



The IEEE Ottawa Joint Chapters of Consumer Technology Society, Communication Society and Broadcast Technology Society (IEEE OTTAWA CTsOc/ComSoc/ BTS) along with IEEE Ottawa Aerospace and Electronic Society Chapter (IEEE OTTAWA AES) and IEEE Ottawa Educational Activity Committee cordially invites you for the following North America Regional webinar sponsored by the IEEE Consumer Technology Society (NAR CTsOc).

This event will be held virtually over zoom on **Wednesday, October 5, 2022 @ 6 PM (EST)**.

Zoom link: <https://carleton-ca.zoom.us/j/95808028297>

Integrated Terrestrial-Aerial-Stratospheric-Space Networks of the Future: Towards A Sustainable ICT Ecosystem

by

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Abstract: In this talk, a novel wireless infrastructure will be presented which includes a new aerial access & computing layer composed of HAPS (high altitude platform station) constellations positioned in stratosphere, 20 km above the ground, in addition to the legacy terrestrial layer and the emerging satellite layer. With its bird's-eye and almost-line-of-sight view of an entire metropolitan area, a HAPS is more than a base station in the air; it is a new architecture paradigm with access, transport, and core network functionalities for integrated connectivity, computing, sensing, positioning, navigation, and surveillance, towards enabling a variety of use-cases in an agile, smart, and sustainable manner for smart cities and societies of the future. The talk will feature a number of enabling technologies for the envisioned architecture including RIS (reconfigurable intelligent surfaces) and advanced antennas.

Bio: Dr. Halim Yanikomeroglu is a Professor at Carleton University, Canada. He received his Ph.D. from the University of Toronto in 1998. He contributed substantially to 4G/5G technologies and standards; his research focus in recent years include 6G/B6G, non-terrestrial networks (NTN), and future wireless infrastructure. His extensive collaboration with industry resulted in 39 granted patents. He supervised or hosted in his lab around 150 postgraduate researchers. He co-authored IEEE papers with faculty members in 80+ universities in 25 countries. He is a Fellow of IEEE, Engineering Institute of Canada (EIC), and Canadian Academy of Engineering (CAE), and an IEEE Distinguished Speaker for ComSoc and VTS.



Dr. Yanikomeroglu is serving as the Chair of IEEE WCNC Steering Committee, Member of IEEE ComSoc Conference Council, Member of IEEE PIMRC Steering Committee, and Member of ComSoc Emerging Technologies Committee. He served as the General Chair of two VTCs and Technical Program Chair/Co-Chair of three WCNCs. He chaired ComSoc Technical Committee on Personal Communications. He received several awards for his research, teaching, and service, including IEEE ComSoc Fred W. Ellersick Prize (2021), IEEE VTS Stuart Meyer Memorial Award (2020), IEEE ComSoc Wireless Communications Technical Committee Recognition Award (2018), and a number of best paper awards.