

## Volkert Leads MRS Board of Directors in 2008



Cynthia A. Volkert

On January 1, **Cynthia A. Volkert** (University of Göttingen) assumed the presidency of the Materials Research Society for 2008, after serving as vice president/president-elect for 2007. She succeeded **Alan J. Hurd** (Los Alamos National Laboratory), who now serves MRS as immediate past president.

In last fall's annual election of officers and directors, **Shefford P. Baker** (Cornell University) was elected vice president/president-elect.

### Cynthia A. Volkert

#### President

Cynthia A. Volkert is a professor at the Institute of Materials Physics at the University of Göttingen where she has been since October 2007. She studied physics at McGill University (Bachelor's degree) and Harvard University (PhD degree) and then spent 10 years as a staff member at Bell Laboratories in New Jersey. In 1999, she moved to Germany where she worked first at the Max Planck Institute for Metals Research in Stuttgart and then at the Forschungszentrum Karlsruhe, prior to moving to Göttingen.

Volkert's research is focused on stability and mechanical behavior of nanostructured materials. She has worked on structural relaxation and flow in metallic glasses, effects of ion irradiation on solids, strain relaxation in heteroepitaxial films, stress effects on optical properties of glasses, phase changes on very short time scales, mechanical properties of thin metal films, and electromigration in thin films. Most recently, she has used various micro-mechanical methods to perform *ex situ* and *in situ* investigations of deformation and dislocation dynamics in small dimensions.

In addition to her involvement in several committees, Volkert has served as MRS vice president/president-elect, secretary, treasurer, chair of the Operational Over-



Shefford P. Baker

sight Committee for the board of directors, co-Guest Editor of the May 2007 issue of *MRS Bulletin*, and has been an organizer for three symposia and a meeting chair for the 2001 MRS Spring Meeting.

### Shefford P. Baker

#### Vice President/President-Elect

Shefford P. Baker is associate professor in Materials Science and Engineering at Cornell University. After completing an undergraduate degree in music and a brief career as a professional musician and music teacher, he went back to school, receiving his PhD degree in materials science and engineering at Stanford University in 1993. He was a staff scientist at the Max Planck Institute for Materials Research in Stuttgart from 1993 to 1997 and joined the Cornell faculty in 1998.

Baker's research focuses on the unique mechanical properties of materials having microstructural or dimensional length scales in the nanometer regime. Recent achievements include discovery of a new microstructure in Ta thin films and characterization of the phase transformation that produces it, x-ray studies of stress states and relaxation in different texture components in thin metal films, dislocation dynamics simulations and analytical modeling of dislocation structures in thin layers, quantitative measurements of bonding at interfaces by time-dependent delamination experiments, and quantification of the structure-property relationships in the lamellar and interlamellar regions in trabecular bone as a function of age and vitamin D deficiency.

For MRS, Baker has organized five symposia and taught numerous tutorials, was a 2004 MRS Fall Meeting Chair, served on the Public Outreach Committee, was co-Guest Editor of the January 2002 issue of the *MRS Bulletin*, and was elected to the board of directors in 2005, where he serves



Alan J. Hurd

as chair of the External Relations Committee. He generated a project to bring 100 high school teachers to the Fall Meeting and worked with principal investigators from several major science museums to create the Nanoscale Informal Science Education (NISE) Network and to promote and define the MRS role in it.

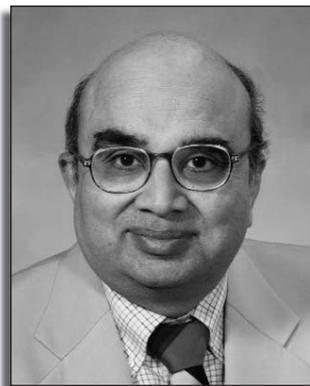
### Alan J. Hurd

#### Immediate Past President

Alan J. Hurd is director of the Lujan Neutron Scattering Center at Los Alamos National Laboratory, where he has also been deputy director of the Institute of Complex Adaptive Materials since 2004. Hurd was also the interim associate director of the Center for Integrated Nanotechnologies in 2004. Prior to joining Los Alamos in 2001, he managed materials research areas at Sandia National Laboratories. He also taught physics at Brandeis University before joining Sandia in 1984. Hurd's research interests include neutron scattering, complex fluids, and sol-gel ceramics, for which he has three awards from the Department of Energy, Basic Energy Sciences for outstanding research. He has served on advisory boards for the DOE, Basic Energy Sciences; the National Nuclear Security Agency; the National Research Council; the National Science Foundation; and various universities.

For MRS, Hurd has served as president, vice president/president-elect, treasurer, secretary, councilor, board member, Membership Committee chair, Public Outreach Subcommittee chair, chair of four task forces, and co-chair of the 1994 MRS Spring Meeting. He received the 1999 MRS Woody Award and the 2004 MRS Special Recognition Award for his activities involving Materials MicroWorld, now known as *Strange Matter*, a science exhibition that promotes public awareness and appreciation of materials science.

## Ashok, Baker, Fitzsimmons, and Joo to Chair 2008 MRS Fall Meeting



S. Ashok



Shenda M. Baker



Michael Fitzsimmons



Young-Chang Joo

The 2008 Materials Research Society Fall Meeting in Boston, December 1–5, will be chaired by S. Ashok (The Pennsylvania State University), Shenda M. Baker (Harvey Mudd College), Michael Fitzsimmons (Los Alamos National Laboratory), and Young-Chang Joo (Seoul National University). Updated information on the meeting is available at [www.mrs.org](http://www.mrs.org).

**S. Ashok** received his BE (University of Madras, 1968), MTech (Indian Institute of Technology, Kanpur, 1970) and PhD (Rensselaer Polytechnic Institute, 1978) degrees all in electrical engineering. He joined the Department of Engineering Science at the Pennsylvania State University as an assistant professor in 1978, and became a full professor in 1987. His research interests have encompassed Schottky barriers, semiconductor surface/interface modification, ion implantation/beam processing, plasma and other process-induced defects in semiconductors, and photovoltaics. In addition to his long-term focus on the use of atomic hydrogen in crystalline Si processing, he has in recent years been involved in semiconductor defect engineering and functional nanocavities in semiconductors. He is a founding co-organizer of a recurring MRS symposium on Semiconductor Defect Engineering, initiated in 1992. He also serves on many program and organizing committees of international conferences, and has collaborated frequently with industrial and government laboratories on joint research projects. He has held several sabbatical and summer appointments at universities and research laboratories around the world. Apart from the obligatory journal publications and conference presentations, his professional contributions include numerous seminars, review talks, and short courses.

**Shenda M. Baker** received a BA degree in chemistry and French from Grinnell College and a PhD degree in chemistry from the California Institute of Technology in 1991. She subsequently joined the Los Alamos National Laboratory in New Mexico as a postdoctoral researcher at the Manuel Lujan Jr. Neutron Scattering Center. In 1993, she began as an assistant professor at Harvey Mudd College in Claremont, Calif., where she became a full professor in 2004. In 1996, she was awarded a Presidential Early Career Award for Scientists and Engineers (PECASE) from the Department of Energy and a CAREER Award from the National Science Foundation. She served on the advisory board for *Chemical and Engineering News* for six years and on the NSF Mathematical and Physical Sciences Advisory Committee for three years. Baker has been active in developing methods for using neutron reflectometry to study polymer thin films under shear and for examining the behavior of diblock copolymers at a variety of interfaces. She also focuses her efforts on understanding the forces that control the formation of nanoscopic structures of amphiphilic diblock copolymers at a variety of interfaces and uses the resultant structures for directed assembly and biosensors. For the MRS, she chaired the *Strange Matter* committee since 2002 and has organized symposia and activities primarily directed toward the enhancement of undergraduate research experience and public outreach.

**Michael Fitzsimmons** received a BA degree in physics (Reed College, 1982) and MS and PhD degrees (Cornell University, 1988) in materials science and engineering. After graduation, Fitzsimmons pursued studies of nanostructured materials with synchrotron radiation in the group of J. Peisl, Ludwig Maximilians Universität

in München as a Fulbright junior research fellow. In 1990, Fitzsimmons joined the Lujan Neutron Scattering Center at Los Alamos as a postdoctorate, where since 1993 he has been a technical staff member. Fitzsimmons is responsible for operating the user program for the polarized neutron reflectometer/diffractometer Asterix, and pursues research in nanostructured magnetic materials using neutron and x-ray scattering. He is a fellow of the American Physical Society and recipient of the Los Alamos Lab Director's distinguished performance award and the LANSCE Director's Award.

**Young-Chang Joo** received a BS and MS degree in metallurgical engineering at Seoul National University in 1987 and 1989, and a PhD degree in electronic materials from the Massachusetts Institute of Technology in 1995. In 1995, he joined Max-Planck Institute for Metals Research in Stuttgart, Germany as a visiting scientist. In 1997, he joined Advanced Micro Devices, Inc. (AMD) in Sunnyvale, Calif. From 1999, he has been an assistant and associate professor of the Department of Materials Science and Engineering, Seoul National University in Seoul, Korea. Joo has been active in the study of mechanical properties, microstructure, and atomic migration of thin films and micro and nano devices. His current research interests are on the electromigration and stress-induced failures of Cu/low-*k* interconnects, materials and reliability of nonvolatile memories flexible devices, and three-dimensional integrated circuits. For MRS, Joo has organized three symposia and has been a member of the MRS Program Development Subcommittee's tutorial review group. He received an Outstanding Young Scientist Award from the Korean Institute of Metals and Materials (2004). 