

**TUESDAY THE 9<sup>th</sup> OF AVRIL - 360° COURSE OF AN IMPLANT**

Times	Headline	Topics	Speakers	Affiliation	Country	Language
9H00-9H15	Welcoming	The "richness" of the ecosystem around the implants	Pierre CHALANDON Operational Mngr Stephane AVRIL Director of CIS Dr. Bertrand BOYER Ortho. Surgeon	CETIM Saint-Etienne Ecole des Mines - Ingénierie Santé CHU - Saint Etienne	F	F
9H15-9H35	The patient Need	1914-1918 : 100 years after in the orthopedy	Dr. Bertrand BOYER Orthopedic Surgeon	University Hospital of Saint Etienne	F	F
9H35-9H55		In vivo studies of the "real" mechanical stresses	Dr. Bertrand SEMAY Orthopedic Surgeon	University Hospital of Saint Etienne	F	F
9H55-10H15	Implants Design	Toward natural bone substituats osseux from shell nacre	Dr. Marthe ROUSSEAU Research	INSERM / CNRS / STANSEA / SAINBIOSE	F	F
10H15-10H35		Surface engineering and cellular responses	Dr. Virginie DUMAS Research Engineer	ENISE / MANUTECH / IVTV / INSERM	F	F
10H35-11H00	<b>COFFEE BREAK</b>					
11H00-11H20	Implants Design	Hydroxyapatite coating, additive manufacturing, elaboration of ceramic biomaterials (calcium phosphate) in the biomedical field.	Dr David GROSSIN Lecturer	HDR CIRIMAT - ENSIACET Toulouse	F	F
11H20-11H40		Study of the compression behaviour of Ti6Al4V trabecular structures produced by Additive Laser Manufacturing	Dr. Francesco ROBOTTI	EUROCOATING Spa	I	ENG
11H40-12H00		Hybrid Additive Manufacturing of metal parts with 3D control of internal stresses and microstructures	Pr. Roland LOGE	EPFL PX Group Chair Thermomechanical Metallurgy Lab	CH	ENG
12H00-12H20		Bionic approach of hand joints total prosthesis design	André NIKOLAENKO	Biomecanic University of Samara RUSSIA	RUS	ENG
12H20-14H00	<b>LUNCH BREAK</b>					
14H00-14H20	Implants Manufacturers Market	Worldwide orthopedic market :stakeholder strategy and heavy trends Orthopedic outsourcing and its evolution: sector concentration and major innovations	Ali MADANI	AVICENNE	F	F
14H20-14H40	Manufacturing	Design, simulation and production of a porous 3D implant: is it compatible with the regulatory? Example of a Tlif titanium intervertebral cage	Gael VOLPI Founder and CEO	3D MEDLAB	F	F
14H40-15H00		3D Metal Printing by Binder Jetting (MBJ): An Industrial Opportunity for Small and Medium Series Production	Maxime ROBERT	CETIM - Pôle procédés performants et innovants	F	F
15H00-15H20		Lattice structure cleaning	Etienne YVAIN Arts et Métiers engineer	CETIM - Pole performance industrielle durable	F	F
15H20-15H25		Poster: Cleaning process in dense CO2 (supercritical and liquid) for the cleaning of parts from additive manufacturing but also on the reduction of the biological load of the implants before the sterilization step	Stéphane BREDEAU Ph. D. Materials Chemistry Engineer	DFD	F	F
15H25-15H45		Finishing of orthopedic implants and surgical instruments	Stéphane GUERIN Process engineer	CETIM	F	F
15H45-16H10	<b>BREAK</b>					
16h10-16H30	Functional Use of Implants	Describing of a 3rd parameter in friction torque	Eric RENAULT Research & Development Director	CORIN	F	F
16h30-16H35		Poster : Biotribological expertise in the laboratory	Ana Maria SFARGHIU	INSA LAMCOS	F	F
16h35-16H40		Poster : Biotribomineralogy	Valentin MASSARDIER	CNRS / INSA	F	F
16H40-17H00		Concept of pre-clinical evaluation in vitro and in vivo biocompatibility of bionic prostheses	Larissa VOLOVA	Biomecanic University of Samara RUSSIA	RUS	ENG
17H00-17H20	Toward Normalisation	Normalization and mechanical validations	Maximilien CHOLLET Biomechanical Laboratory Manager	CETIM	F	F
17H20-17H40		Understanding and Application of ISO 19227 Requirements for Manufacturers in Orthopedics	Dr. Nicola REVELLIN, PhD Scientist in medical research	NAMSA	F	F
17H40-18H00		Constraints and opportunities for DMI manufacturers	Jean-Luc MOYAT President	AFIDEO	F	F

**WEDNESDAY THE 10<sup>th</sup> OF APRIL - NUMERIC AND IMPLANTS**

Times	Headline	Topics	Speakers	Affiliation	Country	Language
8H30-8H45	Welcoming	The place of digital in health and the implant sector, towards digital transformation	Pr. Jérôme POUSIN	INSA	F	F
8H45-9H15	Exemple	The place of digital in implants	Professeur Arnaud GLEIZAL Head of Department of Maxillofacial Surgery	Lyon Croix Rousse Hospital	F	F
9H15-9H45	Numeric Help for Surgeons	Artificial Intelligence in implants	Claude CLEMENT Technical Director	WYSS Center for Bio and Neuroengineering	CH	ENG
9H45-10H15		Scanning and digitization: application to implantable medical devices	Sylvain HUGON Engineer - Teacher	HES-SO	CH	F
10H15-10H45	<b>COFFEE BREAK</b>					
10H45-11H15	Numeric Help for Surgeons	A new vision for computer-assisted surgery	Sébastien HENRY CEO	PIXEE MEDICAL	F	F
11H15-11H45		Contribution of virtual reality to an innovative surgical protocol	Cédric LANCIEUX Technical Director	ETK / LYRA	F	F
11H45-12H15		Functionalized surfaces to treat peri-implantitis in dental implantology	Pr. Dr. Dominique PIOLETTI	EPFL Othopedic Biomechanic Lab	CH	F
12H15-14H00	<b>LUNCH BREAK</b>					
14H00-14H30	Artificial Intelligence for Implants	Changing the business model by introducing A.M., A.I. and wearable technologies to offer better products and services to patients, surgeons and hospitals	Gian Guido RIVA Founder - CEO	REJOINT	I	ENG
14H30-15H00		AI model for Diagnosis and algorithms for tracking medical implants	Dr. Christophe PATRIS DE BROE CEO	DEEP CUBE BioPole Lausanne on AI Implantology EPFL	CH	ENG
15H00-15H30	<b>BREAK</b>					
15H30-16H00	The Numeric "Twin" & The numerical Simulation	Numerical evaluation of contact constraints of dual mobility prosthesis	Daniel FOUGERES Animator workshop Bio Digital Engineering for the medical	MICADO	F	F
16H00-16H30		Simulation and optimization for innovation in implants	Rohan-Jean BIANCO, PhD Co-Founder	PHILIMEC S.E.N.C.	F	F
16H30-17H00		Advanced simulation of multi physical phenomena for reliability dimensioning	Dr. Philippe AMUZUGA	CETIM	F	F
17H00-17H30		The coupling of simulation and physics in additive manufacturing	Jérôme QUARTANA	Engineer School - Mines of Saint-Étienne	F	F