

# Radia Perlman

Lead Technologist & EMC Industry Fellow  
EMC Corporation



Some technologists may know of Radia Perlman for her foundational IT work in developing routing algorithms and spanning trees. Others may have learned the field from her textbooks. If you've never heard her name before, just try Google!

Radia has joined EMC's Office of the CTO as our first-ever industry Fellow. Her mission is to evangelize EMC's federated vision of the future and guide technologists towards that vision through a variety of programs: Portfolio Intelligence, External Research, Innovation, Intellectual Property, and Advanced Development. In her role, Radia will impact the future design of networks, storage, security, trusted infrastructure, and more.

Her work has had major impact on how computer networks work today. Her inventions in network routing makes today's Internet more robust, scalable, and self-configuring. Her spanning tree algorithm transformed Ethernet from something that could support just a few hundred nodes within a building to something that can support hundreds of thousands of nodes. More recently, she invented TRILL, a technology that removes the data path restrictions in Ethernet so that data can travel over shortest paths, multiple paths, and use traffic engineering. She has also made major contributions to network security; making networks robust even if some of the components are malicious, DDOS (distributed denial of service) defense, authentication, authorization, and time-based guaranteed expiration of data from storage. She is the author of "Interconnections: Bridges, Routers, Switches, and Internetworking Protocols", and coauthor of "Network Security: Private Communication in a Public World", both of which are popular textbooks. She holds over 100 issued patents. She has received numerous industry awards including her recent election to the National Academy of Engineering (NAE), lifetime achievement awards from both ACM's SIGCOMM and Usenix, the first recipient of the Anita Borg Women of Vision award for Innovation, Inventor of the Year from SVIPLA, and an honorary doctorate from KTH (Royal Institute of Technology, Sweden). She has a PhD in computer science from MIT.