Computer Society programs and services continuously attract leading professionals in the computing field. Last year, the groundwork was laid for new Society publications such as IT Professional and the merged title Computing in Science & Engineering. The Member Digital Library Subscription, which allows members online access to 18 of the Society's magazines and transactions for one price, made its debut in 1998. Last year, we also initiated partnerships with organizations in Eastern Europe, the former Soviet Union, China, Germany, France, and Japan (see the sidebar, "Partnership Encourages Cross-Society Participation"), renewing our commitment to serve as the world's computer society. Professionals from around the world responded: Nearly every one of our 10 geographic regions showed growth in membership. In just three years, the Society showed a net gain of close to 10,000 members, and by the end of 1998, the Society served 99,343 professionals.

IEEE. The IEEE ended 1998 with a record 334,811 members, surpassing even the growth in 1984, the Institute's centennial year. While the IEEE grew by 4.7 percent in 1998, the Society grew by 7.2 percent, making it the fifth-fastest-growing society of the IEEE. The Computer Society remains the largest of the IEEE's 36 technical societies, representing 21 percent of the Institute's total membership.

STUDENTS
Recognizing that the brightest engineering minds of tomorrow are the students of today, the IEEE reduced the student member rate substantially. As a result, 1998 saw a dramatic increase in the number of student members, in both the IEEE and the Computer Society. All Society student members receive the benefits of IEEE membership, including investment opportunities and travel discounts in addition to special awards, newsgroups, and the student magazine IEEE Potentials. Rates were changed from $28 to $19 per year in the US and Canada and from $20 to $14 in all other regions. (Students in the US and Canada receive IEEE Potentials as part of their dues; other student members may subscribe for $5 a year.)

Subscriptions to the Society's library subscription plan continued to grow: A 16.7 percent increase in libraries subscribing to the package of 18 periodicals was recorded in 1998. This year, libraries can allow their patrons full access to our digital library, in addition to subscribing to 18 titles in print.

Internet Computing, the Society's two-year-old magazine for designers and developers of Internet technologies, marked a 60 percent increase in institutional subscribers. Three transactions titles and the magazine IEEE Computational Science and Engineering (now printed in conjunction with the American Institute of Physics as Computing in Science & Engineering) also showed significant library subscription increases.

SUBSCRIPTIONS
The Member Digital Library Subscription proved a welcome offering—this new program started off strong and gained popularity over the course of the year. New members especially are taking advantage of electronic or combination print-and-electronic subscriptions, also available for the first time in 1998.

Members often report that they join the Computer Society to receive the accurate, current technical information on which the Society has built a reputation. Through new periodicals, targeted conferences, and changes to existing publications and programs, we endeavor to respond to members' professional needs. In 1999 as in 1998, we continue to strive toward that goal. ✤
Two Presented Technical Achievement Awards

The Computer Society presented Technical Achievement Awards to S. Sitharama Iyengar, professor and chair of the department of computer science at Louisiana State University, and K.H. (Kane) Kim, professor of computer engineering and computer science at the University of California at Irvine.

Iyengar established his reputation on his research in the design and analysis of efficient data structuring techniques for image processing and compression. Kim's areas of expertise are fault-tolerant distributed and parallel computer systems, and real-time software systems.

S. Sitharama Iyengar

The director of the Robotics Research Laboratory since its inception in 1986, Iyengar's research interests include autonomous intelligent systems and high-performance algorithms for parallel and distributed processing. He has authored or coauthored more than 220 scientific publications and several textbooks that discuss data structures for image processing and pattern recognition, autonomous navigation, and distributed sensor networks. He received an MS from the Indian Institute of Science in 1970 and a PhD from Mississippi State University in 1974.

A decorated lecturer and LSU distinguished faculty member, Iyengar has received a teaching fellowship from the California Institute of Technology's Jet Propulsion Laboratory, and the Williams Evans Fellowship from the University of Otago, New Zealand. He has served as a visiting professor at the Oak Ridge National Laboratory and the Indian Institute of Science. As an IEEE Computer Society Distinguished Visitor, he spoke on the state of the art in distributed sensor networks, which combine disparate signals from infrared sensors, microwave radars, and laser radars to provide data for defense professionals, among others.

Kane Kim

Over the past 25 years, Kane Kim has conducted research on methods for dependable computing and object-oriented software engineering. Kim originated the Distributed Recovery Block technique and several other basic approaches for cost-effective design of ultra-reliable fault-tolerant, real-time, distributed and parallel computer systems. The primary developer of the TMO (time-triggered message-triggered object) structuring scheme (also called RT0.K), Kim is also credited with developing the DREAM kernel, a prototype OS kernel providing guaranteed timely services.

In the mid-1980s, Kim founded the University of California at Irvine's DREAM Laboratory, which conducts research in distributed real-time ever...
available microcomputing. Under Kim’s direction the Dream Lab, equipped with three advanced parallel and distributed computing testbeds, evaluated TMO-structured real-time system engineering and other techniques for fault tolerance in distributed and parallel real-time computer systems.

A Fellow of the IEEE since 1989, Kim’s Fellow citation reads, “for contributions to the field of fault-tolerant distributed computing.” An active volunteer in the Computer Society, he founded the Society’s Workshop on Object-Oriented Real-Time Dependable Systems (WORDS) and International Symposium on Object-Oriented Real-Time Distributed Computing (ISORC) conference series. His other positions within the Society include past chair of the Technical Committee on Distributed Processing and founding Editorial Board member of IEEE Transactions on Parallel and Distributed Systems. Kim cofounded KOCSEA, the Korean Computer Scientists and Engineers Association in America, in 1982 and served as that association’s president in 1991.

He received a BS in 1969 from Seoul National University, an MA in 1972 from the University of Texas at Austin, and a PhD in 1974 from the University of California at Berkeley.

Iyengar and Kim were presented their awards at a ceremony during the November 1998 Board of Governors meeting in Los Angeles. Iyengar’s citation reads, “for outstanding contributions to data structures and algorithms for image processing and signal/sensor fusion problems.” Kim’s award was given in recognition of “outstanding contributions to the scientific foundation for both real-time fault-tolerant computing and real-time object-oriented distributed computing.”

The IEEE Computer Society Technical Achievement Award is given for exemplary and innovative contributions to the fields of computer and information science and engineering or computer technology. The award recognizes achievements that took place usually within the past 10 years, but not more than 15 years in the past. Nominations are accepted until mid-September. For more information on the Technical Achievement Award or any Computer Society honors, see http://computer.org/awards/awards.htm.

IEEE Top Honor Winner Named

In recognition of his contributions to power engineering systems, Charles Concordia was named the 1999 IEEE Medal of Honor winner. The Medal of Honor, given by the Institute of Radio Engineers since 1917 and by the IEEE since its formation in 1963, is the most prestigious of the Institute’s 40 individual awards, recognizing pioneering work in engineering.

Conordia’s citation reads, “for outstanding contributions in the area of power system dynamics which resulted in substantial improvements in planning, operating, and security of extended power systems.” Concordia, a consulting electric power engineering lecturer in Venice, Florida, was the founding chair of the American Institute of Electrical Engineers’ Subcommittee on Large-Scale Computing in 1946. This subcommittee formed the basis of the IEEE Computer Society.

Given 78 times over the past 82 years, the Medal of Honor recognizes only those who have attained preeminence in engineering. Previous honorees include George H. Heilmeier, Robert M. Metcalfe, Lotfi A. Zadeh, William Shockley, Robert N. Noyce, Claude E. Shannon, F.E. Terman, and Guglielmo Marconi. Consisting of a gold medal, bronze replica, certificate, and $35,000 honorarium, the medal is sponsored by the IEEE Foundation.

IEEE RECOGNIZES 13 OTHER LEADERS

Two corporations and 13 engineers from Canada, the Netherlands, Japan, and the US have also been recognized for their achievements.
Educational Leader Michael C. Mulder Dies

Michael C. Mulder, a leader in academia and industry and an active volunteer in professional associations, passed away in January of cancer.

Mulder was the founding dean and a professor of computer science and engineering at the College of Information Science and Technology of the University of Nebraska at Omaha. An IEEE senior member and a member of the ACM, Mulder represented the Computer Society as the IEEE division V director and served the Society as treasurer, first vice president for education, and member of the Board of Governors. He served as editor-in-chief of Computer and was active on the Publications Board.

Mulder’s research areas included the design and development of computing systems, computer architecture, and robotics. His robotics work focused on adaptive control models for multijointed, multilimbed robots.

Before entering academe, Mulder held industry posts at Sperry Univac and Servio Logic. A senior corporate consultant to Boeing since 1983, he also served in advisory capacities to the NSF, NASA, and several US states.

A Personal Remembrance of Mike Mulder

Mike’s death is a loss to the profession. More significantly, many of us have lost a great friend. We were all shocked to hear the news. Mike told very few outside of his immediate family of his illness. According to his wife, Carol, Mike worried that knowledge of his illness would burden his friends and might negatively impact his work at the University of Nebraska at Omaha and for NSF and other professional and civic activities. To those of us who had the privilege to work with him on many projects, this is no surprise. Mike always gave all of himself to any activity that he undertook.

We first met Mike when he chaired the task force that developed the first Model Curricula for Computer Science and Engineering. At the time, Mike was working in industry, but his dedication to education was apparent. The task force report had a significant impact on the development of computer science and engineering programs worldwide.

Mike made major contributions to subsequent model curricula and the task force report “Design Education in Computer Science and Engineering,” which established design as a central component of all computing programs.

Mike was also a member of the joint IEEE-CS/ACM task force that led to the creation of the Computing Sciences Accreditation Board (CSAB).

He was an initial member of the board and a longtime team chair. CSAB, too, has had a major impact on the quality of computer science education. In addition, Mike served on the first steering committee of the highly successful National Educational Computer Conference. NECC is now a major forum for information interchange among educators, at both the high school and the college level.

Mike served as one of the directors of the NSF-sponsored project, “Educating the Next Generation of Information Specialists in Collaboration with Industry.” This project seeks to specify an industry-developed Profile of the Graduate to create a curriculum that prepares students to work together to develop large information systems.

Although his tenure as a dean at UNO was brief, Mike had already had a significant impact. According to Derek Hodgson, UNO’s vice chancellor for academic affairs, “Dean Mike Mulder was a creative and innovative colleague whose leadership as the founding dean of the College of Information Science and Technology had brought the University of Nebraska at Omaha to new technological heights. Mulder’s vision for the new Peter Kiewit Institute for Information Science, Technology, and Engineering [where he served as co-dean] was an inspiration to us all and will continue to serve as the road map for the future development of the institute. He will be sorely missed, but his legacy will live on.”

At the time of his death he had just been elected to the board of IEEE-USA and was recently one of the representatives of Computer Society members on the IEEE Board of Directors. Once again, in that role he worked tirelessly to build consensus on many difficult issues.

Mike gave his friendship, his time, his energy, and his devotion to his profession for almost three decades. His love of education and his continual efforts to improve the quality of computer education will long be remembered. We have all lost a good friend in Mike, and we will long remember his upbeat smile, his warm disposition, his compassion for others, and his unfailing energy. All of these things made him an ideal volunteer leader and a lifelong friend. While he may not be with us, he has taught us all that life is much more than the technology we deal with: It is the human beings with whom we interact that are most important, and those interactions determine how we will all be remembered. In this way, Mike will long be with us.

— Tom Cain and Ronald G. Hoelzeman, University of Pittsburgh, Computer Society volunteer leaders
purposes, BBN Technologies and the Nokia Corporation were selected to receive the IEEE Corporate Innovation Recognition. BBN’s citation reads, “for pioneering contributions to computer networking technology through the development of the first packet switches, the ARPANET Interface Message Processor (IM P), and Terminal Interface Message Processor (TIP).” Nokia’s honor is “for creation of a new class of integrated communication devices as exemplified by the Nokia 9000 Communicator, and for leadership in the development of cellular network systems.” Their awards will be presented at a special luncheon in New York later this year.

Computer Society members are among the 13 to be honored with IEEE awards for 1999. David G. Messerschmitt will receive the IEEE Alexander Graham Bell Medal “for fundamental contributions to communications theory and practice, including VLSI for signal processing, and simulation and modeling software.” Andries Van Dam’s IEEE James H. Mulligan Jr. Education Medal is in recognition of “his field-defining textbooks, the introduction of innovative educational technology, and inspired undergraduate teaching.” Douglas C. Engelbart, the IEEE John von Neumann Medal winner, is honored “for creating the foundations of real-time, interactive, personal computing including CRT displays, windows, the mouse, hypermedia linking and conferencing, and online journals.” Finally, as reported in the January issue of Computer, Edward A. Parrish will receive the IEEE Richard M. Emberg Award. These awards, along with Concordia’s Medal of Honor, will be presented at the annual IEEE Honors Ceremony scheduled for 12 June in London.

1998 Taulbee Survey Results