Programme

CONFERENCE DAY ONE

Wednesday, October 10th 2018

8:00	9:00	REGISTRATION
9:00	9:10	Opening of the conference **Igor Drstvenšek, Nataša Ihan Hren, Dietmar Drummer, Nicolae Balc**
9:10	9:30	Future of 3D printing in Medicine, Opening Lecture **Nataša Ihan Hren**, Department for Oral and Maxillofacial Surgery, University clinical Centre, Ljubljana
9:30	10:00	Experience in using free software for cost-effective clinical 3D printing - the Hong Kong experience **Christian Fang,** Department of Orthopaedics and Traumatology, Queen Mary Hospital, Hong Kong, China
10:00	10:30	Application of Metal 3D Printing in Orthopaedics – Current Status in China **Hong Cai**, Orthopaedic Department, Peking University Third Hospital, Beijing, China
10:30	11:00	COFFEE BREAK
11:00	11:25	3D-Printed Applicators for Brachytherapy of Gynecological Cancers **Helena Barbara Zobec Logar**, Oncological Institute Ljubljana
11:25	11:50	Virtual surgical planning of complex bony defects in maxillofacial surgery **Luka Prodnik**, Department for Oral and Maxillofacial Surgery, University clinical Centre, Ljubljana
11:50	12:15	Data preparation for Additive Manufacturing **Ismo Mäkelä**, DeskArtes Oy, Helsinki, Finland
12:15	14:00	LUNCH
14:00	14:25	Open-source 3D bioprinting for scientific and industrial applications **Boštjan Vihar**, IRNAS institute, Maribor, Slovenia
14:25	14:50	The 3D imaging as clinical and research tool in the patient with dentofacial deformities **Miha Verdenik**, Department for Oral and Maxillofacial Surgery, University clinical Centre, Ljubljana
14:50	15:15	An Additively Manufactured multi-level drill guide template for pedicle screw placement in the lumbar and sacral spine **Matjaž Merc**, Orthopaedic department, University Clinical Centre Maribor
15:15	15:40	LUNCH
15:40	16:05	Use of Patient Specific Instruments in Clinical Praxis **Andrej Moličnik**, Orthopaedic department, University Clinical Centre Maribor
16:05	16:30	Melting characteristics in Selective Laser Melting of Ti-6Al-4V product for biomedical application **Snehashis Pal**, Additive Manufacturing Laboratory, Faculty of Mechanical Engineering, University of Maribor
16:30	16:55	Study on manufacturing implants of biocomposite materials by water jet cutting **Popan Ioan Alexandru**, Machine Building Faculty, Technical University of Cluj-Napoca, Cluj-Napoca Romania
16:55	17:20	Design for Additive Manufacturing of a Sweat Gland Simulator **Ioan Turcin**, CAMPUS 02, Graz, Austria

19:00	**CONFERENCE DINNER WITH CULTURAL PROGRAMME AND AWARD CEREMONY**

CONFERENCE DAY TWO

Thursday, October 11th 2018

EDUCATION AND ARTS & DESIGN

9:00	9:15	South African AM Outlook - Latest results, developments and strategies **Deon de Beer,** Central University of Technology, Free State, SAR
9:15	9:30	Implementation of interdisciplinary student teams in design education for additive manufacturing **Stefan Junk,** Department of Business and Industrial Engineering, University of Applied Sciences Offenburg, Campus Gengenbach, Germany
9:30	9:45	Additive Manufacturing – a system theoretic approach **Bernhard Heiden**, Industrial Engineering and Management, FH Kärnten University of Applied Sciences, Villach, Austria
9:45	10:00	Development of an Additive Manufacturing education and training strategy for South Africa, using the I2P Lab concept **Sarel Havenga**, Department of Technology Transfer and Innovation, Vaal University of Technology, Vanderbijlpark, South Africa
10:00	10:15	3D interpretation of Snežnik Castle and its surroundings in a form of a scale model **Tanja Nuša Kočevar**, University of Ljubljana, Faculty of Natural Sciences and Engineering, Department of Textiles, Graphic Arts and Design
10:15	10:45	COFFEE BREAK

CAE AND TESTING

10:45	11:00	Topology Optimization in Additive Manufacturing Considering the Grain Structure of Inconel 718 using Numerical Homogenization **Daniel Hübner**, Collaborative Research Centre 814 – Additive Manufacturing, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
11:00	11:15	On a combined geometry and multimaterial optimization approach for the design of frame structures in the context of additive manufacturing **Michael Stingl**, Mathematical Optimization, Collaborative Research Centre 814 – Additive Manufacturing, Friedrich-Alexander-Universität Erlangen-Nürnberg
11:15	11:30	The Examination of Photopolymer-based 3D Printed Products in the Case of Pinpoint Loading **Peter Bakonyi**, Department of Polymer Engineering, Budapest University of Technology and Economics, Budapest, Hungary
11:30	11:45	Tensile testing of 3D printed continuous carbon fiber reinforced PLA composites **Marius Rimašauskas**, Department of Production Engineering, Kaunas University of Technology, Kaunas, Lithuania
11:45	14:00	LUNCH

AM- METALS

14:00	14:15	Influence of the Process Gas on the Laser Beam Melting Process **Andreas Wimmer**, Technical University of Munich, TUM Department of Mechanical Engineering, Institute for Machine Tools and Industrial Management
14:15	14:30	Defect formation and influence on metallurgical structure due to powder cross-contaminations in laser-based powder bed fusion **Max Horn,** Fraunhofer Research Institution for Casting, Composite and Processing Technology IGCV
14:30	14:45	Parameter Study on Laser Beam Melting of WC-Co at 800°C Pre-Heating Temperature **Tobias Schwanekamp**, iWFT Institute of Manufacturing and Tooling Technology, University of Applied Sciences Cologne (RFH), Germany
14:45	15:00	Nano- Micro- Macro- Hardness of LPBF 316L Austenitic Stainless Steel **Massimo Lorusso**, Istituto Italiano di Tecnologia, Torino, Italy
15:00	15:15	Characterizing the Effect of Cutting Condition, Tool Path and Heat Treatment on Cutting Forces of SLM Medical Component **Amirmahyar Khorasani**, University
15:15	15:30	Effect of scan strategy, re-melting and exposure time on the microstructure of stainless steel 17 - 4 PH fabricated by laser powder bed fusion of metals **Sebastian Platt**, University of Duisburg-Essen, Lehrstuhl Fertigungstechnik, Duisburg, Germany
15:30	15:50	COFFEE BREAK

AM PROCESS - POLYMERS

15:50	16:05	Influence of powder bed surface on part properties produced by selective laser beam melting of polymers **Sandra Greiner**, Institute of Polymer Technology, Friedrich-Alexander-Universität Erlangen-Nürnberg, Collaborative Research Center 814 – Additive Manufacturing, Germany
16:05	16:20	Glass-Filled Polypropylene-Systems for Enhancing Reproducibility during Selective Laser Beam Melting and Effect of the Mixing Strategy on Powder Properties **Lydia Lanzl**, Institute of Polymer Technology, Collaborative Research Center 814 – Additive Manufacturing, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany
16:20	16:35	Spherical Blend PBT-PC Particles for Selective Laser Sintering **Maximilian A. Dechet**, Institute of Particle Technology, Friedrich-Alexander Universität Erlangen-Nürnberg (FAU), Erlangen, Germany
16:35	16:50	Thermal rounding of particles in a downer reactor: Direct vs. indirect heating **Juan Sebastian Gomez Bonilla**, Institute of Particle Technology (LFG), Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen
16:50	17:05	Cork-based filaments for Additive Manufacturing: the use of cork powder residues from stoppers industry **Sara Silva**, School of Design, Management and Production Technologies, Aveiro Institute of Materials (CICECO), University of Aveiro, Oliveira de Azeméis, Portugal

AM PROCESS - METALS