

Jain named Cox Professor in Computer Science

By *Beth Miller* • June 7, 2016



Raj Jain (center) was installed May 24 as the Barbara J. and Jerome R. Cox Jr. Professor in Computer Science. Joining him at the installation celebration were Dean Aaron Bobick (left) and Jerry Cox. (Photo: Ray Marklin/School of Engineering & Applied Science)

Raj Jain has been named the Barbara J. and Jerome R. Cox Jr. Professor in Computer Science at Washington University in St. Louis. He was installed May 24.

Jain is a professor of computer science and engineering in the School of Engineering & Applied Science, where he has been on the faculty since 2005. Previously, he was on the faculty at Ohio State University and worked in industry as co-founder and chief technology officer at Nayna Networks Inc. in Milpitas, Calif., and as senior consulting engineer at Digital Equipment Corp. in Littleton, Mass.

“Jerry Cox has made tremendous contributions to Washington University, as a generous benefactor and as a valued and longtime faculty member,” Chancellor Mark S. Wrighton said. “I am deeply grateful for the professorship that he and Barbara established in the School of Engineering & Applied Science and for the

opportunity to recognize a highly accomplished faculty member such as Raj Jain.”

“Jain has had a prolific career in numerous areas of computer science that we use daily and he continues to be innovative and relevant in his research,” said Aaron F. Bobick, dean of the School of Engineering & Applied Science and the James M. McKelvey Professor. “I thank Jerry and Barbara for their generosity in establishing this professorship that allows such world-renowned work to continue to take place in our Department of Computer Science & Engineering.”

Jain’s research interests include inter-cloud and multi-cloud computing, architecture for the next-generation Internet, wireless for unmanned aircraft systems, wireless emergency communications, aeronautical wireless datalink, energy and sustainability, resource management in wireless networks, mobile video modeling, network security, congestion control and traffic management, energy-efficient protocols, performance analysis, and modeling and simulation.

Jain is a fellow of the Institute of Electrical and Electronics Engineers (IEEE), the Association for Computing Machinery (ACM) and the American Association for the Advancement of Science (AAAS). He has received numerous awards, including the 2015 A. A. Michelson Award from Computer Management Group; the 2015 IISc Distinguished Alumnus Award from the Indian Institute of Science Alumni Association; the Center for Development of Advanced Computing–Advanced Computing and Communications Society (CDAS-ACCS) Foundation Award in 2009; the WiMAX Forum Individual Contribution Award in 2008; and the SIGCOMM Test of Time award in 2006. He ranks among the top 90 in CiteSeerX’s list of the most cited authors in computer science.

Jain holds 14 patents and is co-inventor of the DECbit scheme, which has been implemented in various forms in DECnet, OSI, Frame Relay and ATM networks. His team also has developed several switch algorithms for explicit rate-based congestion avoidance in ATM networks. In addition, he has written or edited 12 books, 17 book chapters, more than 70 journal and magazine papers and more than 110 conference papers. Google Scholar lists more than 22,500 citations to his publications.

Jain maintains a website on the latest advances in networking that is used extensively in industry and academia and has won a Top Excellence Award for its usefulness. His class lectures, and most external lectures, have been videotaped and are available for streaming. These lectures are regularly viewed by students from all over the world, particularly in developing countries.

Jain earned a doctorate in applied math and computer science from Harvard University; a master's degree in computer science and controls from the Indian Institute of Science in Bangalore, India; and a bachelor's degree in electrical engineering from APS University in Rewa, India.

About Jerome Cox

Cox joined Washington University's faculty in 1955 and has since contributed significantly to the areas of biomedical computing, multimedia communications and computer networking. The integrating theme of his research has been the application of advanced technology to practical biomedical problems.

His pioneering work in radiation treatment planning paved the way for systems in worldwide operation. Computer methods his research team developed for reconstructing images from CT and PET scanners aid in the diagnosis of cancers and cardiovascular disease. His innovations were instrumental in developing early monitors for heart rhythm disturbances. He also has worked on computer applications in mapping the human genome and in electronic radiology.

Cox was instrumental in building a department that has an international reputation for biomedical computing applications and computer networking. With two colleagues, he founded Growth Networks, a company acquired by Cisco that produced an advanced networking chip set, and, in 2007, he started a new company, Blendics (Blended Integrated Circuit Systems), that provides system-on-chip design tools and services to companies that wish to develop complex, proprietary, low-power integrated circuits.

Cox earned bachelor's, master's and doctoral degrees in electrical engineering from Massachusetts Institute of Technology. He is a member of the National Academy of Science's Institute of Medicine, and a fellow of the Acoustical Society of America and the IEEE. The Harold B. and Adelaide G. Welge Professor of Computer Science at Washington University from 1989-1998, he was awarded the honorary doctor of science in 2001.

His honors also include the 2011 Chancellor's Award for Innovation and Entrepreneurship, which he received along with Jonathan Turner, the inaugural Barbara J. and Jerome R. Cox Jr. Professor of Computer Science. That same year, he was recognized with the School of Engineering & Applied Science's Dean's Award.

Over the years, Cox and his wife, Barbara, who passed away in 2006, have

contributed generously to Washington University. Cox is now encouraging others to do the same in his role as a volunteer for *Leading Together: The Campaign for Washington University*.

The School of Engineering & Applied Science focuses intellectual efforts through a new convergence paradigm and builds on strengths, particularly as applied to medicine and health, energy and environment, entrepreneurship and security. With 88 tenured/tenure-track and 40 additional full-time faculty, 1,300 undergraduate students, more than 900 graduate students and more than 23,000 alumni, we are working to leverage our partnerships with academic and industry partners — across disciplines and across the world — to contribute to solving the greatest global challenges of the 21st century.

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