

## INVITED LECTURE

by **Dr. Chandra Kudsia**

(Speaker Bureau of the IEEE MTT-8 Technical Committee – Filters and Passive Components)

<https://tc8.mtt-tcc.org/chandra-kudsia-0>

### TIME

MAY 23 (THURSDAY) FROM 4:30 PM TILL 6 PM

### LOCATION

MCMASTER UNIVERSITY MAIN ST. CAMPUS

1280 Main St. West, Hamilton, ON L8S 4K1

RM ITB-A113A&B

## Evolution of Microwave Technologies for Communication Satellite Systems

**Abstract** The commercial era of satellite communication systems started with the launch of *Intelsat IV* Satellite in 1971. It spurred unprecedented R & D activities in diverse areas such as launch vehicles, new materials, microwave technologies, solar cells. Communication via satellites has become an integral niche in the provision of telecommunication services worldwide. Satellites are unique in their capability to provide ubiquitous, seamless, and global communications systems. This lecture provides a brief history of the evolution of satellite communications systems, describes some of its unique features, its operating environment and architectures and advances that have taken place, with emphasis on the evolution of microwave technologies. The talk concludes with a discussion of telecommunication services best suited for satellite systems in the face of competition from cellular and fiber optic terrestrial networks.

**Speaker's Short Professional Biography** Dr. Kudsia received undergraduate degrees in Physics and Engineering in India and post graduate degrees in Canada. Chandra started his career at RCA, Montreal in 1967; joined COM DEV as a partner in 1976 and retired as Chief Scientist. His technical leadership helped COM DEV grow from a small company to a world leader having supplied microwave equipment to over 900 satellites. In 2016, COM DEV was sold to Honeywell.

Dr. Kudsia is a Fellow of the IEEE, the AIAA (American Institute of Aeronautics and Astronautics), the CAE (Canadian Academy of Engineering), the EIC (Engineering Institute of Canada) and the IETE (Institute of Electronics and Telecommunication Engineers, India). He has received many awards and honours, including the "A.G.L. McNaughton Award & Medal," the highest honour given by the IEEE in recognition of outstanding contribution to Electrical or Electronic Engineering in Canada. In 2005, he received the Aerospace Communications Award, presented for outstanding contributions in the field of aerospace communications. Sponsored by the AIAA, this award is one of the most prestigious honours bestowed in the satellite industry.

Dr. Kudsia has published extensively and is the co-author of three books, including *Microwave Filters for Communication Systems*, Wiley. He currently holds the position of Adjunct Professor at the University of Waterloo and serves on the Dean's Advisory Board of McMaster University.

Dr. Kudsia received an Honorary Doctor of Science from McMaster University in 2013.

Contact: [ckudsia@ieee.org](mailto:ckudsia@ieee.org)