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Mission to gather data on origin of cosmic rays

The cosmic-ray astrophysics group in the McDonnell Center for the Space Sciences and the Department of Physics in Arts and Sciences recently completed the development of its part of a $9.8 million instrument that will gather valuable information on the origin of cosmic rays during a space flight scheduled for launch next year on a Delta-II rocket.

Robert Binns, Ph.D., research professor of physics, leads the group that designed and built half of the Cosmic Ray Ion spectrometry (CRIS) experiment. That half was delivered last month to the California Institute of Technology in Pasadena, where it is being integrated with the rest of the instrument.

In addition to Washington University and Caltech, scientists and engineers from the Goddard Space Flight Center in Greenbelt, Md., and the Jet Propulsion Laboratory in Pasadena also are involved.

Designed to measure the abundances of galactic cosmic-ray isotopes of nuclei in light as Helium and as heavy as Zinc, the instrument will fly aboard NASA's Advanced Composition Explorer (ACE) spacecraft, set to launch in August 1997.

ACE's primary mission is to observe energetic particles within the solar system. The Earth constantly is being bombarded by a stream of accelerated particles, coming at it not only from the sun but also from sources in our Milky Way galaxy.

The study of these energetic particles will lead to a better understanding of their origin and acceleration and the formation and evolution of the solar system. ACE will carry six high-resolution...
A new study has shown that a blood-thinning drug often prescribed to 5 million elderly patients with atrial fibrillation and additional risk factors for stroke causes about 80,000 strokes each year. Despite costing 80 times more than aspirin, the blood-thinning drug warfarin saves money because it prevents more strokes, thereby reducing hospitalization, physician and rehabilitation costs, said lead investigator Brian Gage, M.D., who joined Washington University last summer as assistant professor of medicine. The cost of treating a stroke is estimated at $25,000 for the first year.

"Currently, about half of patients with atrial fibrillation are not receiving warfarin," said Gage, who conducted the study while at Stanford University. "Our study underscores the need to identify these patients to see if they are candidates for warfarin therapy."

In addition, the researchers found that during a 10-year period, 65-year-old patients at high risk of stroke survived an average of three months longer if they received warfarin instead of aspirin and six months longer if they received warfarin instead of no treatment at all. "Three months may not seem like a long time, but for these patients, it can mean a lot," Gage said. The additional survival is similar to that received from mammogram screening for breast cancer, the authors noted.

Gage's co-authors at Stanford were: Douglas Owens, M.D., assistant professor of medicine; Gregory Albers, M.D., director of the Stanford Stroke Center; and Andria Cardinalli, an undergraduate student.

The work was funded by grants from the Palo Alto Institute for Research and Education and from the Veterans Affairs Health Services Research and Development Field Program. The investigators drew their conclusions by analyzing data from seven clinical trials involving 5,090 elderly patients with atrial fibrillation and measuring quality of life in the patients. They combined this information with medical costs using a computer model to compare warfarin to aspirin or no treatment.

Atrial fibrillation causes rapid and erratic heart contractions in the heart's upper chambers, called the atria. The heart's irregular pumping action can cause blood clots to form in the atria. A stroke occurs when a blood clot is carried by the bloodstream to the brain.

Warfarin, an oral drug also known by its brand nameCoumadin, costs about $80 a year, compared with $10 annually for aspirin. The cost of warfarin includes the expense of monthly blood monitoring, which is necessary because a major complication of the medication is hemorrhage.

But even with warfarin's added monitoring costs and the drug still is more cost-effective than aspirin, Gage said. The study shows that during a 10-year period, warfarin saved about $6,200 for each high-risk patient in costs from stroke — more than enough to offset the additional cost of warfarin therapy vs. aspirin. For patients at medium risk of stroke those with atrial fibrillation and one additional risk factor — warfarin therapy also proved to be cost-effective.

However, warfarin was not cost-effective for patients with atrial fibrillation who had no additional risk factors for stroke and did not exceed these patients' lives, the study showed. "Their risk of stroke is so low that giving them warfarin doesn't seem like a reasonable decision," Gage said. "In fact, for these low-risk patients, warfarin can be harmful because it increases the risk of brain hemorrhage."

The researchers concluded, however, that aspirin is a cost-effective and satisfactory alternative for these low-risk patients.

Gage and colleagues in the Department of Medicine plan to study whether drug therapy can restore a normal heartbeat for all patients with atrial fibrillation. "If the therapy works, we could reduce the rate of stroke in all patients with atrial fibrillation even further," Gage said.

Caroline Decker
Roger K. Khouri, M.D., left, and Patty Young, M.D., resident in plastic surgery, photograph a patient's hand after an opine transfer operation. Plastic surgery resident E. Gene Deune, M.D., is assisting with the photographs, which will be used for training.

Roger K. Khouri, M.D., associate professor of plastic surgery at the University of Washington School of Medicine, is shown with a patient undergoing microsurgery.

He already has tested the hypothesis on bone regeneration. In a 1991 Journal of the American Medical Association article, he reported on skeletal replacement part formation using muscle flaps and growth factors. He presented more bone regeneration research at the American College of Surgeons meeting in October. This time, using a freeze-dried joint graft as the framework, a transforming protein was added to entice the recipient cells to repopulate the muscle-bone complex and revive it into functioning bone and cartilage. "We are induce the body to regenerate a missing bone.

"One thing I am not short of is ideas." Roger K. Khouri, M.D., associate professor of plastic and reconstructive surgery, was asked. "I think of myself as an architect of the human body. Every operation in reconstructive microsurgery involves planning and designing. If not working on the patient's needs and resources and then making sure it is completed and the patient is in a new area. After this autologous transplantation, the body then can act and give it a new function.

His work in breast reconstruction is a perfect example. We transfer tummy tuck tissue from the lower part and sculpt it into a breast," he said. The procedure, called autologous reconstructive surgery, avoids the potential complications of breast implants.

"We also reconstruct missing digits with tissue transferred from the arm. We build urethras and missing penises out of tissue harvested from the arm," he said. His expertise in microsurgery is the key to making it work.

According to Khouri, microsurgery is the ultimate tool in putting the pieces together. Adequate blood supply ensures that the new parts will heal and function in their new environments. Microsurgery connects tiny blood vessels, creating a lifeline for the transplanted tissue. "We take any tissue that is not working and reprogram it to the microscopic level - the smallest level we can manipulate with our hands," he said.

Microsurgery allows plastic surgeons to operate in any part of the body. "That's the beauty of plastic surgery," he said. "We operate on the entire body, from the scalp to the toes, from the top to the bottom, from the outside to the inside in between."

Branding technology

Being able to bring different specialties together and bridge the technology from one area to another is the most enjoyable part of his clinical work. Khouri said the climate at Washington University is one that encourages and facilitates collaboration, not only in clinical areas but in research projects as well. "The receptiveness of various investigators here and their willingness to collaborate is something that does not happen elsewhere," he said. His research projects have involved collaborative efforts with various disciplines, including hematology, pathology and cytogenetics.

The challenge then becomes translating the research into clinical care. For a11 the good work he has done in his field, Khouri has been associated with since he was a student. During his fellowship in molecular biology, he realized his training as a physician was almost exclusively in patient care. "I felt I was at a major disadvantage to my colleagues," he said. "I was such an idiot as I was in the lab. The other hand, I had an edge over them because I knew what was clinically relevant. I knew then I wanted to bridge this gap - to be the clinician who follows up the advances of basic science to try to find new, useful clinical applications.

With this goal in mind, he is concentrating on fabricating minced tissue in vitro using growth factors and genetically engineered cells. "Why can't we regenerate what is missing?" he asked. "Why not use our ability to regrow tissue like salamanders? It is all written there in the genetic code; we just can't transcribe it again. The simplest organ I am called upon to reconstruct is a mound of tissue that we call a breast. Yet I have to do a relatively complex and rather aggressive operation to transfer that tissue from somewhere else. Theoretically, we should be able to induce the surrounding tissue to grow and re-create the missing mound."

Specific part by providing the three-dimensional scaffold, the structural matrix and the appropriate signals to make a joint," he said. Khouri will continue to test this idea and others.

"One thing I am not short of is ideas," he said. "Most scientists make a career out of one good idea. I develop one, and before I become a recognized authority in that particular field, another interesting and completely new idea comes along. I have more fun exploring new territory than building an empire based on what already has been defined. In fact, Khouri has obtained three patents in the last two years, and another six are pending.

"Pushing the frontiers of microsurgery" Khouri's colleagues give his ideas high praise. Joseph Upton III, M.D., associate professor of plastic surgery at Harvard Medical School, has known Khouri since 1981, when Khouri was a surgery resident at Brown University. "He has great ideas, and he follows up on them," Upton said. "He is pushing the frontiers of microsurgery because he is so bright and aggressive. Roger has done more good things for plastic surgery in his first eight years than many others do in their entire careers."

William Shaw, M.D., professor and chair of the Division of Plastic Surgery at the University of California, Los Angeles, calls Khouri a modern-day Don Quixote. "He's a free-thinker spirit who isn't afraid to get involved in complex issues. The work he has done in tissue fabrication may change the future - not only of plastic surgery but possibly orthopaedic and general surgery as well," Shaw said.

When discussing Khouri, his colleagues also point to his inventiveness. "One field is creative," Upton said. "We construct things. Give Roger a problem, and he'll come up with a dozen creative ideas and solutions."

Shaw agreed. "He is one of the most creative plastic surgeons I've ever seen, both clinically and in the research lab." In addition to the University's collaborative nature, Khouri credits much of his success to the Washington University/Monsanto Biomedical Research Agreement, which is headed by David M. Kipnis, M.D., distinguished University Professor of Medicine and professor of molecular biology and pharmacology, and to Paul M. Weeks, M.D., head of the Division of Plastic and Reconstructive Surgery.

"The research agreement paves the way for taking basic technology to clinical trials and expands the work Kipnis has been doing in bringing together us for joint research effort.

"Weeks gives his faculty members the opportunities to achieve their potential, Khouri said. "Weeks is an excellent administrator. He provides a means for people to work together and gives us relatively free reign to pursue our ideas, " said Khouri, who joined the University in 1989 when the agreement was made to research and academic freedom is what Khouri said allows him and others to flourish at Washington University.

Research and academic freedom originally to Khouri, who grew up on the campus of the American University of Beirut, where his father was a professor. "I've spent my entire life in a university setting. I used to play on the campus of a university," Khouri said.

Khouri attended a French Jesuit high school and considered studying mathematics or biology but opted to study medicine at the American University of Beirut. "I ended up in plastic surgery because I was a student, a resident and now a professor," he said. "I guess I would have separation anxiety if I left plastic surgery as my life."

"It was the best university education available in Lebanon in the early 1970s, and I didn't want to leave the country at the time."

Enjoy working with his hands While he was in medical school, a civil war broke out in Lebanon. "I found this war totally absurd," he said. "I did not want to take sides in the conflict. Although born Christian, I grew up in the Muslim part of town, and many of my friends were Muslims. I felt I couldn't stay anywhere. He graduated from high school in 1981 and came to the United States. As a fellow in molecular biology, he knew he had to get interested in his interest in basic science research. "My temperament then led me to become a surgeon, because I like to see immediate results," he said. "I felt I would be more advanced with my hands. I once built a motorcycle out of scrap parts. Constraining things, putting things together was natural to me, so surgery seemed obvious.

He toyed with the idea of becoming a heart surgeon, seeing it as the perfect mix of helping people and applying technology. But once he discovered plastic surgery, he hooked. "I thought that plastic surgery is like building a new motorcycle every day." After that, he finished his training with microsurgery and hand surgery fellowships.

He remembers his training days well and said memory shapes the way he now trains residents and fellows. "Teaching residents is very exciting," he said. His satisfaction comes from seeing them perform complex operations with confidence. "I love it when they can do it better than I can," he added.

Former resident Dale Collins, M.D., now an associate professor of plastic surgery at Dartmouth Medical School, called Khuori a modern-day Don Quixote. "He's a free-thinker spirit who is not afraid to get involved in complex issues. The work he has done in tissue fabrication may change the future - not only of plastic surgery but possibly orthopaedic and general surgery as well," Shaw said.

In terms of his research, Khouri is clear. "I run ideas by smart people, and they say, 'Well, I don't know,'" he said. "I guess I would have separation anxiety if I left plastic surgery as my life."

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Thursday, Jan. 25
7:30 p.m. French Film Series. "Bob Le Flambeur" (1955), with English subtitles. Presented by the Department of French, Room 208 Mallinckrodt Center. 935-6543.

7:30 p.m. Art history and archaeology lecture. "The Hellenistic World: Themes and Traditions," lecture by faculty and guest artists. (Also Jan. 27, Feb. 3, and 10.) Cost: $12 for the general public, $8 for University faculty and staff, and $10 for WU students. Drama Studio, Room 208 Multicultural Center. 935-6543.

Thursday, Feb. 1
8:00 p.m. WU Drama Theatre. The Performing Arts Dept. presents: a modern dancer performing selections choreographed by Sarah St. John. Also Jan. 27, same time and Jan. 28 at 2 p.m. Cost: $8 for the general public, $6 for University faculty and staff, and $10 for WU students. Edison Theatre. 935-5835 or 935-6543.

Saturday, Jan. 27
8:00 p.m. Edith Stein's "Stage Left" series presents Guy Kличкаев, a solo classical guitarist. (Also Jan. 28 at 2 p.m.) Cost: $12 for the general public, $8 for University faculty and staff, and $10 for WU students. Drama Studio, Room 208 Multicultural Center. 935-6543.

Miscellany
Saturday, Jan. 27
10:10-11:30 a.m. Book arts workshop. A paper and printmaking expo with local suppliers who will bring samples and talk about the variety of materials and processes available for making books; Cost: $5. Bixby Hall Gallery. To register, call 935-5643.

Blumenfeld opera to make world debut
"Seasongs in Hell," the latest opera by Harold Blumenfeld, professor of music in Arts and Sciences, will make its world debut Feb. 9-11 at the Patricia Corbett Theater in Cincinnati. The two-act opera, which is Blumenfeld’s fifth work based on the writings of the radical boy poet, will make its world debut Feb. 9-11 at the Patricia Corbett Theater in Cincinnati.

Saturday, Feb. 3

3:00 p.m. Gallery talk. "Lifting the Veil," an introduction and discussion of the Robert B. Duncanson exhibit with Joseph Kastendick, curator of the four-city Duncanson exhibit. (See Exhibitions, this page.) Gallery of Art, upper gallery, Steinberg Hall. 935-5490.

Performances
Friday, Jan. 26
8:00 p.m. WU Drama Theatre. The Performing Arts Dept. presents: a modern dancer performing selections choreographed by Sarah St. John. Also Jan. 27, same time and Jan. 28 at 2 p.m. Cost: $8 for the general public, $6 for University faculty and staff, and $10 for WU students. Edison Theatre. 935-5835 or 935-6543.

Calendar guidelines
Events sponsored by the University — its departments, schools, centers, organizations and recognizes or sponsors — are published in the Calendar. All events are free and open to the public, unless otherwise noted.

Calendar admissions should state time, date, place, sponsor, title of event, name of speaker(s) and affiliation(s), and admission cost. Quality promotional photographs with descriptions are welcome. Send items to Judy Ruhland at Campus Box 1070 (or via fax: 935-4259). Submission forms are available or call 935-4926. The deadline for all entries is noon Tuesday, one week prior to publication. Late entries will not be accepted. The Record is printed every Thursday during the school year, except holidays, and monthly during the summer. If you are uncertain about a particular event, you may wish to call for further information, please call 935-4926.
Satirist Douglas Adams to lecture

B ent-selling author Douglas Adams will give the annual Neurorheology Library Lecture at 11 a.m. Wednesday, Jan. 17, in Crabbell Hall. The lecture, titled "Parrots, the Universe and Everything," is part of the spring 1996 Assembly Series.

That same day, Adams also will participate in an informal discussion at 2 p.m., and a book signing from 3:30 to 5:30 p.m., both in the Women's Building Library. All events are free and open to the public.

Adams, a founder of a new multimedia startup in Britain called The Digital Village, which creates software for television, CD-ROM and the Internet, is the author of "The Hitchhiker's Guide to the Galaxy" series and is the creator of adaptations of the series for radio, television and the stage. Since its 1978 inception as a late-night British radio show, "The Hitchhiker's Guide" has developed an international cult following.


Adams graduated in 1974 from Cambridge University with a bachelor's degree in English literature and, prior to writing radio scripts, worked in various short-term jobs. He was a script editor for the TV series "Doctor Who" (1977-81).

The Neurorheology Library Lecture is made possible through an endowed lecture fund from Washington University alumna Carl Neureuther, an advocate of lifelong reading and the pursuit of book collecting. For more information, call 935-5825.

University College presents short courses

University College in Arts and Sciences will present three short courses in February that focus on "Romeo and Juliet" and "The Woman Suffrage Movement.

The first course, titled "Romeo and Juliet," will be conducted by chair of the Department of Art History and Archaeology in Arts and Sciences, will lead a four-session course titled "Romeo and Juliet." The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 5-25.

The second course, which will review works of art that influenced the artist. The course also will visit a variety of Galleries of Art to view and discuss Rembrandt's etchings. The course will meet from 12:30 to 2 p.m. Monday through Thursday from Feb. 12-26.

The third course, an introduction to drama and of comparative literature and drama and of comparative literature and public space will be conducted by Dr. Kevin Kline works with drama students — from page 1 acting to jump at every opportunity — even if they have to wear costumes. "There's a whole range of..." Kline said. "It's about..."

The Performing Arts Department will present the 15th Annual "Saturday Night at the Movies," which features a wide variety of films from around the world. "The performance of the day," said Schrey, "was the show's..."

Kline said that he has won Tony and Oscar awards for his work, "one of the most important films I've ever seen,"" Schrey added. "It's an amazing opportunity to work with such a gifted, talented man," Kline said. "I was experiencing greatness in my chosen field..."

Jazz sensation Joshua Redman brings quintet

Joshua Redman, saxophonist supreme, brings a quintet to Washington University for a sold-out evening of original jazz, classic ballads and blues at 8 p.m. Feb. 9 in Edison Theatre.

Except for "student rush" tickets, the Redman event has sold out. "Student rush" tickets are available for purchase by students from 10 a.m. to 4 p.m. the day of the show. After 4 p.m., any remaining tickets will be available for purchase by the general public.

Redman was named 1994 "Jazz Artist of the Year" in separate critic polls conducted by Down Beat and Chicago magazine. Redman's fearless improvisational skills and mature melodic sense earned him the nickname "Golden Horn" and the top prize in the 1991 Thelonious Monk International Jazz Instrumental Competition.

For more information, call 935-6543.

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The course will be held from 12:30 to 2 p.m. Monday through Thursday from Feb. 12-25.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 13-27.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 14-28.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 15-29.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 16-30.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 17-31.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 18-1.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 19-2.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 20-3.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 21-4.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 22-5.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 23-6.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 24-7.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 25-8.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 26-9.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 27-10.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 28-11.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 29-12.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 30-13.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 31-14.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 1-15.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 2-16.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 3-17.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 4-18.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 5-19.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 6-20.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 7-21.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 8-22.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 9-23.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 10-24.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 11-25.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 12-26.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 13-27.

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The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 28-11.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 29-12.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 30-13.

The course will meet from 1 to 2 p.m. Monday through Thursday from Feb. 31-14.
The Department of Psychology in Arts and Sciences last month moved into its newly constructed building.

Roediger will lead the department in these important endeavors.

A new psychology building, constructed by BSI Constructors Inc. of St. Louis, was completed on the Hilltop Campus last month.

"With the outstanding new building and the retrenchment of the administration, the psychology department is poised to make a significant move forward," said Roediger. "The existing strengths in neuroscience in the School of Medicine and the excellent programs in philosophy, neuroscience and human learning and memory. Some of his Department of Psychology in these exciting discipline.

Roediger received a bachelor's degree in 1969 from Washington & Lee University (Lexington, Va.) and a doctorate in 1973 from Yale University. Roediger's research and teaching interests focus on human learning and memory. Some of his current experiences explore the phenomenon of memory illusions, or how and why people sometimes remember events quite differently from the way they happened. In the performance of events, people can come to have vivid memories of events that never happened at all.

Author of more than 80 articles and chapters, Roediger also has written or edited five books. There are textbooks that have each passed through four or five editions and cover the topics of introductory psychology, experimental psychology and research methods in psychology. He has extensive teaching experiences across both the graduate and undergraduate levels.

Roediger has served as editor of two major psychological journals: the Journal of Experimental Psychology: Learning, Memory and Cognition and the Psychonomic Bulletin & Review. (He was the founding editor of the latter and continues to edit it.) He also has served on the editorial boards of eight other journals.

Roediger has been elected to various regional and national leadership positions in psychology, including president of the Midwestern Psychological Association and chair of the governing board of the Psychonomic Society, one of the leading organizations of experimental psychologists in the United States. He also has been elected a fellow of the American Association for the Advancement of Science, as well as three psychological organizations.

In 1994, Roediger received a Guggenheim Fellowship to begin writing a book on memory illusions. His research has been funded by the National Institute of Child Health and Human Development and by the Air Force Office of Scientific Research.

Business school launches TQS initiative

The John M. Olin School of Business has announced an initiative aimed at improving K-12 education in St. Louis, county, county and metro-east public schools.

TQS is woven into the business school's master of business administration program and four other undergraduate programs as a three-credit course. School of public student assessment at the Washington University students are being trained, principals, teachers and parents from the seven participating schools will begin consulting in area schools. TQS training will remain the same for future business students.

The increases for next year are a direct result of the need to provide the best quality education and the need to provide the best quality education and the need to provide the best quality education.

TQS will take Ollin and George Warren Brown students into the public schools and the community and will bring modern management techniques to the public schools.

"TQS will take Ollin and George Warren Brown students into the public schools and the community and will bring modern management techniques to the public schools. The program is a win-win situation. It trains public school leaders in ways to utilize quality management techniques to identify and to understand issues within the school environment. It offers Washington University students a practical consulting experience through which they can enhance their leadership, communication and presentation skills. Washington University students will install TQS in our future business and community leaders a lifetime skill that is in demand for and rewards of community service."

Shanti K. Khinduka, Ph.D., dean of the School of Social Work, along with the Washington University students will install TQS in our future business and community leaders a lifetime skill that is in demand for and rewards of community service.

University sets tuition, fees

Undergraduate tuition and fees at Washington University will total $20,200 for the 1996-97 academic year — a 4.7 percent increase above the current year. According to Benjamin S. Sandler, treasurer of the University, the increase will cover a $200 required student activity fee.

Undergraduate tuition and fees for the current academic year were $19,291, which includes a $191 required student activity fee.

Typical room and board charges for 1996-97 will be $6,210, up 4.2 percent from the 1995-96 academic year's charges of $5,961. The total 1996-97 charge for undergraduate tuition, room and board will be $26,410, which is 4.6 percent greater than the corresponding 1995-96 charge of $25,752.

"The increases for next year are a balance between our efforts to hold costs down and the need to provide the best opportunities for our students, in and out of the classroom," Sandler said.

"Our tuition is competitive with institutionals of our quality and size. Washington University is committed to a strong financial aid program. Nearly 90 percent of our students receive some type of financial aid. The University offers two payment plans to help parents with their financial burdens. The Cost Advantage Plan allows University students to pay four years (or more) to be paid in monthly installments over as many as 10 years at competitive fixed interest rates. The advantage of this plan is that a family can lessen the effect of future tuition and room and board increases on the family's income.

The Monthly Payment Plan allows families to defer the impact of their financial year's expenses over 10 equal monthly payments through May. The following tuition charges for graduate and professional schools also were announced:

• Graduate School of Arts and Sciences and graduate programs in the School of Architecture, Business, and Engineering and Applied Science: The graduate tuition and fees charged at the graduate level in these programs will be $20,000, a 4.7 percent increase over the current charge of $19,100.

• School of Art graduate programs: The master of art's program will be $16,600, a 5.1 percent increase over the current charge of $15,800.

• George Warren Brown School of Social Work graduate programs: The graduate tuition for the Juris Doctor program will be $20,350, a 5 percent increase over the current charge of $19,350.

• School of Medicine: For medical students, in-state and out-of-state usual tuition charge will be $27,435. This tuition charge will remain the same for the next two years. The usual tuition charge for medical students for the next two years is $23,135 for the next two years.

Of the tuition charge, students can address such as reducing tardiness, increasing self-respect, increasing personal security, increasing leadership, communication and class participation. The Financial Aid Office offers a wide variety of financial assistance programs to assist students in meeting their educational expenses. For more information, call 935-4214.
Anne Fuller Dillon, director of media services

Dillon Faculty/Family Art Show. From 1974 to 1994, she served as a director of media services for Washington University School of Medicine.

Catherine Lewis, former assistant dean of students

Dillon was featured as a choreographer during a production of "The New Conception in Art" at the Gallery of Art in Esslingen, Germany. His essay on "The New Conceptual Art" was featured in the exhibition's 240-page catalog.

Carol J. Proctor, Ph.D., Frank Bruno professor of Social Work Research, is working with scientists and administrators from the National Institutes of Health (NIH) to analyze NIH funding for research in the behavioral and social sciences. Proctor is helping to develop a standard definition for behavioral and social sciences research, which will be used to analyze NIH funding and to establish goals of the institute's new Office of Behavioral and Social Sciences Research.

Deborah Shure, M.D., associate professor of medicine, was inaugurated as president of the American College of Chest Physicians, a 16,000-member medical society. Shure, an expert in women's health, will hold the position. She was inaugurated during the college's 61st annual international scientific assembly in New York. The college promotes the prevention and treatment of diseases of the chest through leadership, education, research, and service.

During the International Association of Chiefs of Police's annual meeting in Miami, Curtis J. Milhaupt, J.D., associate professor of law, presented a paper in Japanese on "The Role of Business Transactions: Japan and the United States in Comparative Perspective." At a conference in Tokyo sponsored by the Japan-America Society for Legal Studies, the paper is scheduled to be featured in the American (American Law) journal this year.

On assignment

Eula D. Washburn, M.D., associate professor of medicine, was inaugurated as president of the American College of Chest Physicians, a 16,000-member medical society. Washburn, an expert in women's health, will hold the position. She was inaugurated during the college's 61st annual international scientific assembly in New York. The college promotes the prevention and treatment of diseases of the chest through leadership, education, research, and service.

To press

Randy L. Korotov, Ph.D., research associate professor of earth and planetary sciences in Arts and Sciences, is one of five authors of a book titled "Birds of the St. Louis Area: Where and When to Find Them" published by the Webster Groves Nature Study Society.

Guidelines for submitting copy:

Send your full name, complete title, department, phone number, and highest earned degree, along with a typed description of your release, to the Missouri School of Journalism's Record, c/o Carolyn Sanford, Campus Box 1031, 1 Brookings Drive, St. Louis, MO 63105, or to the School of Engineering and Applied Science or the School of Engineering and Applied Science's public relations office. Items must not exceed 75 words. For information, call Sanford at 933-5293.

Alumnus Jerome F. Brash, selected as one of the trustees

W ashington University alumni Jerome F. Brash, president of Brash Manufacturing Inc., has been elected to a four-year term on the University's Board of Trustees. Brash received a bachelor's degree in engineering in 1944 and a master's degree in the same field in 1947 at Washington University.

Robert Pollak, Ph.D., Hebrew Distinguished Professor of English and Arts and Sciences, was elected to a four-year term as a trustee of the Hebrew University of Jerusalem, where he is a lecturer in the Department of Economics. Among his research interests are economic theory and policy and political economy. Pollak received a bachelor's degree in mathematics and economics in 1983 and a doctorate in game theory in 1988, both from Harvard University.

Kerry Kornfeld, M.D., Ph.D., assistant professor of molecular biology, pharmacology, and physiology at the Massachusetts Institute of Technology in Cambridge, is an expert in the field of developmental biology. He received his bachelor's degree in biology from Yale University in 1989 and a medical degree in 1996 from St. Louis University in St. Louis, Missouri.

Paul B. Robbins, M.D., assistant professor of medicine, comes from the Duke University Medical Center in Durham, N.C., where he has a cardiology fellowship. His research focuses on heart disease. Robbins received a bachelor's degree in biology in 1983 from Haverford College in Pennsylvania, a master's degree in biochemistry in 1985 from Cambridge University in England, and a medical degree in 1989 from St. Louis University School of Medicine.

Susan M. Brasch, M.D., Ph.D., associate professor of medicine, comes from the University of Southern California in Los Angeles. She received a bachelor's degree in biology from the Hebrew University of Jerusalem in 1982, a master's degree in biochemistry in 1985 from the University of Southern California in Los Angeles, and a medical degree in 1989 from the University of Southern California School of Medicine.

Among the crowd of memorable characters are Lucy and Pumphrey Mehmel. "It's a mystery why Felix's father is coming from Galveston to ply his mysteries, leaving nothing as it was before he came," Brash said. The Mehmels, privileged and eccentric and headed into the opening of the "Zero Italy" exhibition at the Gallery of Art in Esslingen, Germany. His essay on "The New Conceptual Art" was featured in the exhibition's 240-page catalog.
Vice chancellor search begins — from page 1

Vice chancellor search begins — from page 1

Experiment to answer galactic questions — from page 1

sensors and three monitoring instruments that will sample low-energy particles of solar origin and high-energy galactic particles, with a collecting power of 10,000 times greater than previous experiments. It is the first instrument that takes it outside of our magnetosphere, allowing the charged particles to be de- tected unimpeded by Earth’s magnetic field.

The part of CRIS that the cosmic ray group developed is called SOFT, which stands for Statistical Online Fluctuation Test. The goal of the experiment is to test the theory that many cosmic rays were generated in a thermal engineer from Johns Hopkins University. The team included Binns, who is a co-investigator on the project, and James Cravens, an independent consultant in physics.

In addition to Binns, other group members are encouraged to apply for open positions. The office strongly discourages special requests for applications, including those from faculty at 362-7197 to request information regarding these positions. Application required. Physics.

Statistical Data Analyst 960216-R. Requirements: Bachelor's degree with some college; statistical computer programs and procedures accompanying such responsibilities included. Application required.


Research Assistant 960159-R. Medical Computing Services. Requirements: Bachelor's degree in computer science or related area. Application required.

Research Patient Assistant 960218-R. Requirements: Bachelor's degree in biology or related sciences and experience with large longitudinal research projects. Application required.