**Webinar Title:** LEO Satellite Constellation based Tomographic Retrieve of the Real-Time Rainfall Process using the Microwave Signals

**Organising OU:** Communications Society (ComSoc) Chapter

***Abstract:***  
The method designed for real-time rainfall process monitoring at the local area with small costs is put forward by utilising the model of the LEO satellite constellation and the ground stations for gathering the microwave communication signal attenuation during the rainfall process. Before retrieving the rainfall fields, the signal-to-noise ratio (SNR) is estimated and the estimation equation is simplified by the differential operation eliminating the effect of the unknown constant factor. With the prior information, the algebraic reconstruction technique (ART) is employed to retrieve the rainfall process with a high temporal resolution, and the simulation results show that the method successfully captures the variations during the continuous rainfall process and can achieve good performances with small amounts of data.

**Speaker:** Miss Wenxiao Wang, the University of Western Australia

***Bio:***  
Miss Wenxiao Wang received the B.E degree in communication engineering from Jilin University, Changchun, China, in 2014, and then the M.E degree from Changchun University of Science and Technology in 2017. She is currently a final year Ph.D student with the School of Electrical, Electronic, and Computer Engineering, UWA, Australia. Her research interests include continuous rainfall process retrieval using microwave communication links and tomographic inversion algorithms.

**Date:** Friday, 27 November 2020  
**Time:** 12:30 pm Perth (UTC+8) time  
**Online Link:** Email to Felix ([xi.shen@uwa.edu.au](mailto:xi.shen@uwa.edu.au)) for registration and the Online Link before COB 25 November, 2020  
**Registration:** Free  
**Who can attend:** Open to all