



State Key Laboratory of
Terahertz and Millimeter Waves
(City University of Hong Kong)



Seminar On

Terahertz Metasurfaces and Integrated Platforms

By

Dr Withawat Withayachumnankul

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Founding Leader of the Terahertz Engineering Laboratory

University of Adelaide, Australia

Date : 24 May 2019 (Friday)

Time : 10:00 am – 11:00 am

**Venue : Room 15-202, 15/F, State Key Laboratory of Terahertz and Millimeter Waves,
Lau Ming Wai Academic Building, City University of Hong Kong**

Abstract

Terahertz waves are promising for applications in spectroscopy, sensing, and communications. To utilise the full capacities of terahertz waves, here I exploit the concepts of metasurfaces and effective media to attain functional terahertz components. These components offer integrability, functionality, bandwidth, and efficiency, not available from conventional approaches. I will give an overview of our recent work in two main areas: (i) terahertz metasurfaces for free-space beamforming and polarization control, and (ii) terahertz integrated platforms for point-feed beamforming. The seminar will cover a latest development of those components towards communications application.

Biography

Dr. Withawat Withayachumnankul completed bachelor's and master's degrees in electronic engineering from King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand, in 2001 and 2003, and a doctorate degree in electrical engineering with a special commendation from the University of Adelaide, Australia, in 2010. In 2010, he was awarded a 3-year ARC Australian Postdoctoral Fellowship. In 2015, he was a Research Fellow of the Japan Society for the Promotion of Science (JSPS) at Tokyo Institute of Technology. He has been a Visiting Researcher at Osaka University from 2017.

Dr. Withayachumnankul is currently a Senior Lecturer and Postgraduate Coordinator at the University of Adelaide, and the founding leader of the Terahertz Engineering Laboratory. Currently, he serves as an Associate Editor of the IEEE Transactions on Terahertz Science and Technology. Between 2017 and 2018, he was a Chair of the IEEE South Australia Joint Chapter on Microwave Theory and Techniques (MTT) & Antennas and Propagation (AP). He has authored and co-authored more than 70 journal publication, and has supervised 6 PhD students to completion, all with commendation. In recent years, he is a lead investigator for three Australian Research Council (ARC) grants, totalling to over AUD 1M. His research interests include terahertz components, integrated platforms, antennas, radar, communications, and metrology.

***** ALL ARE WELCOME *****

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