Tutorial 5 Advancing the Intelligent Internet of Bio-Nano Things via Molecular Communication

Presenter 1

Yu Huang, Guangzhou University, China

Presentation Title

Model-based and Data-driven Signal Processing Schemes in Molecular communication

Yu Huang received the Ph.D. degree from South China University of Technology, Guangzhou, China. During the Summer vacations of 2018 and 2019, he was a visiting student with Yonsei University, Seoul, South Korea. From January 2020 to March 2021, he visited Cranfield University, Bedford, U.K., for molecular communication techniques. He is currently an Associate Professor with Guangzhou University, Guangzhou, China. His main research interests include model-based and data-driven detectors for molecular communications. He was the Second-prize recipient of the Guangdong Province Electronic Information Science and Technology Award (Natural Sciences), and the winner of the Data Bakeoff Competition (Molecular MIMO) at the IEEE Communication Theory Workshop held in Selfoss, Iceland, in 2019.

Presenter 2

Xuan Chen, Guangzhou University, China

Presentation Title

Channel modeling for molecular communication in confined spaces

Xuan Chen received her Ph.D. degree from South China University of Technology in 2022. She is currently a Lecturer with Guangzhou University. In August 2019, she was a Visiting Student for molecular communication with Yonsei University, Seoul, South Korea. From August 2021 to August 2022, she visited York University, Toronto, ON, Canada, for molecular communication techniques. Her main research interests include wireless and molecular communications. She served as a guest editor for Electronics. She was the Winner of the Data Bakeoff Competition (Molecular MIMO) at IEEE Communication Theory Workshop (CTW) 2019, Selfoss, Iceland.

Presenter 3

Miaowen Wen, South China University of Technology, China

Presentation Title

The Internet of Bio-Nano Things with Molecular Communication: From Theory to Prototype

Miaowen Wen received the Ph.D. degree from Peking University, Beijing, China, in 2014. From 2019 to 2021, he was with the Department of Electrical and Electronic Engineering at the University of Hong Kong, Hong Kong, as a Post-Doctoral Research Fellow. He is currently a Professor with the South China University of Technology, Guangzhou, China. His research interests include a variety of topics in the areas of wireless and molecular communications. He was a recipient of the IEEE ComSoc Asia-Pacific Outstanding Young Researcher Award in 2020, and five Best Paper Awards from the IEEE ITST'12, the IEEE ITSC'14, the IEEE ICNC'16, the IEEE ICCT'19, and the EAI QSHINE'22. He was the Winner in data bakeoff competition from the 2019 IEEE Communication Theory Workshop. He is currently serving on the Editorial boards of the IEEE Transactions on Communications, the IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, and the IEEE Communications Letters.