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Contacts

Virginia Gold
ACM
212-626-0505
vgold@acm.org

Ramesh Govindan
ACM SIGCOMM
213-740-4509
ramesh@usc.edu

INTEL RESEARCHER HONORED FOR CONTRIBUTIONS TO COMPUTER NETWORKING

Radia Perlman Wins ACM SIGCOMM Award for Pioneering Advances in Internet Communication

NEW DELHI, July 22, 2010 - Radia Perlman, an Intel Fellow, has been awarded the highest honor from ACM's Special Interest Group on Data Communications (SIGCOMM) **http://www.sigcomm.org** for pioneering contributions to Internet routing and bridging protocols. Perlman was cited for her work on spanning tree bridging algorithms and link state routing algorithms, advances that have made the Internet more scalable and robust. She will receive the award and deliver the keynote address at the ACM SIGCOMM conference on August 31, in New Delhi, India **http://conferences.sigcomm.org/sigcomm/2010/** .

In a career spanning more than three decades, Perlman has generated two ideas that changed the world. Her work on improving the convergence and stability properties of link state routing has been incorporated into routing protocols, which are used to route Internet traffic in large enterprises and Internet Service Providers (ISPs). She is equally famous for her invention of spanning tree protocols, which are based on algorithms she developed that construct "spanning trees" along which traffic is routed, thus ensuring reliability of Internet bridging devices that are necessary for efficient Internet communication. Perlman's invention allows a network design to include spare (redundant) links to provide automatic backup paths if an active link fails. To this day, these algorithms are used in most Internet switching devices.

Recently, Perlman's work has taken on added significance with the emergence of "cloud computing," which relies on data centers that store information in the cloud. The data centers are often designed using switching components that incorporate her algorithms. Perlman has also

built a prodigious portfolio as an inventor, authoring or co-authoring some 98 patents, an unusual achievement for individuals in industry.

Perlman has been responsible for educating a generation of engineers. Her book, *Interconnections*, is a classic reference on Internet routing and switching, and has sold well over 50,000 copies. Her second book *Network Security* (of which she is a co-author) is well on its way to becoming a classic in the security field. Both books rank among the top 10 networking reference books according to *Network Magazine*. She has also delivered more than 100 lectures and seminars on these topics, helping budding engineers learn the concepts underlying complex Internet protocols.

In 2006, Perlman won the Usenix Lifetime Achievement award. She was named one of the 20 most influential people in information technology by *Data Communications Magazine* in both its 20th and 25th anniversary editions. She was also awarded an honorary Ph.D. by the Swedish Royal Institute of Technology (KTH), an honor granted only once every five years.

Perlman is a graduate of the Massachusetts Institute of Technology, and holds S.B and S.M. degrees in Mathematics, and a Ph.D. in Computer Science. Prior to joining Intel, she worked at Sun Microsystems, Novell Inc., Digital Equipment Corporation, and BBN Technologies.

About SIGCOMM
The ACM Special Interest Group on Data Communications **www.acm.org/sigs/sigcomm** provides a forum for computing professionals in the vital field of data communication. It focuses on network architecture, network protocols, distributed systems and publications. SIGCOMM co-sponsors the *ACM/IEEE Transactions on Networking*, a quarterly journal, with the IEEE. SIGCOMM also co-sponsors world-class conferences and publishes the quarterly newsletter *Computer Communication Review (CCR)*, which includes SIGCOMM's annual conference proceedings.

About ACM
ACM, the Association for Computing Machinery **www.acm.org,** is the world's largest educational and scientific computing society, uniting computing educators, researchers and professionals to inspire dialogue, share resources and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

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