adrenal Function," F.S. vom Saal, biological sciences, UMC, \$25,000.

"Interdisciplinary Program for Protection from Mycotoxins that are Economically Important in Missouri: Structure Revision, Metabolism, Detoxification and Antidotes," (multicampus proposal) David Yourtee, pharmacy/medicine, UMKC; Scott Searles Jr., chemistry, UMC; and George E. Rottinghaus, veterinary medicine, UMC, \$34,617.

# Olson Fund for the Arts continues to grow

Pledges totalling \$127,000 have been received for the Olson Fund for the Arts, established in honor of retiring UM President James C. Olson and his wife, Vera.

Kickoff for the endowment fund was March 22 in St. Louis. At that time, pledges totalling \$103,000 already had been received. It is hoped the goal of \$250,000 will be pledged by July 1, the date Olson retires

from the position he has held since 1976.

Future presidents of the University will administer the earnings from the permanent endowment, giving full or partial funding to visual and performing arts events, including lectures, on all four campuses of UM.

Tax-deductible donations or pledges may be sent to the James and Vera Olson Fund for the Arts, University Hall, Columbia.

# UMC appropriations hearing rescheduled

The time for the Columbia public hearing on UM's 1985-86 appropriations request has been changed. The hearing will be from 1 to 3 p.m. April 20 in the small ballroom of the UMC Memorial Union.

UM President James C. Olson and his staff will meet with students, faculty, staff and the general public on each campus to discuss the appropriations request before it is presented to the Board of Curators.

# Four share Jefferson award

(Continued from front)

McPherson shares Jefferson's commitment to free public education, says a colleague who nominated him for the award. "Jefferson was a promoter of research and experimentation in all fields of learning. If he were to meet Professor McPherson I can easily envision them sharing many evenings together comparing notes on research, experimentation and learning."

"Professor McPherson is a man of conviction, a man of simple wants and desires, a man of letters with an imagination of a better world through peace, tolerance and individual liberties."

McPherson has been a member of the UMR faculty since 1956. Before that he

taught at the University of Kentucky and Ohio State University and was a high school science and mathematics teacher in Ohio. He was principal electrical engineer at Batelle Memorial Institute and a project engineer with the U.S. Naval Research Laboratory in Washington. His bachelor's and master's degrees are from Ohio State University.

In 1975, McPherson traveled to Ecuador to advise the Escuela Superior Politecnica del Litoral at Guayaquil on the development of power education laboratories.

In supporting McPherson's nomination a former student writes: "I had the opportunity to have Professor McPherson as a teacher in undergraduate school, and looking back now I would rate him among the best that I had."

# Jobs

The following administrative/professional and academic vacancies were listed with *Spectrum* as of April 6. Anyone interested in a position should contact the appropriate department or personnel office.

**UMC:** assoc./full professor, medicine, and director, pulmonary diseases; assoc./full professor, medicine, and chief, medical services, VA Hospital; research associate, agronomy; director and professor, biological sciences; asst. professor, medicine (5), business administration, agronomy, family and community medicine (3), neurology (2), surgery, human nutrition/foods/food systems management, pharmacology (2), practical arts/vocational-technical education; professor and chairman, chemical engineering; asst./assoc. professor, medicine (3), radiology, nursing, information science, computer science; asst./assoc./full professor, experimental psychology, industrial engineering; research fellow, surgery; asst. program director, Center for Economics Education; postdoctoral fellow, veterinary pathology; instructor/assoc./full professor, mechanical and aerospace engineering; instructor/asst. professor, nursing; coordinator, continuing education in nursing; instructor/curriculum specialist, Center for Independent Study; librarian II or III/journalism librarian; registered pharmacist; residence hall coordinator; administrator, MPP; foreman, agriculture; grants and contracts specialist; management analyst; research specialist. **UMca:** manager, financial information systems; computer programmer/analyst II; acquisition specialist; manuscript specialist; reactor physicist.

**UMC Hospital:** administrative nurse I; clinical nurse I; nurse anesthetist; pharmacist; physical therapist; radiological engineer; clinical dietitian; education nurse I; manager, clinical engineering; assoc. administrator, ambulatory care; computer project manager; administrative nurse II; IV nurse; health care evaluation analyst; occupational therapist; sr.

computer programmer/analyst; social worker.

**UMKC:** asst. professor, geosciences, mathematics, medicine; grader, business and public administration; research assistant, biology, chemistry, education, UMKC Institute; professor, banking; asst./assoc. professor, fixed prosthodontics, removable prosthodontics, oral and maxillofacial surgery, mathematics/computer sciences (2), accountancy, computer science, operative dentistry (3); adjunct faculty, biology; instructor, speech communication; chairman and academic theatre director, theatre; research associate, UMKC Institute; coach, tennis; sr. research assistant, UMKC Institute; resident manager.

**UMR:** asst./assoc. professor, physics; assoc. professor, computer science; research asst. professor, physics; postdoctoral fellow, chemistry; systems programmer.

**UMSL:** visiting asst./assoc. professor, art; postdoctoral fellow, chemistry; asst. professor, mathematics, childhood education; visiting asst. professor, political science/history; research asst./computer programmer, optometry; sr. systems programmer; sports information specialist; sr. accountant.

# SPECTRUM

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