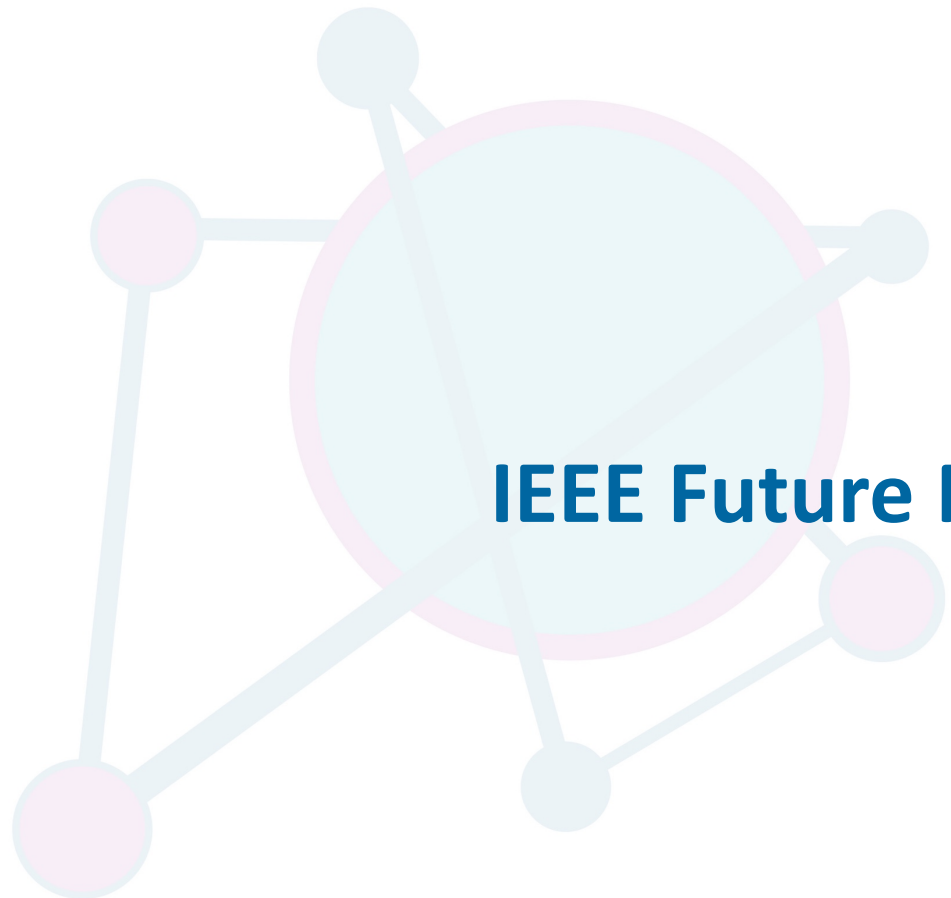**INGR**

International Network Generations Roadmap

2020 IEEE Future Networks Winter Session

Narendra Mangra, GlobeNet, LLC
IEEE INGR and Applications & Services WG Co-Chair
February 8, 2020

◆IEEE

Agenda

- IEEE Future Networks Initiative and IEEE INGR

- IEEE INGR First Edition Highlights

  - New and Existing WGs

- IEEE Second Edition and Working Groups

IEEE Future Networks

2020 Future Directions Coverage

IEEE BLOCKCHAIN

IEEE Future NETWORKS

IEEE brain

IEEE QUANTUM

IEEE Digital Reality

IEEE Roadmaps Committee (IRC)

ieee.org/futuredirections

Graduated Initiatives

IEEE BigData

IEEE Smart Cities

IEEE CLOUD COMPUTING

IEEE SMARTGRID

IEEE CYBER SECURITY

IEEE SOFTWARE DEFINED NETWORKS

IEEE rebooting COMPUTING

IEEE Internet of Things

IEEE lifesciences

IEEE TRANSPORTATION ELECTRIFICATION COMMUNITY

IEEE SUSTAINABLEICT

Key Stakeholders

IEEE Societies

Industry

Government, Academia, Students

IEEE OUs

IEEE STANDARDS ASSOCIATION
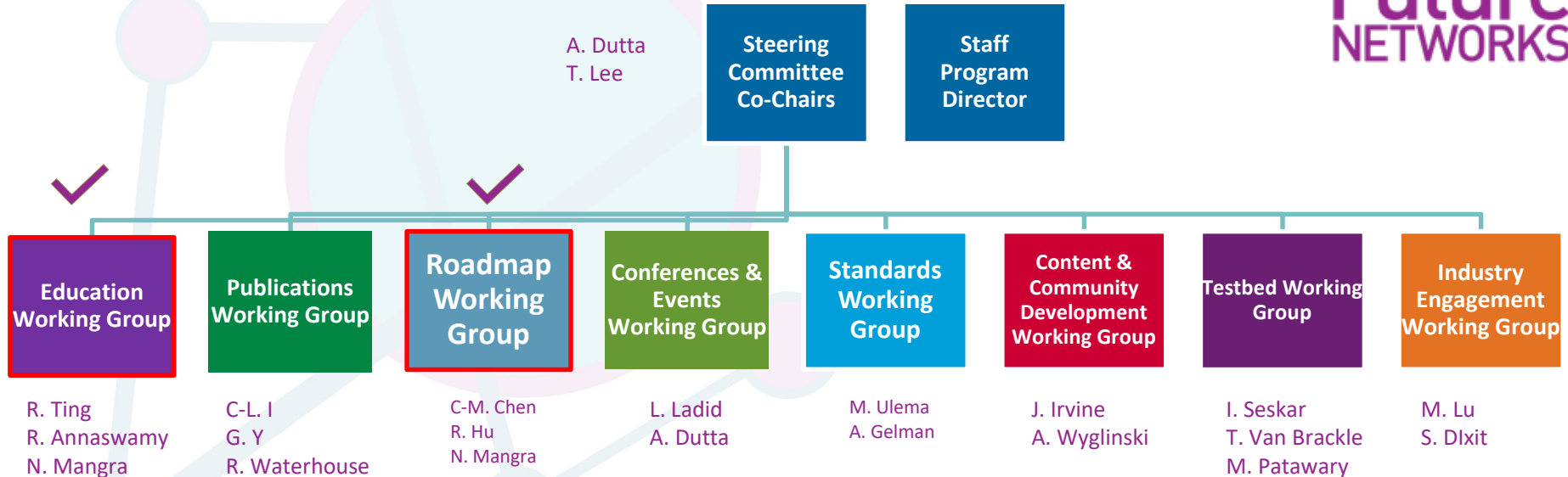
IEEE EDUCATIONAL ACTIVITIES

Initiative Profile

- ‣ Launched August 2016
- ‣ Technical Activities Board Funded
- ‣ 20+ Participating Societies/OUs

IEEE Future Networks Initiative Organization Structure

A. Dutta
T. Lee

Steering Committee Co-Chairs

Staff Program Director

Education Working Group	Publications Working Group	Roadmap Working Group	Conferences & Events Working Group	Standards Working Group	Content & Community Development Working Group	Testbed Working Group	Industry Engagement Working Group
R. Ting R. Annaswamy N. Mangra	C-L. I G. Y R. Waterhouse	C-M. Chen R. Hu N. Mangra	L. Ladid A. Dutta	M. Ulema A. Gelman	J. Irvine A. Wyglinski	I. Seskar T. Van Brackle M. Patawary	M. Lu S. Dixit

Visit our website: https://futurenetworks.ieee.org/roadmap

2020 IEEE Future Networks Winter Session Topics

5G Technology Overview and Architecture, Dr. Srini Gottumukkala, OpusNet

IEEE Future Networks International Network Generations Roadmap (INGR), Narendra Mangra, GlobeNet LLC

Evolution of Optical and Transport Technologies for 5G Xhaul Network, Dr. Reza Vaez-Ghami, Viavi

IEEE Future Networks Applications and Services Roadmap (Smart Cities Ecosystems), Narendra Mangra, GlobeNet LLC

(Demo) Microcontroller Radar Stations Utilizing Software Defined Radio (SDR), Keenan Leatham, UDC

Acknowledgements

- COMSOC Baltimore
- SPS NOVA
- PES
- RAS
- Sensors Council
- GWU Student Branch
- UDC Student Branch

Special Thanks to the University of the District of Columbia (UDC) for hosting this event !

Presentation Slides will be posted on IEEE FNI Website
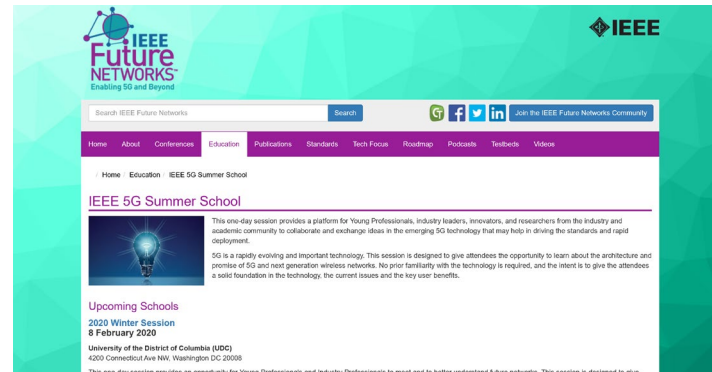
2020 IEEE Future Networks Winter Session
8 February 2020
University of the District of Columbia (UDC)
Washington, DC

Join us for a one-day session to network and better comprehend 5G, future networks, and technology roadmaps.

bit.ly/FNWinterSession

International Network Generations Roadmap

Reduce technical and engineering risks associated with the migration to 5G and beyond

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- Hardware
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- Satellite
- Millimeter Wave for Signal Processing
- Security
- Standardization Building Blocks
- Testbeds

- *IEEE INGR - https://futurenetworks.ieee.org/roadmap*
- *2020 IEEE FNI Educational Sessions (includes slides from previous session)-* https://futurenetworks.ieee.org/education/ieee-5g-summer-school
  - INGR Webinar Available on Demand