

# Wave Form Diversity

Wenyu Zhao, Zihang Qi, and Xiuping Li

***Abstract***—Wave form diversity is another diversity for improving the reliability of a message signal. Assuming that we have a metasurface that which could concurrently manipulate surface waves and free-space waves, surface waves and free-space waves are two different wave forms. Different messages are delivered by these two wave forms, simultaneously. Wave form diversity improves the communication capacity.

Wenyu Zhao, Zihang Qi, and Xiuping Li is with the School of Electronic Engineering, Key Laboratory of Universal Wireless Communications Ministry of Education, State Key Laboratory of Information Photonics and Optical Communications, and Beijing Key Laboratory of Work Safety Intelligent Monitoring, Beijing University of Posts and Telecommunications, Beijing 100876, China. (e-mail: wyzhao@bupt.edu.cn)