



# IEEE Names Fellows for 2004

**E**ach year, a select few IEEE members are honored with the title of Fellow. The title is conferred by the IEEE Board of Directors upon a person with an extraordinary record of achievements in any of the IEEE fields of interest. A brief citation notes the accomplishments of each new Fellow.

The IEEE Board of Governors voted in 2003 to confer the title of Fellow upon 260 IEEE senior members, of whom 65 were members of the Computer Society. Senior membership status itself recognizes demonstrated achievement in engineering. As a matter of IEEE policy, the total number of



Fellows selected in any one year may not exceed one-tenth of one percent of the IEEE's total voting membership. In some cases, a Computer Society member has been named as a Fellow based upon contributions to a field other

than computing. The name of the IEEE evaluating society (if other than the Computer Society) appears after each new Fellow's citation.

Two IEEE members with no society affiliation were selected as 2004 Fellows for their contributions to computing. They are **Vijay K. Garg**, University of Texas at Austin, for contributions to distributed computing systems and discrete event systems, and **Vishvjit Singh Nalwa**, FullView Inc., for contributions to high-resolution electronically steerable video.

The Computer Society is proud to recognize among its members the following new IEEE Fellows:

## B

**Miroslav Miodrag Begovic**, Georgia Institute of Technology, for leadership in developing analysis tools and protection techniques for electric power transmission systems and renewable generation. (Power Engineering)

**Jon Atli Benediktsson**, University of Iceland, for contributions to pattern recognition and data fusion in remote sensing. (Geoscience and Remote Sensing)

**Jerome John Blair**, Bechtel, for contributions to the design and testing of analog-to-digital converters. (Instrumentation and Measurement)

**Piero P. Bonissone**, General Electric Global Research Center, for leadership in the development of artificial and computational intelligence technologies and their applications to real-world problems. (Neural Networks)

**Kim Boyer**, Ohio State University, for contributions to computer vision.

## C

**Shih-Fu Chang**, Columbia University, for contributions to digital video and multimedia technologies. (Circuits and Systems)

**Ming-Syan Chen**, National Taiwan University, for contributions to algorithms for query processing and data management in parallel and distributed systems.

**Philip A. Chou**, Microsoft, for contributions to variational methods in information theory, signal processing, and compression. (Signal Processing)

## D

**Frederica Darema**, National Science Foundation, for contributions to the programming of parallel and distributed computers.

**Serge N. Demidenko**, Massey University, for contributions to electronic testing. (Instrumentation and Measurement)

**Bart L.R. De Moor**, Catholic University Leuven, for contributions to algebraic and numerical methods for systems and control. (Control Systems)

**Atam P. Dhawan**, New Jersey Institute of Technology, for contributions to optical imaging of skin lesions and multimodality medical image analysis. (Engineering in Medicine and Biology)

**John McG Dobbs**, Analog Corp., for

contributions to CT scanners and biomedical instrumentation. (Instrumentation and Measurement)

**Edmund Durfee**, University of Michigan, for contributions to distributed artificial intelligence, multiagent systems, and real-time intelligent control.

## E

**Joel S. Emer**, Intel, for contributions to computer architecture and quantitative analysis of processor performance.

## F

**James Farmer**, Wave 7 Optics, for technical leadership in the cable television industry. (Consumer Electronics)

**Aly E. Fathy**, University of Tennessee, for contributions to advanced antenna concepts and implementations. (Microwave Theory and Techniques)

**Hiromu Fujioka**, Osaka University, for contributions to electron beam testing of semiconductor devices and circuits. (Electron Devices)

## G

**Forouzan Golshani**, Arizona State University, for contributions to the field of multimedia information systems.

**William Eric Leifur Grimson**, Massachusetts Institute of Technology, for contributions to surface reconstruction, object recognition, image database indexing, and medical applications.

**Rajesh K. Gupta**, University of California, San Diego, for contributions to high-level synthesis and computer-aided design of digital circuits and systems.

**Graham Reginald Hellestrand**, VaST Systems, for contributions to computer system architecture simulations. (Circuits and Systems)

**William Evan Higgins**, Pennsylvania State University, for contributions to three-dimensional medical imaging and processing. (Engineering in Medicine and Biology)

**Hajime Ishikawa**, Fujitsu Laboratories, for technical leadership in the development of high-performance Si and GaAs devices and circuits. (Electron Devices)

**Pankaj Jalote**, Indian Institute of Technology, Kanpur, for contributions to software process improvement, fault-tolerant computing, and software engineering education.

**Dilip Dinkar Kandlur**, IBM T.J. Watson Research Center, for contributions to the development of quality of service in networks and network servers.

**Daniel Koditschek**, University of Michigan, for contributions to the theory and practice of robotics and intelligent systems. (Robotics and Automation)

**Jack N. Little**, Math Works, for leadership in the development of engineering software for technical computing. (Control Systems)

**Hans-Andrea Loeliger**, Swiss Federal Institute of Technology, for contributions to group codes, iterative decoding, and analog implementation of decoders. (Information Theory)

**Michael Rung-Tsong Lyu**, Chinese University of Hong Kong, for contri-

butions to software reliability engineering and software fault tolerance.

**Koso Murakami**, Osaka University, for contributions to switching technologies and systems for broadband communications networks. (Communications)

**Yukihiro Nakamura**, Kyoto University, for contributions to very large-scale integration synthesis methodologies. (Circuits and Systems)

**Bjorn Erik Ottersten**, Royal Institute of Technology, Sweden, for contributions to antenna signal processing and wireless communications. (Signal Processing)

**Krishna Palem**, Georgia Institute of Technology, for contributions to embedded computing.

**Raymond Paul**, US Department of Defense, for contributions to metrics-guided testing and evaluation of software systems.

**Sanjoy Paul**, Bell Laboratories, for contributions to the design and development of communication network protocols. (Communications)

**Ron H. Perrott**, The Queen's University of Belfast, for contributions to the design and implementation of programming languages of parallel and distributed computers.

**S. Ramadorai**, Tata Consultancy Services, for leadership in the development of multidisciplinary software solutions. (Engineering Management)

**Robert Cornelius Rassa**, Raytheon, for contributions to automated system testing. (Instrumentation and Measurement)

**Peter Irvin Scheuermann**, Northwestern University, for contributions to logical and physical database design.

**M. Ibrahim Sezan**, Sharp Laboratories, for technical leadership in digital image and video processing. (Signal Processing)

**Ghavam G. Shahidi**, IBM Micro-

electronics, for contributions to silicon-on-insulator technology products. (Electron Devices)

**Gurindar Singh Sohi**, University of Wisconsin, for contributions to thread-level speculation in computer architecture.

**Alfred Spector**, IBM T.J. Watson Research Center, for leadership in reliable, scalable distributed computer systems.

**Jaideep Srivastava**, University of Minnesota, for contributions to the development of models and metrics for multimedia information processing.

**Leon Stok**, IBM T. J. Watson Research Center, for the development and application of high-level and logic synthesis algorithms. (Circuits and Systems)

**Douglas Strain**, for leadership in the development of automated test and calibration systems. (Instrumentation and Measurement)

**Michael G. Strintzis**, University of Thessaloniki, for contributions to digital filtering, image processing, and coding. (Circuits and Systems)

**Christer M. Svensson**, Linkoping University, for contributions to single-phase clocking and high-speed CMOS circuits. (Solid-State Circuits)

**Wim Sweldens**, Bell Laboratories, for contributions to multiresolution methods for image and 3D geometry compression.

**Tieniu Tan**, Chinese Academy of Sciences, for contributions to pattern recognition research and applications.

**Yuan Yan Tang**, Hong Kong Baptist University, for contributions to wavelet analysis to pattern recognition and document analysis. (Systems, Man, and Cybernetics)

**David L. Tennenhouse**, Intel, for leadership in the development of active networks.

**Stuart K. Tewksbury**, Stevens Institute of Technology, for contributions to telecommunications and interconnections in high-performance digital systems. (Components, Packaging, and Manufacturing Technology)

**Osamu Tomisawa**, Mitsubishi, for contributions to low-power, high-speed integrated circuits. (Solid-State Circuits)

**Josep Torrellas**, University of Illinois at Urbana-Champaign, for contributions to shared-memory multiprocessors.

#### W

**Michael Waidner**, IBM Zurich Research Laboratory, for contributions to the theory and practice of information security, privacy, and cryptography.

**Steven J. Wallach**, Chiaro Networks, for contributions to high-performance computing.

**DeLiang Wang**, Ohio State University, for contributions to advancing oscillatory correlation theory and its application to auditory and visual scene analysis. (Neural Networks)

**Mark Wegman**, IBM T.J. Watson Research Center, for contributions to the design, implementation, and analysis of algorithms and compiler technology.

**David Wood**, University of Wisconsin-Madison, for contributions to the design and evaluation of shared-memory multiprocessors.

**Cheng-Wen Wu**, National Tsing Hua University, for contributions to design and test of array structures.

#### Y

**Daniel So Yeung**, Hong Kong Polytechnic University, for contributions to sensitivity analysis of neural networks and fuzzy expert systems. (Systems, Man, and Cybernetics)

#### Z

**Hong-Jiang Zhang**, Microsoft, for contributions to media computing and leadership in content-based visual media analysis, retrieval, and browsing. (Circuits and Systems)

**Albert Y. Zomaya**, University of Sydney, for contributions to the solution of scheduling problems in parallel computing systems.

### ***Computing in Science & Engineering* Seeks Editor in Chief**

The IEEE Computer Society and the American Institute of Physics are soliciting applications for a volunteer to serve as editor in chief of *Computing in Science & Engineering*. *CiSE* aims to reach across disciplines using the lingua franca of computation.

The *CiSE* Search Committee seeks nominations from the science and engineering community for candidates suitable for the post. Each applicant should submit a package that includes a letter of employer support, a vision statement that details a proposed leadership plan for the magazine, and a resume that lists publications and editorial experience.

The two-year editor-in-chief term will begin in January 2005. All application materials must be received by **15 March**.

Direct all nominations, inquiries, and application materials to Norman Chonacky, Chair, *CiSE* EIC Search Committee, Department of Earth and Environmental Engineering, Columbia University, Room 918 Mudd—Mail code 4711, 500 West 120th St., New York, NY 10027; [chonacky@columbia.edu](mailto:chonacky@columbia.edu).

Further application requirements are detailed at [www.computer.org/pr/Jan04/cise\\_eic.htm](http://www.computer.org/pr/Jan04/cise_eic.htm).

### **IEEE Foundation Solicits Grant Proposals for 2004**

The IEEE Foundation, the philanthropic arm of the IEEE, is soliciting proposals for grants to be awarded in mid-2004. Proposals should be for projects that

- improve education in mathematics, science, and technology from pre-college through continuing education;
- preserve, study, or promote the history of IEEE-associated technologies;
- recognize major contributions to these technologies; or
- promise a major contribution to communities served by the IEEE.

At its November meeting, the IEEE Foundation awarded \$138,500 in new grants, bringing the total for 2003 to more than \$400,000. This included a \$130,000 grant to the IEEE History Center for the operation of the IEEE Virtual Museum during 2004 and 2005. The IEEE Virtual Museum is devoted to helping pre-college students appreciate technology from a social and historical perspective.

The IEEE Foundation also awarded \$26,035 to Indiana University-Purdue University in Indianapolis for a pre-college program, *Introducing Robotics to K12*, in which students learn problem-solving skills by using Lego robotic toys to create working prototypes.

To view a full list of the grants awarded in 2003, visit [www.ieee.org/organizations/foundation/html/2003grants.html](http://www.ieee.org/organizations/foundation/html/2003grants.html). For information and guidelines on IEEE Foundation grants, visit [www.ieee.org/foundation](http://www.ieee.org/foundation).

Early 2004 grant proposal abstracts are due **12 March**, and full proposals are due by **23 April**. For consideration later in 2004, abstracts are due by **6 August**, and proposals by **17 September**.