



# ΙΤΕ/ΕΙΧΗΜΥΘ

## ΣΕΜΙΝΑΡΙΟ ΣΕΜΙΝΑΡΙΟ

**ΟΜΙΛΗΤΗΣ:** Dr. Johan Sten  
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**ΘΕΜΑ:** **Low-frequency electromagnetic scattering and homogenisation of conducting split-ring elements**

**ΤΟΠΟΣ:** Αίθουσα Σεμιναρίων ΙΤΕ/ΕΙΧΗΜΥΘ

**ΗΜΕΡΟΜΗΝΙΑ:** **Τρίτη, 4 Νοεμβρίου 2008**

**ΩΡΑ:** **12:00**

**ΠΕΡΙΛΗΨΗ:** The elementary split ring resonator is a key structure in so-called "metamaterial" mediums, exhibiting negative material parameters. In the talk I discuss the low-frequency electromagnetic scattering by a split ring particle, modelled as a perfectly conducting wire ring furnished with a narrow gap. Analytical results are given for the electric and magnetic dipole moments for different kinds of incidence and polarisation in the quasi-static approximation. Through the process of homogenisation, the expressions discovered for the dipole moments and the related polarisation dyadics are linked with the macroscopic constitutive equations for the medium.

**SHORT CV:** Born in 1967, in Helsinki, Finland. Diploma Engineer in 1992 (Helsinki University of Technology), Doctor of Science in Technology 1995 (Helsinki University of Technology), Docent (= Doctor habilis) in 2007 (Helsinki University of Technology).