



YEDITEPE UNIVERSITY
Faculty of Engineering
Electrical and Electronics Engineering Seminars

Frequency-Selective Structure and Antenna Design

Dr. Ahmed Omar

Abstract

Frequency-selective surfaces (FSSs) are 2-D infinite arrays that act as a filter for the incident electromagnetic waves. They have been used in hybrid radomes, dichroic main reflector, sub-reflector, microwave absorbers, absorptive frequency-selective surfaces, high impedance surfaces, and many other applications. Recently, 3-D frequency-selective structure was presented in the literature to overcome the limitations of the 2-D FSS. In this seminar, I will present topics related to 3-D FSS as multiband high-order bandstop 3-D FSS, thin bandstop 3-D FSS based on loop resonator, thin bandpass 3-D FSS based on folded substrate, DSPSL resonator for dual-polarized 3-D FSS and absorber, and absorptive frequency-selective reflection and transmission structures. My research work is not limited to FSS and absorber. I will take some time to talk about my research work in antenna design. More specifically in compact, wideband, dual-polarized, and mm-Wave 5G antennas.

Biography:

Ahmed Abdelmottaleb Omar (Member, IEEE) was born in Giza, Egypt, in 1982. He received the B.Sc. and M.Sc. degrees in electrical engineering from Benha University, Benha, Egypt, in 2005 and 2010, respectively, and the Ph.D. degree in electrical engineering from Nanyang Technological University, Singapore, in 2019. From 2007 to 2014, he was a Teaching Assistant with the Faculty of Engineering, Benha University. From 2012 to 2014, he was a Research Assistant with the Faculty of Engineering, Ain Shams University, Cairo, Egypt. He was a part-time Research Assistant with the School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore, from August 2018 to February 2019. In April 2019, he joined the Pohang University of Science and Technology, South Korea, as a Postdoctoral Research Fellow. His current research interests include analysis and design of frequency-selective surfaces/structures, absorptive frequency-selective transmission/reflection structures, microwave absorbers, and compact, wideband, and mm-Wave 5G antennas.

Date: 24th July 2020 Friday

Time: 13:30

Online Link: meet.google.com/kmt-vrvz-qrt