Gary Purdy, University Professor in the department of materials science and engineering at McMaster University in Hamilton, Ontario, Canada

Evgeny Velikhov, president of the Russian Research Center at the Kurchatov Institute, in Moscow.

In Brief

This month, physicist **Robert A. Eisenstein** is taking office as president of the Santa Fe Institute (SFI), a New Mexico research organization that encourages multidisciplinary collaborations among visiting and resident scientists from the physical, mathematical, biological, computational, and social sciences. Eisenstein was NSF's assistant director for mathematical and physical sciences from 1997 to 2002 and, during the past year, has been on leave at CERN. He succeeds **Ellen H. Goldberg**, who became president in January 1996. She stepped down this past January, when she was appointed as a research professor at SFI and codirector of the initiative entitled Santa Fe Institute Consortium: Increasing Human Potential.

Albert Chang, professor of physics at Purdue University, will be joining the physics faculty at Duke University on 1 August.

Brian DeMarco has been awarded the 2003 Michelson Postdoctoral Prize Lectureship by Case Western Reserve University in Cleveland, Ohio, for his "seminal contributions to the field of trapped atomic gases, including the creation, with his collaborators, of the first degenerate Fermi atomic gas and his work on quantum computing using trapped ions." DeMarco, National Research Council postdoctoral fellow at NIST in Boulder, Colorado, spent a week in late April in residence at CWRU, where he gave three seminars and a colloquium on the quantum behavior of trapped Bose and Fermi gases and on quantum computing using atomic and optical systems. In August, he will be joining the physics department at the University of Illinois at Urbana-Champaign as an assistant professor.

Last month, **Edwin Lyman** joined the Union of Concerned Scientists in Washington, DC, as a senior staff scientist in the global security program. He had been president of the Nuclear Control Institute in Washington, DC.

The Chinese government has announced that **Joseph Hamilton** is the recipient of the 2002 International Scientific and Technological Cooperation Award of the People's Republic of China. The award honors Hamilton, Landon C. Garland Distinguished Professor of Physics at Vanderbilt University, for his "important contributions, along with Chinese scientists and engineers, toward the development of science and technology in China." The ceremony, originally scheduled for April, has been postponed until later this summer.

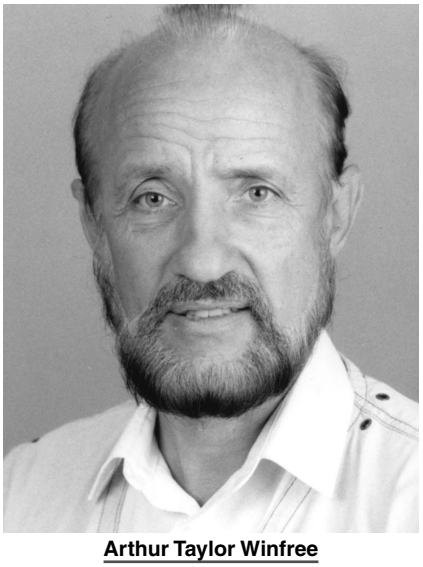
The Royal Swedish Academy of Sciences will award the 2003 Gregori Aminoff Prize in Crystallography to **Axel T. Brunger** and **Alwyn Jones** at a ceremony in Stockholm, Sweden, this September. The academy is recognizing Brunger for his "development of refinement techniques for macromolecules." He is an investigator at the Howard Hughes Medical Institute and a professor of molecular and cellular physiology at the Stanford University School of Medicine. The academy is citing Jones, professor of structural biology at Uppsala University in Sweden, for his "pioneering development of methods to interpret electron density maps and to build models of biological macromolecules with the aid of computer graphics."

This month, the Abdus Salam International Centre for Theoretical Physics is awarding its ICTP Prize for 2002 to **Mohit Randeria** at a ceremony in Trieste, Italy. According to the ICTP, he is regarded as "the world's expert in the implications of the Angle Resolved Photoemission (ARPES) experiments for the properties of strongly correlated electron systems." He also is being acknowledged for contributing his "theoretical interpretation of experiments on the pseudogap state in the normal state of high-T_c superconductors." Randeria, theoretical physicist at the Tata Institute of Fundamental Research in Mumbai, India, is on sabbatical for 2002–03 as the George A. Miller Visiting Professor at the University of Illinois at Urbana-Champaign.

Obituaries

Arthur Taylor Winfree

Arthur Taylor Winfree, a distinguished theoretical biologist whose discoveries repeatedly opened new lines of inquiry in physics, died of brain cancer on 5 November 2002 in Tucson, where he was Regents' Professor at the University of Arizona.



Arthur Taylor Winfree

Art was born on 15 May 1942 in St. Petersburg, Florida. As a boy fascinated by the mysteries of the living world, he decided somewhat paradoxically that the best strategy was to acquire the quantitative tools and training of a physicist. He majored in engineering physics at Cornell University and received his BS in 1965. His senior thesis gave another early hint of his unconventional way of thinking. Motivated by the phenomenon of circadian rhythms, Art devised a model based on an enormous collection of coupled, self-sustained oscillators. Those hypothetical oscillators were supposed to represent multiple cellular clocks whose collective behavior would be mirrored in an animal's activity. Because no mathematical methods existed for analyzing large systems of nonlinear oscillators, Art built a gadget that he called the firefly machine, consisting of 71 flickering neon lamps, each coupled electrically to all the others. His hunch was that the aggregate output of that system, when plotted in the format used by circadian biologists, might suggest new ways of interpreting their data.

His experiments led to his first publication, in 1967, on the population dynamics of limit-cycle oscillators. Art discovered that, under appropriate conditions, such oscillator populations can spontaneously synchronize. As the variance of their natural frequencies is reduced, the oscillators remain incoherent until the dispersion falls below a certain threshold. Then synchrony breaks out cooperatively in a manner reminis-