

# MURI: High Power, Low Loss Artificial Materials for Transformational EM 2014

Dr. John Luginsland and Dr. Arje Nachman | November 5, 2014 | Arlington, VA

Basic Research Innovation and Collaboration Center (BRICC)  
4075 Wilson Blvd., Suite 350 | Justice Room  
Arlington, VA 22203

Time	Title	Speaker
08:30	<b>Registration</b>	
09:00	Welcome	AFOSR Program Officers
09:15	Introduction to the Meeting and Overview	Edl Schamiloglu University of New Mexico
<b>Part I – Dispersion Engineering for Slow Wave Structure Design – Theoretical Concepts</b>		
09:30	Novel Concepts for Slow Wave Structures of High Power BWO's and TWT Amplifiers	John Volakis Ohio State University
10:00	Multi-Scale Strategy to Optimize Metamaterial SWS Design for Short TWT's	Robert Lipton Louisiana State University
10:30	<b>BREAK</b>	
10:45	Giant Amplification in Periodic Structures with Gain; Properties and Advantages of Multimode Waveguides for Achieving Higher Levels of Amplification	Alex Figotin/Filippo Capolino UC Irvine
<b>Part II – Dispersion Engineering for Slow Wave Structure Design – Theory to Experiment</b>		
11:15	Metamaterial-Based Backward Wave Oscillator	Rick Temkin/Michael Shapiro MIT
11:45	<b>LUNCH (on our own)</b>	
13:00	Broadside-Coupled Split Ring Resonator Cerenkov Oscillator	Edl Schamiloglu University of New Mexico
<b>Part III – Passive and Active Components; Evolution of Electromagnetic Fields</b>		
13:30	Metamaterials for Passive and Active Components	Christos Christodoulou University of New Mexico
14:00	Temporal Evolution of Electromagnetic Fields in Metamaterial Structures	Mark Gilmore University of New Mexico
<b>Part IV – Related Theoretical Efforts</b>		
14:30	Multiple Transmission Line Models for Pierce Theory	Alex Figotin/Filippo Capolino UC Irvine
<b>Part V – Satellite Efforts</b>		

15:00	Brief Overview of Activities at the University of Huddersfield and University of Strathclyde	Edl Schamiloglu for Rebecca Seviour and Adrian Cross
15:15	Wrap-up	Edl Schamiloglu and Program Officers
15:30	<b>BREAK</b>	
15:45	Program Officers' meeting with Advisory Council (closed door)	
16:15	Debrief and Adjourn	
17:00	<b>MEETING ADJOURNED</b>	