

Research aide earns her keep

Carolyn Ward speaks physics. Anyone who has ever had a lengthy conversation with a physicist knows that physics is a language all its own.

Carolyn is a research aide at UMR's Graduate Center for Materials Research and works with a team of faculty, post-doctoral fellows and graduate students in the area of surface physics—more specifically, surface electromagnetic waves. The group is investigating catalysis processes (what happens when surface elements of two substances react to provide an unexpected result) and the failure mechanisms of electronic devices. These projects are supported by grants from the National Science Foundation and the Air Force.

As a result of her proficiency in physics, it is Ms. Ward's job to help develop the theoretical physics for the projects. She proposes a theory about why something happens or what will happen under certain circumstances and the research teams then set up experiments that test it.

She is also in charge of programming and running all the computer work for the teams. She keeps the books and handles the records for all grant funding. She is also involved in technical writing and proofing on proposals for grants and articles reporting the results of research.

"The best part of this job," she says, "is that there are so few limitations. Dr. Ralph Alexander and Dr. Robert Bell [co-directors of the research team] allow me to do whatever I am capable of doing and have the nerve to try. Even though I don't have a master's or Ph.D. degree, I can work with the theoretical physics and write up the results of the work for publication." Ms. Ward has B.S. degrees in physics and education earned in 1965 at the University of Cincinnati.

Since she joined Materials Research in 1972, she has been the author or co-author of seven technical papers published in such journals as *The Physical Review* and *The Journal of Chemical Physics*.

This spring she won a Sigma Delta Epsilon Graduate Women in Science grant-in-aid of \$750 for her research work. Part of the money, she says, will be used to cover expenses in attending a computer simulation conference, part will help finance a study of electronic structure and interactions of a platinum surface using a method developed by team member Dr. Gerald Alldredge, and, assuming the research results in a paper, part will be used for publication costs.

"You know," Dr. Bell says, "some physicists with Ph.D.s publish only one or two papers of the caliber of Carolyn's during their lifetime. We like to see this kind of initiative and work."

Ms. Ward keeps on learning more and more about physics. Last September she won a NATO grant to attend an Advanced Study Institute on Electronic Structure and Reactivity of Metal Surfaces in Belgium. And, while in Europe, she visited physics laboratories in Germany, Switzerland and England.

In the process of presenting papers on the results of her research, she has traveled to some pretty high-powered physics conferences, too. In the last two years she has been to Denver, Atlanta and Washington, where she combined learning more about physics with some sightseeing.

Ms. Ward enjoys music and bridge as well as physics. In her spare time she gives piano lessons and serves as an accompanist for soloists in Rolla and the Fort Leonard Wood area, for the Rolla Chamber Singers and for UMR vocal groups. She is an avid duplicate-bridge player and has participated in several duplicate-bridge tournaments. She is active in the American Association of University Women and has served as an officer on both local and state committees for the group.

Ms. Ward confines her trips to conferences and institutes to the school months so that she will have more time to spend during the summer with her two sons, Randy, 6 and Mike, 8.

Sally White
OPI
UMR



Carolyn Ward

Get-acquainted session for new research system

UM faculty, research staff and librarians who are interested in automated literature searching can find out about UM's search services at a colloquium to be held Oct. 29 in Columbia.

Although similar to the search service which UM arranged more than a year ago with the University of Georgia, the new service is faster and much less costly.

Early this month, faculty, librarians and researchers on all campuses will receive a mailer and sign-up card for the Oct. 29 event, which is to be held in rooms 107, 108 and 109, Stewart Hall. Four sessions, each covering related disciplines, will feature a discussion of what is available, costs and on-line demonstrations of the service. The sign-up card will invite participants to request — in advance — an actual search, the results of which will be provided at the colloquium.

There will be no charge for the colloquium, which is being funded jointly by system research administration and the UMC Graduate School. The colloquium will be conducted — and the search services provided — by UMC's School of Library and Information Science.

The following general and special-subject files are accessible:

directories of foundations; directories of ongoing research projects; all congressional publications; all federal statistical publications; all current Library of Congress monograph acquisitions in English, French, German, Spanish and Portuguese; all dissertations submitted in the country; all government-funded research reports; materials in Science Citation and Social Science Citation Index; business; marketing; psychology; education; geology; petroleum; pollution; oceanography; meteorology; biology; chemistry; physics; engineering; electronics; metallurgy; agriculture; health sciences.

The following schedule has been established for the automated literature searching colloquium:

Session I — Social sciences, humanities, business: 12:45-2:30 p.m.

Session II — Medical, life sciences, biochemistry, chemistry, agriculture: 1:45-3:30 p.m.

Session III — Engineering, physics, geology: 2:45-4:30 p.m.

Session IV — Research administration, librarians, general: 3:45-5:30 p.m.

Participants will spend the first 45 minutes of each session in Room 106, Stewart Hall, UMC, for an introduction to automated searching. They will spend the remainder of the session in either Room 107 (System Development Corporation's ORBIT, OCLC, BALLOTS and MEDLINE) or in Room 108 (Lockheed Data System's DIALOG).

Sidelines

Award to Uhlman

Dr. Thomas M. Uhlman, UMSL assistant professor of political science, is the recipient of the Edward S. Corwin Award, which the American Political Science Association presents every two years in recognition of the best doctoral dissertation in the fields of public law, courts and the judicial process.

Dr. Uhlman's dissertation was entitled *Racial Justice: Black Judges and Defendants in the Metro City Criminal Court, 1968-1974*.

Arts center gift

A \$2-million gift from Mrs. Kenneth A. Spencer, Kansas City philanthropist and patron of the arts, will enable UMKC to furnish, equip and decorate the interior of the theater in the Performing Arts Center to be built on the Volker campus.

Last spring the Missouri General Assembly reappropriated \$5.8 million in state funds for the center and about 420 contributors recommitted more than \$3 million in private gifts and pledges for the facility.

New Letters

The summer issue of *New Letters*, UMKC's highly regarded literary review, contains a rich assortment of new American poetry from more than 130 contributors.

Among those represented are some whose names may be unfamiliar, but many are well-known, among them Robert Bly, David Ignatow, Richard Eberhart, Denise Levertov and Galway Kinnell. A poem by David Ray, the editor of *New Letters*, is included, and so is one by Gary Gildner, co-editor of this issue.

Copies of *New Letters* may be obtained by writing to *New Letters*, 5346 Charlotte, UMKC. The price for a single copy is \$2.50.

Research award

UMC's chapter of Sigma Xi, national research honorary society, has presented its Research Award to Dr. Donald L. Waldelich, whose work in spacecraft technology and circuit analysis has won international acclaim.

A prolific and energetic scholar, the electrical engineering professor has received two Fulbrights, has written more than 120 papers (many of which are classified) and has served as a consultant to many industrial concerns and to various governmental agencies and departments, among them the Atomic Energy Commission and NASA's Goddard Space Flight Center.

Touring workshop

An "Energy-Environment Simulator," a computer-like contrivance designed to demonstrate the complexity of the problems involved in the government's efforts to balance energy demands and preservation of the environment, will be set up in various Missouri towns as part of an information program to be conducted by engineering faculty members from Columbia and Rolla.

Participants in the Citizens Workshop on Energy and the Environment will be placed in a game situation in which the responsibility for making energy policy decisions is in their hands. Using the Energy-Environment Simulator, they will be confronted with problems relating to energy use, allocation of energy, environmental impact, energy demands, growth factors and standard of living. Decisions will be registered on remote-control panels, while years pass at the rate of 100 per minute.



UMKC's planned law school building, for which a \$5,070,000 contract has been awarded to a Kansas City, Kan., builder, will stand at the northeast corner of Oak and 52nd Street. Construction is expected to begin within 60 days, and plans call for completion within two years. The project is funded entirely by state appropriations.

Answer Line

Inventors and royalty income

Questions to be answered in this column should be addressed to Answer Line, 424 Lewis Hall, Columbia. Correspondents need not identify themselves, but they are urged to do so, should some clarification be required. The editor guarantees absolute anonymity.

Q — In Spectrum (Sept. 3, 1976) your answering respondents (C. P. Merilan and P. R. Keenan) gave a measure of patent activity at UM 1970-71 through 1974-75. It would be of interest to learn

what amounts of royalty income went to the inventors contributing to the royalty incomes reported in the tabulation.

GEORGE W.
PRECKSHOT
Professor
Chemical Engineering
UMC

A — Income from inventions disclosed prior to June 25, 1971, is distributed in

accordance with the patent regulations developed in 1956. For those inventions, the inventor(s) receive(s) a minimum of 15 per cent of the royalties with the remainder (after expenses) going into the University general fund.

For those inventions disclosed after June 25, 1971, (the approval date of the current regulations) the inventor(s) receive(s) a minimum of 33 1/3 per cent of the royalty income and after expenses the remainder of the income from each invention is allocated as follows:

One-third to the department where the invention originated;
One-third to the campus of the department listed above;
One-third to the University.

Allocations to the department, campus and the University are restricted to use for support of research, development and other scholarly activities.

Specific details concerning the procedures and policies for distribution of patent royalty income at the University of Missouri are contained in the PATENT REGULATIONS. Copies of these regulations may be obtained from the Research Administration Office on each campus.

C. P. MERILAN
Professor
Dairy Husbandry
UMC

(Note: Professor Merilan is head of the patent and copyright committee.)

Grant to aid low-income and handicapped students

The cooperative efforts of administrative units at UMC have resulted in the awarding of \$140,286 for use in strengthening its program of academic aid to low-income and handicapped students.

The grant, from the U.S. Office of Education, will be used to help eligible students in academic skills, curriculum choice, career guidance, social-personal development and handling of finances.

An unusual aspect of the program is the signing of a "performance agreement"

under which the student and the institution accept certain responsibilities. With the agreement UMC can offer students the opportunity of developing themselves provided they take advantage of services recommended by counselors in the program.

Eligibility will be determined by the student's financial need as calculated by the office of student financial affairs. Income of parents and the number of dependent children in the family are to be considered, as well as each student's specific situation, according to Dr. Owen Koeppe, provost for academic affairs.

Most of the services to be provided under the terms of the grant are already available at UMC. Dr. James Banning, vice chancellor for student affairs, says he hopes to sharpen the focus of these services, make them available to more students and develop other services based on needs encountered as the program develops.

The program will stress flexibility, Dr. Koeppe says, so that individual needs of students will be dealt with by the administrative or academic unit best able to help in working out a solution to each student's unique problem.

Dr. Koeppe says he expects 700 to 800 students to be involved in the program.

Weldon Spring report heard

The St. Louis planning firm studying possible uses of UM's 8,000-acre Weldon Spring tract in St. Charles County has reported to the Board of Curators on the probable environmental consequences should the University decide to develop the property. The report, by HOK Associates, was the fifth of six "tasks" commissioned by the University and begun by the firm in May 1974.

The report says the greatest environmental change would be the reduction of wildlife habitat, causing substantial migration of wildlife to adjoining areas. The report notes that migration could be reduced through various planting programs and construction of water-retention basins, to provide more standing water for wildlife than is now available.

The final task, which will be a comprehensive development plan and report, is expected to be completed before the end of the year. After the final report is in, the Board of Curators will decide what will be done with the tract.

Gifts to UM at \$4.2 million

Private giving to the University during the 1975-76 fiscal year totaled nearly \$4.2 million, some \$800,000 less than in the previous year, according to Guy H. Entsminger, head of UM's four-campus Development Council.

Entsminger, in reporting to the Board of Curators, said the decrease was probably a result of the conclusion of a special campaign for the alumni center in Columbia.

"During the 1974-75 year," Entsminger said, "the Columbia campus mounted a successful campaign to raise \$800,000 to build a campus alumni center. The Columbia campus did, therefore, show an equivalent decrease in giving during 1975-76. Similarly, that campus showed a 2,000-person decline in donors last year compared to the previous year. That's about the number who gave specifically for the alumni center project."

Several hundred students were direct beneficiaries of private giving, Entsminger said. Scholarships, fellowships, awards and other forms of assistance to students totaled more than \$363,000.

'To your health!'

Brains of alcohol-guzzling rats may yield vital information

In a laboratory at UM's Dalton Research Center a scientist prepares for a project—by turning a group of rats into alcoholics.

The effects of alcoholism on the human brain have long been of interest to Dr. Ezio Moscatelli, a neurochemist and associate professor of biochemistry on the Columbia campus. His colony of white rats is being prepared as research models for a study of brain changes induced by chronic alcohol abuse.

The National Institute of Alcohol Abuse and Alcoholism has awarded Moscatelli \$6,173 to initiate studies on the effects of alcohol abuse on brain lipids. Lipids may be defined simply as fats, but in the brain they have complex duties—one of which is to form a membrane called myelin, which sheaths nerve fibers.

Moscatelli believes that chronic abuse of alcohol causes a destruction of myelin through an increase in activity of what are called "lipid-degrading enzymes." Study of the alcohol-consuming rats may clarify the molecular changes that cause myelin damage in the brains of chronic alcoholics.

The long-range goal of Moscatelli's research is treatment of these disorders—and ultimately treatment or prevention of other diseases that involve destruction of myelin. The best known of these is multiple sclerosis.

The membrane on which Moscatelli is focusing accounts for the white matter among the predominant grey matter of the brain. Myelin, besides shielding nerve fibers, is thought to affect the speed and synchronization of electronic transmission through the nerves. Its destruction causes



the major symptoms of multiple sclerosis. "Most research in the area of alcohol abuse involves the liver," Moscatelli said. "But there are profound changes in the

brain, and this is an area that needs a lot of study." His observations are based, in part, on studies he conducted during his four years as chief of the biochemistry section of the Missouri Institute of Psychiatry.

Moscatelli's helpers in his most recent investigation are 54 white male rats (male because they have a simpler hormonal structure and thus present fewer variables to the researcher).

Before approving his grant application, the alcohol abuse institute (an arm of HEW) had to be assured that the rats could become alcohol abusers. Admitting that he had problems with some teetotalers among his trial group, Moscatelli induced most of them to drink. In fact, 12 of them went on a 17-week spree.

Rats, who Moscatelli described as "smarter than humans in this case," do not like alcohol. They adore sugar water, however, and it was through this medium that Moscatelli introduced them to booze. Ethanol (the chemical name for alcohol) was gradually introduced to the sugar water. Levels of alcohol were increased until the rats were taking 45 per cent of their calories by means of alcohol. This rate approximates the calorie intake of human alcohol abusers.

The rats became lethargic and subject to some unusual behavior as they settled into a routine of alcohol abuse, but they survived their ordeal well.

"They experienced some withdrawal symptoms, just as humans do," Moscatelli said.

The effect on their brains remains to be assessed. "This first experiment was intended only to establish the rat as a suitable model for the study," Moscatelli said. "Now we are ready to look at the effects alcohol has on the myelin structures of the rats' brains."

How will this be done? Half the 54 rats will take 45 per cent of their calories as alcohol in sucrose (table sugar) solutions. The other half will be given a non-alcoholic, high-sucrose diet. Further, half the rats will be on a diet high in all nutritional essentials, while the others will be on one low in protein and in the B vitamin, thiamin—a regimen which simulates eating habits in chronic alcoholics. The purpose here is to determine the role played by nutritional deficiencies combined with alcohol abuse.

After three months, their brains will be studied for evidence of myelin destruction.

Al Anderson
UPI
UMC

Sick-leave revisions

The Board of Curators has approved revisions in the University's sick-leave policy to allow two additional sick-leave days to be accrued each year and to permit employees to take some sick leave when a member of the employee's household is ill.

The revisions, retroactive to Sept. 1, were approved at the Sept. 17 meeting of the board. The changes:

- Full-time employees now will accrue 12 days of sick-leave per year, rather than the previous 10 days a year. (Note: The policy regarding new employees accruing no sick-leave during their first six months of employment is unchanged. However, after six months of employment, the employees will be credited with sick-leave retroactive to date of employment.)

- An employe now may use up to four days of accumulated sick-leave each

calendar year for illness in the immediate family. "Immediate family" is described as mother, father, husband/wife, son, daughter, brother, sister or other relatives in the employe's household.



The Rev. Richard L. Fisher of St. Louis has been named by Governor Bond to fill the vacancy on the Board of Curators created by the death of Howard B. Woods. The appointment, pending Senate confirmation, will extend to Jan. 1, 1979, at which time Mr. Woods's term was to expire.

Bisplinghoff to NSF board

Chancellor Raymond Bisplinghoff of UMR has been named by President Ford to membership on the policy-making board of the National Science Foundation.

The appointment, pending confirmation by the Senate, will run through May 1982.

The National Science Board, which is composed of 25 members, was established in 1950. Chancellor Bisplinghoff will be the 102nd person to serve on it, and the second from UM, the first being Frederick A. Middlebush, a former UM president.

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Editor: Harold V. Cordry, 882-4591
Campus Correspondents:
UMC—Anne D. Robinson, 882-8211
UMKC—Phillippa Mezile, 276-1576
UMR—Sally White, 341-4259
UMSL—Jill P. Triplett, 453-5686



'Open Meeting'

Chancellor Arnold Grobman of UMSL and Acting Chancellor Wesley Dale of UMKC will join Dr. James Olson this Sunday at 5:30 p.m. on "Open Meeting," the University's live, call-in radio program. The subject of discussion is to be the role of the urban campuses in carrying out the University's mission.

The program will originate from the studio of KCUR, UMKC's station. Listeners are invited to call in questions. The number: 816-276-1551.

"Open Meeting" will also be carried on KBIA, Columbia; KWMU, St. Louis; and KUMR, Rolla.

Curators' award

Assistant professors on all campuses of the University are invited to submit manuscripts for consideration in the competition for the 1977 Curators' Publication Award, which carries with it a stipend of \$1,000.

The manuscripts, which must be original and unpublished, may be in any field of scholarship recognized on any of the four campuses and must be no more than 125,000 words in length. No poetry or fiction will be considered for the award.

All manuscripts submitted for the competition that have been accepted for publication by May 1, 1977, will be eligible for the 1977 award. From those manuscripts the curators' award subcommittee of the University Press Committee may nominate to the full committee one to be designated as the curators' award winner. Manuscripts still being evaluated or revised as of May 1, and not yet acted upon by the University Press Committee, will automatically be eligible for consideration in the following year if they are eventually accepted for publication.

Entries for the 1977 award must be received by the University Press, 107 Swallow Hall, Columbia, before Dec. 15, 1976, and should be marked "For Consideration for the Curators' Publication Award."

Persons interested in entering the competition may obtain from the University Press more specific information regarding eligibility and regulations.

SIS committee planning visits to campuses

The Student Information System Policy Committee met Sept. 22 in Columbia and completed arrangements for committee discussions with campus user groups.

Those visits are scheduled as follows: UMKC, Sept. 29; UMR, Sept. 30; UMC, Oct. 4 (and other dates to be set later); and UMSL, Oct. 7.

Users will be notified of the exact time and location. Others interested in attending may obtain information from their chancellor's office.

The committee's executive officer, Richard Wallace, committee members and the campus director of admissions/registrar will inform users of the systems' current capabilities. The users will be able to tell the committee what they think the system should do.

The Intercampus Faculty Council has named Paul Blackwell, head of computer science at UMC, as its representative on the committee. Blackwell attended the committee's Sept. 22 session.

Smith named dean

Dr. Wendell L. Smith has been appointed dean of continuing education-extension at UMSL. Dr. Smith succeeds Virgil Sapp, who retired June 30 after 41 years with the University.

Boost for UMKC

The University of Kansas City Board of Trustees disbursed a total of \$699,608.27 for the benefit of UMKC during 1975-76, according to a report to the Board of Curators.

The figure includes more than \$600,000 in pledge payments for the Performing Arts Center and funds for the Jo Tyler Lectureship, the Judaic Studies Program, the Summer Repertory Theatre, the UKC Professorship in Pharmacy, the Schutte Chair in the School of Administration and the Cocke Chair in Continuing Education, among other programs and projects.

Economist honored

Clyde Cunningham, Columbia campus agricultural economist, has been cited for his 10-year work with the National Association of Retail Grocers. The recently retired economist, a specialist in food distribution, was honored for "outstanding work in furthering the cause of retail food store management." Cunningham, who worked with association members to develop training programs and seminars in food store management, is the first person to receive the Educational Service Award.

New degree

UMC's College of Education will begin awarding an educational specialist degree, according to Dr. Bob G. Woods, dean of the college.

The Ed.S. will supplant the graduate certificate of specialization in education with designation offered in more than a half-dozen educational fields. Requirements for the degree will be the same as those for the certificate—30 hours of graduate work beyond the master's.

Named to office

Dr. Larry A. Kantner, associate professor in UMC's College of Education and College of Arts and Science, has been appointed honorary world secretary of the International Society for Education through Art.

Here and There

Spectrum's calendar carries announcements that may be of interest to persons throughout the University system. Anyone wishing to place an announcement in *Spectrum* should write to Calendar, 424 Lewis Hall, UM, Columbia, Mo. 65201. The next issue of *Spectrum* is scheduled to appear Oct. 15, and the calendar deadline is 1 p.m. on the preceding Friday.

The Ballad of Baby Doe—Lyric Theatre; Oct. 1; 11th and Central, Kansas City.

Soccer: UMSL vs. Xavier—4:30 p.m., Oct. 1; UMSL.

Philharmonic—Music-Media Experience III (Haydn's "Cassation" and Mozart's "Clarinet Concerto" and "Symphony No. 41"); Crown Center Multi-Media Forum; 7:45, Oct. 1 & 2; for ticket info. call 816-842-9300.

Weaving by Egyptian Children—through Nov. 7, sales and rental gallery, Nelson Gallery, 4525 Oak, Kansas City.

Football: UMC vs. North Carolina—1:30, Oct. 2; Columbia.

American String Quartet—8 p.m., Oct. 2; Unitarian Church, 121 W. Eighth, Kansas City, Mo. 64150; tickets \$7 at the door.

Andrea Chenier—Lyric Theatre; Oct. 2, 6 & 8; 11th and Central, Kansas City.

Coming of Age: Retrospective of the Friends of Art Collection—through Oct. 3, Nelson Gallery, 4525 Oak, Kansas City.

Maynard Ferguson Jazz Concert—8 p.m., Oct. 3, Jesse Aud., UMC.

Philharmonic Symphonette—3:30 p.m., Oct. 3, Nelson Gallery; may be sold out; ph. 816-842-9300.

Soccer: UMSL vs. Davis & Elkins College—4:30 p.m., Oct. 4; UMSL.

Imogen Cunningham: exhibition of photographs from St. Louis and Columbia collections—9-9 Mon.-Fri., Oct. 4-27; Gallery 210, Lucas Hall, UMSL.

The Taming of the Shrew, presented by The Young Vic—8 p.m., Oct. 5, Kansas City Music Hall; tickets \$4, \$6, \$8, \$10; SASE to Fine Arts Program, William Jewell College, Liberty, Mo. 64068.

La Traviata—Oct. 5, 7, 9, 13 & 15, Lyric Theatre, 11th & Central, Kansas City.

Oedipus the King, presented by the Young Vic—8 p.m., Oct. 6, Kansas City

Music Hall; ticket info. under *The Taming of the Shrew*.

Ice Follies—Oct. 6-10; Kemper Arena; tickets \$6.50, \$5.50, \$4.50; SASE to Ice Follies, Box 8372, Kansas City, Mo. 64105 (ph. 816-842-8622).

Equus—first production of MSA's 1976-77 Broadway Play Series; 8 p.m., Oct. 7, Jesse Auditorium, UMC; tickets \$3.50, \$4.25 & \$5, available at ticket window in UMC's Memorial Union.

UMKC Conservatory Symphony Orchestra—8:15, Oct. 8, Pierson Hall, UMKC.

Chicago—in concert, 8 p.m., Oct. 8, Arena; tickets \$6.50 & \$7.50.

Missouri Photographers '76—exhibition of best photographs among entries in Missouri's first state-wide juried competition; from Oct. 8 to Nov. 5; UMKC's Fine Arts Gallery; hours 8-5 Mon.-Fri., 1-5 Sun.

Football: UMR vs. Lincoln—1:30, Oct. 9 (parents' day); Rolla.

Football: UMC vs. Kansas State—Oct. 9; Manhattan.

Soccer: UMSL vs. Quincy College—1:30 p.m., Oct. 9; UMSL.

The Barber of Seville—Oct. 12, 13, 16, 20 & 22, Lyric Theatre, 11th & Central, Kansas City.

Ice Follies—Oct. 12-17; Arena; tickets \$3.50, \$4.50, \$5.50, \$6.50; SASE to Arena Ticket Office, 5700 Oakland Ave., St. Louis, Mo. 63110.

Soccer: UMSL vs. SIU-Edwardsville—4:30 p.m., Oct. 13; Edwardsville.

Projections: Victoria, Staller, Schwartz—exhibition Oct. 15-Nov. 21; Nelson Gallery, Kansas City; open 10-5 Tue.-Sat., 2-6 Sun.

Chamber Music Society of Lincoln Center—8:15 p.m., Oct. 16, Jesse Aud., UMC.

Football: UMR vs. Central Missouri State—2 p.m., Oct. 16; Warrensburg.

Football: UMC vs. Iowa State—1:30, Oct. 16 (homecoming); Columbia.

Manhattan Transfer—8 p.m., Oct. 17, Uptown, Kansas City; tickets \$5, \$6 & \$7; SASE to UMKC Ticket Office, 5100 Rockhill Rd., Kansas City, Mo. 64110.

UMKC Conservatory Civic Orchestra—8:15, Oct. 17, Pierson Hall, UMKC.

Ray Charles—7 & 9 p.m., Oct. 17, Chase Hotel, St. Louis; tickets \$7 in adv., \$8 at the door.

The Pirates of Penzance—Lyric Theatre; Oct. 19 & 21; 11th and Central, Kansas City.

Soccer: UMSL vs. Rockhurst—4:30 p.m., Oct. 22; UMSL.

Soccer: UMSL vs. Missouri Southern State—1:30 p.m., Oct. 23; UMSL.

Football: UMR vs. Southwest Missouri State—1:30, Oct. 23 (homecoming); Rolla.

Chinese Acrobats of Taiwan—8 p.m., Oct. 23, Music Hall, Kansas City; tickets

\$6, \$7 & \$8; SASE to UMKC Ticket Office, 5100 Rockhill Rd., Kansas City, Mo. 64110.

Football: UMC vs. Nebraska—Oct. 23; Lincoln.

Volker String Quartet—8:15 p.m., Oct. 23; All Souls Unitarian Church, 4500 Warwick Blvd.; first performance in Chamber Music Series, to be followed by Klausner-Kemner Duo (Dec. 4), Douglas Niedt (Jan. 23), Volker String Quartet (Feb. 19), Ricercare (Feb. 26), Fresk Quartet (Mar. 23), Volker String Quartet (Apr. 30); tickets \$4 (reg. adult season subscription, \$18; fac. & staff subscr., \$12; stu. subscr., \$10; an additional \$4.50 on a season subscr. buys the subscriber an \$8 ticket to Hartford Ballet's performance Apr. 22, 1977, at Music Hall; this offer limited to first 100 persons who buy season subscriptions; for further info. phone 816-276-2705); SASE to Central Ticket Office, University Center, 5100 Rockhill Rd., Kansas City, Mo. 64111.

Masterworks of 20th-Century Music, St. Louis New Music Circle—8:30 p.m., Oct. 25; Winifred Moore Aud., Webster College; Evelyn Mitchell of UMSL, Jacob Berg, Janet Strickert, and others; tickets \$3.50.

Prague Musica da Camera—8 p.m., Oct. 25, Jesse Auditorium, UMC; ticket info. under Ruth Laredo listing.

Philharmonic—8 p.m., Oct. 26; 7:30 p.m., Oct. 27; 1 p.m., Oct. 28; first two at Music Hall, last at Plaza Theatre; for ticket info. SASE to Kansas City Philharmonic, 210 West 10th St., Kansas City, Mo. 64105 (ph. 816-842-9300). (Program: Berlioz, "Roman Carnival Overture"; Brahms, "Symphony No. 3"; Brahms, "First Piano." Gary Graffman, pianist; Maurice Peress, conductor.)

"Solar Energy in the Midwest," a one-day conference to be held Oct. 27, 8-4:30, at the Radisson-Muehlebach Hotel, 12th & Baltimore, Kansas City. Fee: \$30. Further info.: Gordon L. Moore, Room 2008, College of Engineering, UMC (ph. 314-882-7401).

The Liar—8 p.m., Oct. 28, 29, 30; 2 p.m., Oct. 31; University Playhouse, 51st & Holmes, UMKC; tickets \$3.

Vacancies

The following administrative, professional and academic vacancies were listed with *Spectrum* as of Sept. 22:

UMC — Athletic trainer; chief engr. (in training); construction engr.; coord., comp. operations; dir., Pub. Affs. Info. Svcs.; mgr., cashiering; mgr., univ. svcs. fac.; sr. construction inspctr.; sr. fisc. analyst; sr. personnel asst.; sr. systems analyst (2); systems analyst.

UMC MED CENTER — Admin. assoc.; asst. dir., Med. Comp. Centr.; head nurse (2); nurse anesthetist (2); nuc. med. tech.; pharmacist; reg. med. tech.; staff nurse I (16); staff nurse II (12); staff dev. coord. (2); caseworker.

UMKC — None.
UMR — Pub. designer; post-doc., inorganic-phys. chem.; post-doc., exp. solid-state physics; lect., chem. engr.
UMSL — Gen. mgr., KWMU; coord., Women's Centr.; coord., vet. affs.; systems programmer analyst.

Persons interested in an administrative vacancy should inquire through the personnel office on the campus where the vacancy exists. Those interested in an academic vacancy should inquire through the department or school listing the opening.

Note: Department heads wishing to place announcements of academic vacancies in *Spectrum* should write to *Spectrum*, 424 Lewis Hall, Columbia. Listings will be run in two consecutive issues and then dropped, unless further publication is requested.)

The Visitor

*Too bad you came when you did.
Nothing but rain and cold.
Wrong season, you kept
repeating, as you waited
by the window. You would stare
at the row of cacti on the ledge.
The chair took your shape.*

*Now look at the hills —
if you could. They are green.
Sun and shadows bounce together,
play on the chair you made.
No one in all this house, not even
the bachelor uncle, remembers your face.*

Thomas McAfee
Professor of English
UMC

(From Thomas McAfee's most recent book, *The Body and the Body's Guest: New and Selected Poems*, BookMark Press, 5725 Wyandotte, Kansas City, Mo. 64113; © Thomas McAfee 1975.)