Arvidson named McDonnell Professor

By Tony Fitzpatrick

Raymond E. Arvidson, Ph.D., chair of the Department of Earth and Planetary Sciences in Arts and Sciences, has been appointed the James S. McDonnell Distinguished University Professor at Washington University. Arvidson’s research is in the area of Earth and space sciences, particularly the inner solar system planets of Mars and Venus and environmental studies of Earth. In announcing Arvidson’s appointment, Chancellor Mark S. Wrighton said: “Professor Arvidson is one of the world’s leading scholars in his field and a great academic leader. We are fortunate to have him at Washington University and to be able to recognize his extraordinary achievements.” Arvidson and his research group manage NASA’s Planetary Data System Geosciences Node, a facility available to planetary scientists worldwide containing images and planetary data from missions to Mars, the moon and Venus. A 25-year veteran of NASA missions and programs, he recently was appointed interdisciplinary scientist for NASA’s Mars Surveyor Program 2001 Mission as well as deputy principal investigator with the Athena science team for the 2003 and 2005 rover missions. Arvidson has published more than 100 articles and books dealing with remote sensing on Earth, Mars and Venus. He earned a bachelor’s degree in geology from Temple University in 1969 and a master’s (1971) and a doctorate (1974), both in geology, from Brown University. He joined the Washington University earth and planetary sciences department in 1974. He was made full professor in 1984 and in 1991 was appointed chair of the department. He also is a fellow of the American Geophysical Union. Arvidson also directs the Microbeam Analysis Facility, an electron microprobe, including the one that is a powerful tool for analyzing cosmic dust and particles weighing as little as a millionth of a millionth of a gram. By studying the isotopic composition of these particles, researchers are gaining new information on nuclear and chemical processes in stars and on conditions during the formation of the solar system.

Microprobe coming to McDonnell Center

One of a kind instrument helps analyze cosmic dust

By Susan Killenberg

The National Science Foundation’s (NSF) Major Research Instrumentation program has awarded $500,000 to a research group in the McDonnell Center for the Space Sciences in Arts and Sciences to complete the purchase and installation of a NANO SIMS, a one-of-a-kind ion microprobe. When installed, the NANO SIMS will be the only instrument in the world that will allow researchers to analyze cosmic dust particles so small that they can’t even be seen with an optical microscope. The NSF grant complements $1 million already committed by NASA and $500,000 awarded by the McDonnell Center toward the purchase of the NANO SIMS, according to Robert M. Walker, Ph.D., McDonnell Professor of Physics and director of the McDonnell Center. The grants have been awarded to the center’s extramural materials group headed by Walker.

The NANO SIMS, which is being manufactured in Paris and will be ready for delivery to Compton Hall late winter, represents a breakthrough in ion microprobe technology, according to Walker. A typical ion microprobe, which is a powerful instrument used to measure the isotopes of interstellar material, can measure grains weighing as little as a milligram of a milligram of a gram. By studying the isotopic composition of these particles, researchers are gaining new information on nuclear and chemical processes in stars and on conditions during the formation of the solar system.

Bill Gates to address students, promote computer careers

By Susan Killenberg

Microsoft Corp. chairman and Oct. 13 chief executive officer Bill Gates will deliver an address Monday in the All-University Field House at the Athletic Complex during a visit to St. Louis in a program open only to St. Louis area college students, at the company’s urging. Washington University students must have a ticket to hear Gates’ talk. Other members of the University community may view the Gates address at remote closed-circuit TV locations, still to be announced.

In conjunction with Gates’ address, there will be a separate Universitywide Career Fair sponsored by the Washington University Chapter of the National Society of Black Engineers (NSBE). The Career Fair will be held in the recreational gymnasium of the Athletic Complex from 10 a.m. to 4:30 p.m. Oct. 13, and will be open to any current Washington University student.

Wrighton addresses congressional panel

Science Coalition presents ‘Great Advances’ in research

Chancellor Mark S. Wrighton was one of three university chief executives to address the U.S. House of Representatives Science Committee Thursday, Sept. 24. Wrighton, who will deliver an address to St. Louis area college students, said that most of the grants will be part of the team for the Mars 2001 mission. Arvidson and his research group manage NASA’s Planetary Data System Geosciences Node, a facility available to planetary scientists worldwide containing images and planetary data from missions to Mars, the moon and Venus. A 25-year veteran of NASA missions and programs, he recently was appointed interdisciplinary scientist for NASA’s Mars Surveyor Program 2001 Mission as well as deputy principal investigator with the Athena science team for the 2003 and 2005 rover missions. Arvidson has published more than 100 articles and books dealing with remote sensing on Earth, Mars and Venus. He earned a bachelor’s degree in geology from Temple University in 1969 and a master’s (1971) and a doctorate (1974), both in geology, from Brown University. He joined the Washington University earth and planetary sciences department in 1974. He was made full professor in 1984 and in 1991 was appointed chair of the department. He also is a fellow of the American Geophysical Union. Arvidson also directs the Microbeam Analysis Facility, an electron microprobe, including the one that is a powerful tool for analyzing cosmic dust and particles weighing as little as a millionth of a millionth of a gram. By studying the isotopic composition of these particles, researchers are gaining new information on nuclear and chemical processes in stars and on conditions during the formation of the solar system.

When the NANO SIMS is completed, however, researchers will be able to analyze cosmic dust particles 10 times smaller than was previously possible with any current ion microprobe, including the one now at the McDonnell Center. Walker said that most of the detailed astrophysical information

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提供了，如热力学、化学和工程学，这些领域定义了其基础科学。催化剂的领域在哪里？科学家和企业是否想得到它？科学家和公众认为大学文化的主要角色是研究的基础。他们追求的基本研究，在美国无论是公共和私营机构，都证明是重要的。研究的最终目标是了解和控制自然界的复杂性，以解决实际问题。研究的成果不仅限于学术界，还广泛应用于医学、环境科学、工程学和其他领域。研究的持续性需要政府、私营部门和非营利组织的持续支持。
Stroke risk related to oxygen use in the brain

Finding revives interest in surgical option for some patients

By Jim Dryden

By measuring oxygen use in the brain, researchers at Washington University School of Medicine can determine which patients with blocked carotid arteries are at high risk for a stroke. The findings were published in the Sept. 23-30 issue of the Journal of the American Medical Association, could have implications for reversing a discarded surgical procedure that increased blood flow to the brain.

Leading the research was John E. Powers, M.D., the Herbert Louriere Professor of Neurosurgery and professor of radiology; William I. Powers, M.D., professor of neurology and associate professor of radiology; and colleagues reported a complete blockage of the carotid artery and a condition known as hemodynamic failure are at high risk for a stroke. The researchers studied 81 patients, 80 of whom had one blocked carotid artery. Hemodynamic failure is when the brain is not receiving the normal amount of oxygenated blood. Using a method called positron emission tomography (PET) images, the investigators measured blood flow and oxygen metabolism in the brains of 81 study subjects. All had complete block of one of their carotid arteries and had suffered either a stroke or a transient ischemic attack, which resembles a stroke but lasts itself in a few hours. The PET scans revealed which patients were in hemodynamic failure by revealing the amount of oxygen reaching their brains and the percentage of oxygen that the brain used.

"...this study clearly indicates that oxygen metabolism in the brain is important to stroke risk. ..."

Robert L. Grubb

PET scans that showed increased oxygen extraction, and 42 had normal oxygen extraction. In the group with increased oxygen extraction, 12 patients (31 percent) suffered strokes. Only three of the patients (7 percent) who had normal oxygen extraction rates had strokes. And 11 of the 12 strokes occurred in patients with increased oxygen extraction occurred on the same side of the brain as the artery blockage, near the brain areas that were getting more oxygen than normal.

"...we were surprised by the number of strokes in the group with hemodynamic failure," Grubb said. "We did not anticipate the discrepancy, but we think this study clearly indicates that oxygen metabolism in the brain is important to stroke risk and that available medical treatments do not reduce this risk.

But the investigators think surgical therapy might be helpful. They want to try a surgical technique called extracranial-intracranial bypass surgery. In the operation, a vein is taken from outside of the brain and anastomosed to a vessel inside the brain. The approach is designed to improve blood flow to the brain and reduce stroke risk.

A 1985 multicenter study showed that the EC-IC bypass was no better than medical therapy in reducing risk of stroke, but that was before the risk of hemodynamic failure had been clarified, Powers and Grubb hope to test the surgery in a study of patients with known hemodynam-ic failure. The bypass surgery might benefit this group if it can raise the oxygen intake and lower the percentage of oxygen extracted from the blood.

"Using PET, we confirmed that oxygen extraction increased in some patients with blocked carotid arteries, there was an imbalance between supply and demand of oxygen and the amount of oxygen used by the part of the brain supplied by the blocked carotid artery vessel."

Continued on next page...
Exhibitions


Films

Friday, Oct. 2

6 p.m. Flinders Film Series. "Bourne Rights." (English subtitles). Room 219 Ridgley Hall. Cost: $3 first visit; $2 subsequent visits. Room 100 Brown Hall. 935-5983.


Saturday, Oct. 3

8:45 a.m. Digestive Diseases Research Colloquium. Theme: "Cancer Progression and Metastasis." The Women's Studies program and the Center for Women in Science and Engineering present author readings and seminars. Room 30. 362-8941.

Friday, Oct. 9

7 and 9 p.m. Foreign and Classic Series. "Salvator Mundi." (Greek subtitles). 935-5983.

Wednesday, Oct. 7

9 a.m. Japanese Film Series. "Black Rain." (English subtitles). Room 219 Ridgley Hall. 935-5983.

Friday, Oct. 2

7 and 9:30 p.m. Flinders Film Series. "Shakespeare Rockbill." (English subtitles). 935-5983.

Friday, Oct. 9


Lectures

Thursday, Oct. 1

8 a.m. Office of Continuing Medical Education seminar. "Surgical Oncology." 362-6000. Free and open to the public.


Friday, Oct. 2


Saturday, Oct. 3


The concert is free and open to the public. For more information, call (314) 935-4841.

Orchestra plans concert in quad

The Department of Music in Arts and Sciences will present a concert by the Washington University Symphony Orchestra at 3 p.m. Sunday, Oct. 4 in the recital hall of the Donald R. Pritzker Pavilion on the University Quad. A pre-concert dinner is scheduled at 2 p.m. in the Quadrophile Restaurant at the hotel.

On-campus concerts will continue with a performance by the Gregorian Choir at 7:30 p.m. Monday, Oct. 5 in the recital hall. The concert is free and open to the public. For more information, call (314) 935-4941.

Music

Friday, Sunday, and Monday concerts will be held in the Music Center on the campus of Washington University. The concerts are free and open to the public.

Reading Series

Poet Anthony Butts, whose collection, "Fifth and Hope," was published in 1997, will read from his work at 8 p.m. Friday, Oct. 9, in the 1998-99 Reading Series sponsored by the National Endowment for the Arts and the College of Arts and Sciences. The first reading will take place at the West Center Conference Center.

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Awards and prizes for the 1998-99 Reading Series will be announced at the reading. The program is sponsored by the National Endowment for the Arts and the College of Arts and Sciences.

For more information on the Reading Series, call (314) 935-4841.

Friday, Oct. 2

8:45 a.m. Anesthesiology Grand Round. "Cardiac Surgery:

Saturday, Oct. 3


Friday, Oct. 9


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Liberating the book within you
Fine Arts Institute schedules 17 autumn workshops

By Lissy Ott
dd: in it: Somewhere deep inside, we've got a book inside you struggling to get out. Well, you're in luck because this fall the School of Art is sponsoring a series of Saturday workshops designed to help you realize that potential volume. In fact, over the next three months, the Fine Arts Institute— the School of Art's continuing education program— will offer more than a dozen workshops. "The workshops are designed to be a novel and creative process, and can have a very different sequence of ideas, creating one of a kind origami and accordion fold books," Ardakani said. "These workshops will offer art-making opportunities for everyone," said Linda Ardakani, assistant director of the Fine Arts Institute. "Students will learn about everything from developing content to illustrating it. They also have a lot of fun," Ardakani added. All workshops are open to the public and held at Redford Hall, 4656 Sanitarium Road from 1:30 to 4:30 p.m. The cost ranges from $15 to $40. For more information or to register, call 935-4643.

• Oct. 10, 17 and 24, "How Did They Paint That?" — Each workshop features a local painter or printmaker giving a demonstration on how to paint or print. The workshops are open to the public and range in content from acrylics to serigraphy, a woodcut from an edition of "Gray on Gray: A Lifelong Conversation" — author Sharon Pettus will discuss how to differentiate a lithograph from a woodcut, which often are based on her family, and help students begin working on their own. He also suggests that students creative process, with particular attention on the art of book-making. "These workshops will offer art-making opportunities for everyone," said Linda Ardakani, assistant director of the Fine Arts Institute. "Students will learn about everything from developing content to illustrating it. They also have a lot of fun," Ardakani added. All workshops are open to the public and held at Redford Hall, 4656 Sanitarium Road from 1:30 to 4:30 p.m. The cost ranges from $15 to $40. For more information or to register, call 935-4643.

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Microprobe

University receives cutting-edge instrument — from page 1

available today has come from studies of the isotopic and elemental compositions of individual grains. The NANOSIMS will extend the study of such grains from a micrometer in size — not visible to the naked eye — to grains with a thousand times smaller volume, which is moreover a characteristic of interstellar dust. "This instrument will open up a whole new world, allowing the study of a much wider range of material present in primitive meteorites," Walker said.

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...rer results of the Max Planck Institut will receive a...
Notables

Of note
Jeffry J. Brown, M.D., and Michael T. Darcy, M.D. Both associate professors of radiology, were named fellows of the American College of Radiology at the college's annual meeting held in Pittsburgh. Brown and Darcy were two of three Missouri radiologists to receive the recognition in 1998.

Sol L. Garfield, Ph.D., professor emeritus of psychology in Arts and Sciences, was honored for his service to the International Society of Psychoanalytic Psychotherapy with a special symposium celebrating his 80th birthday that focused on the contribution to psychotherapy research.


Speaking of
Dwight C. Look, M.D., assistant professor of medicine, presented an abstract titled "Mechanisms of Epithelial Inhibition of Stalk-Dependent Gene Activation in Alveolar Epithelial Cells" at the American Lung Association/American Thoracic Society annual meeting in Chicago. Look's abstract was one of 11 chosen for presentation at the meeting, which commemorated the 50th anniversary of the founding of the National Heart, Lung and Blood Institute.

J. Christopher Kroeger, former associate professor of engineering admissions, has been promoted to associate dean and director of engineering under-graduate admissions. He joined the engineering community in November 1990 as assistant director of the engineering cooperative education program.

Kroeger earned a bachelor's degree in psychology from the University of Northern Iowa in 1986 and a master's degree in industrial/organizational psychology at Loyola University in Chicago in 1988. He spent 12 years in the U.S. Army Reserve and held the rank of captain at the time of his departure in 1997.

Kroeger has also graduate engineering admissions, including freshman transfer and dual-degree admission. Further duties include administering entrance-based scholarships for the engineering school.

Jan Snow, formerly associate director of undergraduate admissions, has been promoted to director of engineering under-graduate recruiting. She joined the University in 1981 in the Office of Undergraduate Admissions.

Jan Snow, professor emeritus of biochemistry, published a book review titled "International Criminal Law Comes of Age" on the first major text on international criminal law in "The Criminal Law Forum." Before joining the forum, she was the editor for the Moct Court Competition at the law school. Also in this issue, the Elements Research Group of the National Society of Neurology and Neurosurgery.

To press
Leila Sadat Wexler, J.D., LL.M., D.E.A., professor of law, published a book review titled "International Criminal Law Comes of Age" on the first major text on international criminal law in "The Criminal Law Forum." Before joining the forum, she was the editor for the Moct Court Competition at the law school. Also in this issue, the Elements Research Group of the National Society of Neurology and Neurosurgery.

Five appointed to new positions in engineering school this fall

D rim Christopher J. Byrnes, Ph.D., has announced new appointments at the School of Engineering and Applied Science in administration, student services and communications. J. Christopher Kroeger, formerly assistant professor of engineering admissions, has been promoted to associate dean and director of engineering under-graduate admissions. He joined the engineering community in November 1990 as assistant director of the engineering cooperative education program.

Kroeger earned a bachelor's degree in psychology from the University of Northern Iowa in 1986 and a master's degree in industrial/organizational psychology at Loyola University in Chicago in 1988. He spent 12 years in the U.S. Army Reserve and held the rank of captain at the time of his departure in 1997.

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Jan Snow, formerly associate director of undergraduate admissions, has been promoted to director of engineering under-graduate recruiting. She joined the University in 1981 in the Office of Undergraduate Admissions. She now serves as vice chair for 1998-99.

Recent appointments at the School of Engineering and Applied Science include:

• professor emeritus of education in the College of Arts and Sciences, was honored with a visit from the International Society of Psychoanalytic Psychotherapy.

Treena Bell Thompson was named program director of Campus Y program director

Treena Bell Thompson has been named program director of Campus Y, according to Dennis Trask, executive director of the organization.

Thompson will coordinate the 25 student programs and director and will be the technical and leadership service and development director for Campus Y. "Treena brings a great deal of organizational skill and experience, as well as a great deal of community service," Trask said. "Her appointment as program director to the Campus Y. Trask added. Prior to the appointment, Thompson served as associate director of client services at Respinc, developing and implementing education and awareness programs for the St. Louis area. She was also a senior account manager for the YMCA of Greater St. Louis and a United Way member. Thompson attended the University of Pennsylvania and the University of Pittsburgh.

Emory, who was born inMechanichus, Ohio, served in the Marine Corps and in the U.S. Navy. Emory earned a bachelor's degree in business administration from Ohio State University in 1978 and a master's degree in business administration from the University of Illinois in 1987.

Richard Grodsky, D.Sc., formerly professor of psychology and executive director of the engineering school's summer school, has been promoted to assistant dean and registrar for the school.

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C. William Emory, professor of business of marketing

William Emory, Ph.D., professor emeritus of marketing at the John M. Olin School of Business, who was on his faculty from 1985 to 1991, died Sept. 19, 1998, in Charlotte, N.C. He was 75 and lived in St. Louis.

William Emory directed marketing and business research methods; and, in 1986, he was a founding director of the Consortium for Graduate Study in Management, which provides scholarships to encourage and enroll minority students in management programs.

Emory earned a doctorate in economics from the University of Illinois in 1985 and a master's degree in business administration from Ohio State University in 1958. Before joining the University in 1985, Emory served as associate professor of business of marketing at the University of Georgia.

William Emory, professor of business of marketing

C. William Emory, professor of business of marketing

Treena Bell Thompson named program director

Treena Bell Thompson named program director

Symposium to celebrate Jewish scholar's installation

H ilde I. Kieval, Ph.D., will be formally installed as the University's 9th Goldstein Professor of Jewish Thought and Studies on Oct. 15 and 16.

Kieval, a leading scholar of the Jewish experience in Europe in both the pre- and post-Holocaust periods, was appointed director of the Center for Jewish Studies and the YWCA of Metropolitan St. Louis. He is professor of Jewish Culture at the Hebrew University of Jerusalem, will speak on "The Transformation of Jewish Culture in Early Modern Europe." He was formerly a visiting scholar at the University of Minnesota.

Kieval will also preside over a roundtable discussion among the audience. The gathering is expected to adjourn at noon.

The installation ceremony and reception, call 935-5834. For information on the symposium, call 935-8507.

Obituaries

C. William Emory, professor of business of marketing

C. William Emory, professor of business of marketing

Obituary

Additional information and definitions and includes publications and abstracts database and a bibliography.

Clarification

Louise Jones, whose photo is on page 11 of this week's issue, is associate director of medical development in Alumni and Development Programs. She was significantly identified in the caption.

Obituary

W. W. Charters, former professor

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Tackling unanswered questions in the care of newborn babies

Aaron Hamvas, M.D., finds challenge in helping infants survive and thrive outside the womb.

BY DIANE DUKES WILLIAMS

Aaron Hamvas, M.D., and his patient Daniel Johnson, 17 months, who was born prematurely.

"The longer I do this, the more I've become humbled in terms of the ability to predict outcomes," said Hamvas, whose research focuses on newborn lung diseases in newborns, particularly in infants with genetic disorders called pulmonary surfactant protein B (SP-B) deficiency. "At times, this aspect is the one point and now are doing just fine.

In the field of newborn medicine, Hamvas says, there are still many unanswered questions about development, diseases and technology. "I keep reminding myself of this every time I'm dealing with a difficult case that looks hopeless, I'm now following many children, some years old who seemed hopeless at one point and now are doing just fine.

Colten and Nogee identified the specific genetic deficiency so that physicians now can diagnose the disorder definitively using amniocentesis or by taking a blood sample after the baby is born. Early identification of the disorder allows for the necessary arrangements for treatment at birth with a lung transplant.

Hamvas has been at the center of the clinical care of SP-B deficient infants facilitating the diagnosis, developing strategies to stabilize the infants for lung transplantation and understanding the long-term outcome of these infants following transplantation.

Hamvas and Nogee, now associate professor of pediatrics at Johns Hopkins University School of Medicine, still collaborate on pulmonary SP-B deficiency studies. Nogee said Hamvas has an excellent understanding of clinical medicine and clinical issues as well as of science.

"Hamvas has an ability to see the big picture and to get the questions answered," said Nogee, who described Hamvas as quietly effective. "He's also very unfussy in terms of putting patients first. He never has his own agenda. He doesn't make a big deal or fuss — he gets things done without a great deal of fanfare."

Hamvas has been a volunteer in medical research for more than 10 years, working with former colleagues Harvey Coltes, M.D., and Lawrence Negre, M.D., who contributed to the clinical care of infants in the newborn intensive care unit.

"I thought it was the field work of a lifetime. The resources you've accumulated over time and apply in a real-life setting," Hamvas said.

Special resources

Working with families of very sick newborns takes special resources that Hamvas has, Nogee said. "He's a very personable person in terms of dealing with families who have had real tragedies," he said. "Helping them and also trying to learn something from them is the experience that can benefit others.

Being a parent himself helps Hamvas relate to his patient's families. He and his wife, Paula, a social worker for an employee assistance program, have three daughters, ages 18, 16 and 15. Hamvas entered Washington University School of Medicine, where he majored in music and piano. He learned to play the violin at his synagogue.

"I want to come to work every day because I don't know what's going to happen," he said. "I like knowing there will be some sort of intellectual challenge to be dealt with during the course of the day."

Aaron Hamvas, M.D.

Birthplace: Yankton, S.D.

Education: B.S., Rensselaer Polytechnic Institute, Troy, N.Y., 1977; M.D., Washington University School of Medicine, 1981.

Position: associate professor of pediatrics and medical director of neonatal intensive care Unit, Children's Hospital

Hobbies: biking, biking, tennis, plays violin in a Jewish folk music group at his synagogue.