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PHYSICS COLLOQUIUM 293

Medical and Biological Applications of X-ray Fluorescence (XRF)

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ABSTRACT

For the past 50 years medical x-ray fluorescence (XRF) studies highlighted the importance of trace elements metabolism and toxicity to human health. The talk will introduce the physics behind XRF and place past and current medical and biological applications in a broad scientific context. Instrumentation, methods, and results of several studies focused on the measurements of arsenic and selenium in skin phantoms and human nails and lead in bone phantoms will be presented. Time allowing, the capabilities of the microbeam XRF unit recently developed at Fresno State will be presented in connection with present and future research interests.

BIO:

EDUCATION	2001-2006	Ph.D. in Physics, Medical Physics program (CAMPEP in 2010), Carleton University, Ottawa, Ontario, Canada.
	1999-2001	M.Sc. in Medical Physics, University of Bucharest, Bucharest, Romania.
	1995-1999	B.Sc. in Physics, University of Bucharest, Bucharest, Romania.
POSITIONS	2006-2012	Postdoctoral Fellow, Physics Department, Mount Allison University, Sackville, New Brunswick, Canada.
	2008-2014	Physics Lecturer, Physics Department, Mount Allison University, Sackville, New Brunswick, Canada.
	2014-present	Assistant Professor of Biomedical Physics, California State University, Fresno, California, United States.