

**March 28, 2018, 5:30pm – 6:30pm,  
Louise Slaughter Hall (CIMS)  
RIT Campus BLDG 78, Rochester Institute of Technology, NY 14623**

**2018 IEEE JCM  
Rochester Section Joint Microwave Theory and Techniques &  
Antennas and Propagation Society presents:**

***Metamaterials for Microwave  
Applications***

**By**

**Jun (Brandon) Choi**

**Assistant Professor, University at Buffalo**



**Abstract:**

Recent research advances in passive and active metamaterials for microwave applications will be presented. The first part of the talk will cover antennas and arrays based on 1D metamaterial also known as Composite Right/Left-Handed (CRLH) transmission lines. CRLH structures provide unique dispersion responses that can be systematically controlled. Such dispersion engineering technique allows the design of antenna elements or phased-array feed networks that support frequency-scanning over a wide spatial angle. This technology may eventually serve in enhancing next-generation radars and imaging sensor by alleviating ever increasing technological demand for higher spatial resolution, faster information acquisition speed, and smaller circuit dimensions. For the second half of this talk, passive and tunable low-profile 2D metamaterial (also known as metasurface) based on inverter layers will be presented.

**Biography:**

Jun (Brandon) Choi received the B.S. degree in electrical engineering from the University of California at Irvine, Irvine, CA, USA, in 2003, and the M.S. and Ph.D. degrees in electrical engineering from the University of California at Los Angeles, Los Angeles, CA, USA, in 2006 and 2014, respectively. He is currently an Assistant Research Professor with the Department of Electrical Engineering and Computer Science, Syracuse University, Syracuse, New York and Assistant Professor with the Department of Electrical Engineering, University at Buffalo, The State University of New York, Buffalo, New York. From 2014 to 2017, he was an Assistant Professor with the Department of Electrical Engineering and Computer Science at Syracuse University, Syracuse, New York. His current research interests include planar antennas, frequency selective surfaces, and microwave devices based on CRLH, and metamaterial structures. Dr. Choi was a recipient of the 2017 Air Force Office of Scientific Research (AFOSR) Young Investigator Award.

**Meeting Registration:**

There is no fee for Dr. Choi's presentation, Please register for the meeting, but come even if you do not register.

<https://events.vtools.ieee.org/m/161577>