

## 2020–2021 Carleton 6G Workshop #2

**FUTURE SATELLITE NETWORKS****Wednesday, 16 December 2020, 10:00 - 16:00 EST (Ottawa time)**Zoom Link: <https://carleton-ca.zoom.us/j/92850975283>

Meeting ID: 928 5097 5283

There is rejuvenated interest in satellite communications & networking. One main difference between the legacy satellite systems and the LEO mega-constellations is the networking aspect with very high-speed inter-satellite links. For efficient operation, the network will have to be autonomous, intelligent, resilient, self-organizing & self-controlling to reduce the cost and risk of human intervention. Distributed decision making, fault recovery, resilience, and scalability are among the important features. These networks will rely on AI techniques at all levels: Ground operations, on-board operations, inter-satellite and satellite-to-ground links. Due to the unique characteristics of future LEO networks and their envisioned integration with aerial, terrestrial, and even deep space networks, unprecedented networking and communication scenarios will arise which require innovative solutions.

**Workshop Chairs:** Dr. Halim Yanikomeroglu, Carleton University  
Dr. Gunes Kurt, Istanbul Technical University

**Program Chair:** Dr. Tasneem Darwish, Carleton University

Time	Speaker	Affiliation	Title
10:15–10:30	Dr. Halim Yanikomeroglu Dr. Gunes Kurt	Carleton University Istanbul Technical University	Opening Remarks
10:30–11:00	Guillaume Lamontagne	Director of Technology MDA, Canada	<b>Keynote:</b> Too Spaced Apart? Why and How Next Generation Satellite Networks will Conquer the Final Frontier
11:00–11:20	Dr. Aizaz Chaudhry	Carleton University	FSO for Next-Generation Satellite Networks
11:20–11:40	Dr. Eylem Erdogan	Istanbul Medeniyet University	Site Diversity in Downlink Optical Satellite Networks through Ground Station Selection
11:40–12:00	Dr. Jean-Daniel Medjo Me Biomo	Carleton University	Packet Routing in Future LEO Satellite Networks
12:00–12:30	<b>Q&amp;A Session</b>		
12:30–13:30	<b>Break</b>		
13:30–13:50	Kursat Tekbiyik	Istanbul Technical University	Reconfigurable Intelligent Surface Empowered Satellite Networks
13:50–14:10	Dr. Tasneem Darwish	Carleton University & MDA	Location Management in LEO Networks: Current View & Future Challenges
14:10–14:30	Dr. Mohammed Younis Abdelsadek	Carleton University	Resource Management in Future LEO Satellite Networks
14:30–15:00	<b>Q&amp;A Session</b>		
15:00–16:00	<b>Panel &amp; Brainstorming Session</b>		