



**BHARTI SCHOOL OF TELECOMMUNICATION TECHNOLOGY AND
MANAGEMENT, IIT DELHI**

AIRTEL LECTURE 2017

Date: 17th July, 2017

**Venue: Bharti School of Telecommunication Technology and Management,
IIA 101, Ground Floor, IIT Delhi**

Timing: 4.00 PM – 5.00 PM

“Disruption in 5G Cellular Systems?”

By

“Prof. Robert Heath”

Speaker's Profile

From 1998 to 2001, Heath was a Senior Member of the Technical Staff and, later, Senior Consultant at Iospan Wireless Inc, San Jose, CA. At Iospan he was part of a team that designed and implemented the physical and link layers of the first commercial MIMO-OFDM communication system. Since January 2002, he has been with the Department of Electrical and Computer Engineering at The University of Texas at Austin where he is a Cullen Trust for Higher Education Endowed Professor, and is a Member of the Wireless Networking and Communications Group. He is also President and CEO of MIMO Wireless Inc. and Chief Innovation Officer at Kuma Signals LLC. He was the Director of the Wireless Networking and Communications Group from 2012-2014, where he oversaw an expansion of the center in terms of faculty and students, and an increase in research expenditures to more than \$5M per year. He is a co-author on more than 450 refereed conference and journal publications. He is also a co-inventor of 50 U.S. patents. He authored a laboratory manual that teaches the principles of wireless communication to undergraduate students and co-authored a book on millimeter wave wireless communication. He is particularly known for his work on different aspects of MIMO communication systems.



Abstract:

Cellular systems are growing into their fifth generation (5G). Trials of 5G technologies are already underway and extensive deployments of 5G are expected in the coming years. In this talk, I explain several new revolutionary applications of cellular communication, which place new requirements on the design of 5G. These applications involve vehicular and aerial to everything communications for mobile robots, or ultra-reliable low rate communications in the context of IoT. Then I describe different technical elements of 5G enabling these new applications. Some examples of these technologies are massive MIMO, millimeter wave communication or network slicing. Finally, I categorize these technologies based on how much they disrupt 4G thinking.

About Lecture Series:

This lecture series is being held with the objective of providing students of Bharti School an environment to learn from the leaders, insight into the best practices of the industry as well as an opportunity to interact with telecom leaders.

Note: We look forward to your participation. Please be seated by 3:45 pm