



Seminar series of Enabling Advances in Technology (EAT) @ DIET

Seminar Announcement

July 2nd, 2015 - DIET Dept. Room 206, 1:15 p.m.

Metamaterial Electromagnetic Absorbers

Speaker: Dr. Nicola Tedeschi

Abstract: We will see an overview on the electromagnetic absorbers, particularly for the microwave regime, from the Salisbury screen to the gradient impedance absorbers. Afterward, the concept of metamaterial in electromagnetism will be introduced and discussed and the new kinds of metamaterial absorbers will be presented, focusing on their frequency and angular properties. The homogenization of such metamaterial will be described. Particularly, the differences between the isotropic and anisotropic homogenization will be emphasized, and the possibility of the realization of a perfect absorber will be discussed. The connection between the angular band and the anisotropic effective parameters will be pointed out.

Bio: Nicola Tedeschi received the Electronic Engineering degree in 2009 and the Ph.D. in Electromagnetism in 2013, both from "La Sapienza" University of Rome. In 2012, he has been visiting student at the Department of Radio Science and Engineering of Aalto University, Finland. In 2013 and 2014 he won the Young Scientist Award by the URSI. In 2014, he won the Barzilai Award from the Italian Electromagnetism Society. His research interests concern electromagnetic scattering, planar boundary interactions, in homogeneous waves, propagation in dissipative and anisotropic materials and metamaterial analysis.

