

Viterbi
Keynote



Dr. Arogyaswami Paulraj

Professor of Electrical Engineering, Emeritus
Stanford University

*"Big Ideas in Mobile Wireless Technology:
Many are Called, but Only Some are Chosen"*

Thursday, February 29, 2024

Reception 2:00 PM

Lecture 3:00 PM

Hosted by

Dr. Richard Leahy

Hughes Aircraft Electrical Engineering Building Courtyard

Hughes Aircraft Electrical Engineering Building (EEB 132)

This talk takes a panoramic view of the evolution of mobile wireless technology from 2G to 5G. The research community has put forth several significant ideas, but only some (as of yet) have actually made it into mobile standards.

This talk takes a somewhat simplistic (but hopefully accessible) view of these ideas and outlines the complex tradeoffs that pick winners and losers.

Paulraj is an Emeritus Professor at Stanford University and a pioneer of MIMO (Multiple Input, Multiple Output) wireless, the key technology adopted in all modern wireless systems.

Paulraj served for 25 years with the Indian Navy, leading programs in ASW Naval sonar systems for a decade and, for shorter periods, other major Indian national initiatives in AI, high-speed computing, and combat jet aircraft. He received a Ph.D. from the Indian Institute of Technology, New Delhi, India, in 1973. After prematurely retiring from the Navy in 1991, Paulraj joined Stanford University as a research associate.

Paulraj founded Iospan Wireless Inc., which pioneered MIMO-OFDMA wireless technology. He co-founded Beceem Communications Inc., which became the leader in 4G-WiMAX chip sets. And later, he founded Rasa Networks for AI-based WiFi network analytics. These companies were acquired by Intel, Broadcom, and HPE, respectively.

Paulraj's recognitions include the 2023 IET Faraday Medal, the 2014 Marconi Prize, the 2011 IEEE Alexander Graham Bell Medal, the 2018 Induction into the US Patent Office's National Inventors Hall of Fame, and the 2022 Induction into the Wireless History Foundation's Hall of Fame. He is a member of ten national academies spanning engineering, the sciences, and the arts.

His recognitions also include the Friendship Award from the Government of PR China and the Padma Bhushan from the Government of India.

