Metallurgy and Materials Processing

Wednesday, 7th February 2018 - Microsymposium UDM2 Venue: ESRF Auditorium		
08:15 – 08:50	Registration	
9:00 – 9:05	Introduction to the microsymposium UDM2 by Michela Brunelli / Alejandro Fernandez-Martinez	
	Session I: Characterizing Advanced Engineering Materials - Diffraction and Imaging Techniques. Chair: Thomas Buslaps, *ESRF Grenoble*	
09:05 – 09:45	**Keynote Talk: Diffraction and Imaging: completing the picture.**	**Philip Withers, University of Manchester, UK**
09:45 – 10:05	"Combined in situ texture and microstructure analysis of deformed metals using high-energy x-ray diffraction"	Andras Borbely
10:05 – 10:25	"Mapping the precipitation kinetics in compositional space: a combinatorial approach to microstructure characterization"	Frederic De Geuser
10:25 – 10:45	"Analysis of VHCF damage in duplex Stainless steel using micro-beam X-ray diffraction and a pnCCD detector"	A. Abboud
10:45 – 11:10	Coffee break	
	Session II: Processing Advanced Engineering Materials. Chair: Frederic De Geuser, *Université Grenoble Alpes, CNRS, Grenoble INP, SIMAP*	
11:10 – 11:50	**Keynote talk: In situ investigation of the phase and microstructure formation in alloys under laser additive manufacturing conditions.**	**Christian Leinenbach, EMPA, Switzerland**
11:50 – 12:10	"Modeling and experimental measurement with synchrotron radiation of residual stress distribution in additive manufactured Ti-6Al-4V"	Axel Steuwer
12:10 – 12:30	"Coherently Aligned Nanoparticles Within a Biogenic Single Crystal: a Biological Prestressing Strategy"	Boaz Pokroy
12:30 – 14:00	Lunch at ESR/ILL restaurant	
	Session III: 3D Hard X-ray Microscope Applications. Chair: Wolfgang Ludwig, *INSA Lyon*	
14:00 – 14:40	**Keynote Talk 3:**	**Henning Poulsen, DTU, Technical University of Denmark**
14:40 – 15:00	"4D X-ray imaging of directional solidification under magnetic fields"	Biao Cai
15:00 – 15:20	"In-situ nanotomography investigation of high temperature deformation in light alloys at ID16B"	Richi Kumar
15:20 – 15:40	"Composition and morphology of composite materials by ptychographic X-ray computed tomography"	Julio Cesar da Silva
15:40 – 16:00	Conclusion by (to be confirmed)	
16:00	End of meeting	