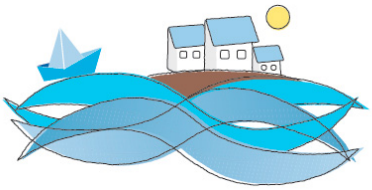

Mediterranean Thematic Workshops in Advanced Molecular Imaging

Contribution ID: **48** Type: **Invited**

Advances in Inflammation Imaging: Optical Techniques in Mesoscopic and Macroscopic Regimes

Saturday 25 May 2024 08:50 (20 minutes)

This presentation will highlight recent developments in imaging inflammation using advanced optical methods across macroscopic and microscopic scales. We will delve into hyperspectral imaging (HSI), which captures spatial and spectral data concurrently, and its application in various inflammatory conditions, including rheumatoid, psoriatic, and osteoarthritis, as well as graft-versus-host disease and multiple infections. Additionally, we will explore optical coherence tomography (OCT), akin to ultrasound in detecting backscattered light, utilized in imaging uveitis and inflammations in soft tissue, bladder, and coronary regions. The talk will also cover photoacoustic tomography (PAT), employing laser-induced acoustic signals for detecting inflammation in vascular systems, kidneys, joints, brain, and intestines. The synergy of combining techniques like HSI and OCT for enriched, complementary data will be emphasized, showcasing their potential to enhance diagnostic accuracy and treatment efficacy in medical physics.

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Session Classification: Advances in multimodality imaging to increase our understanding of the inflammation's role in healthy and diseased tissue