Università di Pisa

GIDRM

Gruppo Italiano Discussione Risonanze Magnetiche

DIPARTIMENTO DI INGEGNERIA DELL'INFORMAZIONE

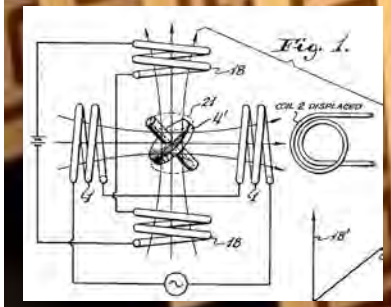
GIDRM Workshop

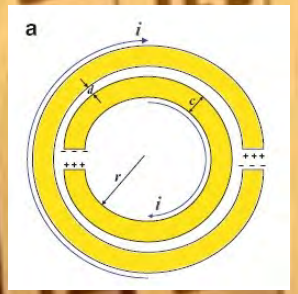
Metamaterials and Metasurfaces in Magnetic Resonance: From Theory to Applications

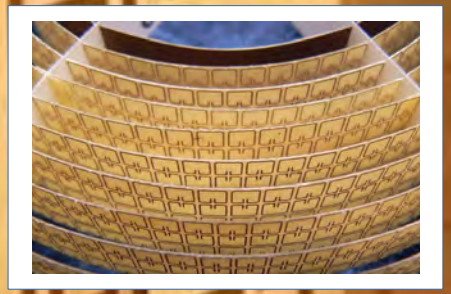
30 November 2020

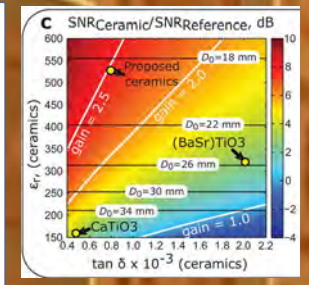
University of Pisa, Department of Information Engineering, Italy

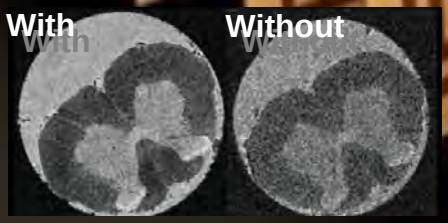
www.gidrm.org

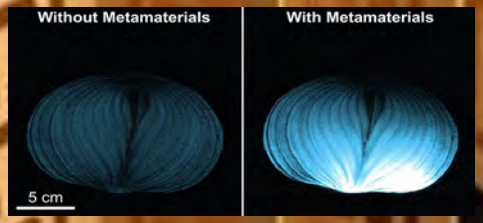












AIMS

A metamaterial (MM) is a material engineered to have a property that is not found in naturally occurring materials. MM are made from assemblies of multiple elements fashioned from composite materials such as metals and dielectric. The constitutive materials are usually arranged in repeating patterns, at scales that are smaller than the wavelengths of the phenomena they influence.

The primary goal of this GIDRM workshop on MM in Magnetic Resonance is to bring together the communities of chemists, physicists, engineers, computer scientist, biologists, physicians to explore this rapidly expanding field. The workshop will provide a theoretical introduction to MM. A review of experimental methods suitable to assemble and test a MM based on bulk or surface structures. It will also be considered how to analyse the dependence of MM properties on the operating frequency (magnetic field). The numerical electromagnetic tools suitable for MM modelling will be reviewed. Given the expanding field of MM use in Magnetic Resonance, we will present and discuss several practical examples related to improved NMR and MRI features.

Registration is free, but reserved to GIDRM associates with regular payment for 2020 and to new GIDRM associates. New associations to GIDRM will remain valid throughout 2021 and will include free access to all 2021 GIDRM days and school organised in a telematic way. Registration is open at www.gidrm.org and deadline is 24th November 2020

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FONDAZIONE ANTONIO DE MARCO