

Tomography Imaging: Is a Single Pair of Glasses Enough?



**IEEE Distinguished Lecture
Federal University of Rio de Janeiro, Brazil**

Onde? UFRJ – Centro de Tecnologia
Sala H-322 (Auditório PEE)
Quando? 22 de março - 10:00
Quem? Dr. Krikor B Ozanyan
University Of Manchester, UK
K.Ozanyan@Manchester.ac.UK

Abstract

This presentation will give an introduction to Tomography as an indirect imaging method, exemplified in the classical case of X-ray Computer Tomography. The basic concepts of tomography measurements and the following mathematical reconstruction will be examined briefly, followed by a review of the measurement modalities for Tomography across the electromagnetic spectrum (gamma and x-rays, infrared, terahertz and electrical). These will be identified and grouped as hard-field and soft-field tomography and the possible interaction and synergy between the two will be highlighted. Examples of major applications across the electromagnetic spectrum will be illustrated, together with new kinds of Tomography, developed at Manchester. Emphasis will be given to the recent development of fast systems with compatible frame rates to allow multi-contrast images for monitoring of three-phase flow.



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