



IEEE Okanagan Subsection

Presents

Dr. Andrea Goldsmith

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The Next Wave in Wireless Technology: Challenges and Solutions



Date: Tuesday, July 13, 2010

Time: 4:00 PM - 5:00 PM

Place: UBC Okanagan, Room SCI 337

Talk Abstract: The demand for wireless communications has enjoyed exponential growth worldwide for decades, and looks to continue unabated into the foreseeable future. To meet these demands, the next generation of high-performance wireless networks must support a significant increase in data rates, better coverage and reliability, greater spectral efficiency, and lower energy consumption in both the infrastructure and the terminals. In addition, applications such as sensor networks, smart structures, and bioengineering need extreme energy efficiency as well as new wireless networking paradigms. Overcoming these technical challenges will require significant breakthroughs in wireless component and system design, as well as cross-layer optimization between applications and their underlying networks. This talk will describe these design challenges along with recent innovations in wireless technology that may provide the solutions.

Speaker Biography: Andrea Goldsmith is a professor of Electrical Engineering at Stanford University, and was previously an assistant professor of Electrical Engineering at Caltech. She is also founder of Quantenna Communications, Inc., and has previously held industry positions at Maxim Technologies, Memorylink Corporation, and AT&T Bell Laboratories. Dr. Goldsmith is a Fellow of the IEEE and of Stanford, and she has received several awards for her work, including co-recipient of the IEEE Communications Society and Information Theory Society joint paper award, winner of the National Academy of Engineering Gilbreth Lecture Award, and the Silicon Valley/San Jose Business Journal's Women of Influence Award.



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Speaker Biography (Con't): She currently serves as Associate Editor for the IEEE Transactions on Information Theory and as Editor for the Journal on Foundations and Trends in Communications and Information Theory and in Networks. She was previously an editor for the IEEE Transactions on Communications and for the IEEE Wireless Communications Magazine. Dr. Goldsmith is active in committees and conference organization for the IEEE Information Theory and Communications Societies and has served on the Board of Governors for both societies, is president of the IEEE Information Theory Society, the founding chair of its student society, as well as a Distinguished Lecturer for the IEEE Communications Society. At Stanford she received the university postdoc mentoring award and is currently the chair of the faculty Senate. Dr. Goldsmith has authored the book "Wireless Communications" and co-authored the book "MIMO Wireless Communications," both published by Cambridge University Press. Her research includes work on wireless communication and information theory, MIMO systems and multihop networks, cross-layer wireless system design, and wireless communications for distributed control. She received the B.S., M.S. and Ph.D. degrees in Electrical Engineering from U.C. Berkeley.