Monte Carlo simulation tools for X-ray imaging and fluorescence Workshop

ESRF Auditorium

Monday 24 February 2014		
08:30 - 09:00	**Registration**	
09:00 - 09:10	**Welcome**	
	Session 1: Presentations	
09:10 – 09:35	The general purpose Monte Carlo code MCSHAPE: main features and recent developments	**Viviana Scot** Università di Bologna, Italy
09:35 - 10:00	Fixed forced detection for accelerating the simulation of X-ray images with Geant4	**Simon Rit** CREATIS, Villeurbanne, France
10:00 – 10:25	A Monte Carlo simulation tool based on PENELOPE for imaging plate performance investigation	**Min Yao** INSA - LYON
10:25 – 10:50	Virtual imaging X-ray experiments using McXtrace	**Erik Knudsen** Technical University of Denmark
10:50 - 11:10	**Coffee break**	
	Session 2: Presentations	
11:10 – 11:35	Use of Monte Carlo simulations for Cultural Heritage XRF analysis	**Antonio Brunetti** Università di Sassari, Italy
11:35 – 12:00	The processing of large, heterogeneous data sets acquired for XRF imaging	**Matthias Alfeld** DESY Hamburg, Germany
12:00 – 12:25	Determination of gold leaf thickness by realistic Monte Carlo simulations of an EDXRF spectrometer: application to a renaissance illumination	**Jorge Sampaio** Universidade de Lisboa, Portugal
12:25 – 12:50	Development and applications of Monte Carlo based XRF quantification protocols for the elemental analysis of meteoritic materials	**Stephen Bauters** Ghent University, Belgium
12:50 - 14:00	**Lunch**	
14:00 - 14:50	A general introduction to Monte Carlo simulations of X-ray spectroscopy and imaging experiments	**Laszlo Vincze** Ghent University, Belgium
14:50 - 15:50	Introduction to xraylib (presentation + hands-on)	**Tom Schoonjans** Università di Sassari, Italy
15:50 - 16:10	**Coffee Break**	
16:10 - 17:50	Introduction to XMI-MSIM (presentation + hands-on)	**Tom Schoonjans** Università di Sassari, Italy
17:50 - 18:30	Discussion	
19:00 - 21:00	**Wine & Cheese Party**	

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24 & 25 February 2014, ESRF Auditorium

	Tuesday 25 February 2014	
	Session 3: Presentations	
09:00 - 09:25	A Monte Carlo simulation of confocal X-ray fluorescence experiment	**Mateusz Czyzycki** Univ. Of science & Technology Krakow, Poland
09:25 - 09:50	The Monte Carlo Simulation of Diffraction Enhanced Imaging of Lung Tissue Model	**Li Kun** Institute of High Energy Physics (CAS) Beijing, China
09:50 - 10:15	Modeling x-ray phase-contrast imaging of microbubbles	**Thomas Millard** UCL, London, UK
10:15 - 10:40	Application of a Monte Carlo code to the characterization of novel X-ray imaging systems	**Piernicola Oliva** Università di Sassari, Italy
10:40 - 11:00	**Coffee Break**	
	Session 4: Presentations	
11:00 - 11:25	A single Monte Carlo program for multiple XRF studies	**Charalambos Zarkadas** PANalytical, Almelo, NL
11:25 - 11:50	Enhancement of X-ray dose absorption via high-Z radiosensitization	**Sara Lim** Ohio State University, USA
11:50 - 12:15	A Tool for GIXRF/XRR simulation and data analysis	**Nikita Vakula** IAEA, Seibersdorf, Austria
12:15 - 14:00	**Lunch**	
14:00 - 15:50	Introduction to quantification with XMI-MSIM and PyMca (presentation + hands-on)	**V. Armando Solé** ESRF, Grenoble - France
15:50 -16:10	**Coffee Break**	
16:10 - 19:00	Introduction to XRMC (presentation + hands-on)	**Bruno Golosio** Università di Sassari, Italy
19:00	**End of the workshop**	