

6G Wireless for Sustainable Development Goals

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Abstract—6G communication system and the United Nations Sustainable Development Goals (UN SDGs) all target 2030. Although the relationship between 6G and SDG is not currently well defined yet, both SDG and 6G cover a wide range of the same topics that can share the mutually reinforcing forces, such as energy saving and smart cities. In this talk, we introduce the vision of 6G and its relations to UN SDGs through a set of indicators. This measuring tool for data collection can help build a 6G ecosystem in line with the UN SDGs. We will show some 6G technologies, such as novel cellular architecture and radio resource management, that can be incorporated towards reaching the UN SDGs



Bio—Li-Chun Wang (M'96 – SM'06 – F'11) received Ph.D. degree from the Georgia Institute of Technology, Atlanta, in 1996. From 1996 to 2000, he was a Senior Technical Staff Member at AT&T Laboratories. Since August 2000, he has joined National Yang Ming Chiao Tung University (NYCU) in Taiwan. He is now the Chair Professor and serves the Dean of College of Electrical and Computer Engineering of NYCU. Dr. Wang was elected to the IEEE Fellow in 2011 for his contributions to cellular architecture and radio resource management in wireless networks. He won two Distinguished Research Awards from National Science and Technology Council (2012, 2017), IEEE Communications Society Asia-Pacific Board Best Award (2015), Y. Z. Hsu Scientific Paper Award (2013), and IEEE Jack Neubauer Best Paper Award (1997). He was recognized as Top 2% Scientists Worldwide in a

study from Stanford University. His recent research interests are in the areas of cross-layer optimization for wireless systems, AI-enabled radio resource management for heterogeneous mobile networks, and big data analysis for industrial Internet of things. He holds 26 US patents, and has published over 300 journal and conference papers, and co-edited the book, "Key Technologies for 5G Wireless Systems," (Cambridge University Press 2017).

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