ETH zürich

MaP Competence Center for Materials and Processes

additivETH –
AM mini-symposium / pitch event

Wednesday, 11 April 2018
13.00-18.30
ETH Zentrum

additivETH is a novel platform supporting capacity build-up and fostering collaborations in Additive Manufacturing across ETH Zurich. More info and regsitration at www.map.ethz.ch/news-events/additivETH

Program

Time	Program
13:00	**Welcome by Christofer Hierold (ETH Zurich Delegate SFA Advanced Manufacturing (SFA-AM))**
13:05	**Kunal Masania, André Studart (Complex Materials, MATL)** 3D printing of hierarchical materials across length scales
13:15	**Jean-Christophe Leroux (Drug Formulation & Delivery, CHAB)** 3D printed drug formulations
13:25	**Yinyin Bao (Drug Formulation & Delivery, CHAB)** Novel materials for producing biodegradable 3D printed devices
13:30	**Ralph Müller (Laboratory for Bone Biomechanics, HEST)** 3D bioprinting of bone - from cells to organoids
13:40	**Marina Rubert (Laboratory for Bone Biomechanics, HEST)** Personalized 3D bioprinted bone organoids for patient-specific therapeutic treatment
13:45	**Jianhua Zhang (Laboratory for Bone Biomechanics, HEST)** Mechanical stiffness of 3D bioprinted hMSCs-laden scaffolds influences cell mineralization, proliferation and differentiation in a static bone bioreactor
13:50	**Felicitas Flohr (Laboratory for Bone Biomechanics, HEST)** Biomimetic in vitro osteocyte models fabricated by two photon polymerization direct laser writing
13:55	**Philipp Fisch (Tissue Engineering & Biofabrication, HEST)** Bioprinting – Advanced Bioinks and Novel Extrusion Systems
14:00	**5' Bio-Break**
14:05	**Lucio Isa (Interfaces, Soft Matter and Assembly, MATL)** Sequential capillary assembly: an AM method at the micro and nanoscale
14:15	**Laura Alvarez Frances (Interfaces, Soft Matter and Assembly, MATL)** Sequential capillary assembly of responsive active materials: challenges and opportunities
14:20	**Patrick Rohner (Thermodynamics in Emerging Technologies (LTNT), MAVT)** The nanoengineering capabilities of direct electrohydrodynamic printing
14:30	**Tomaso Zambelli (Biosensors & Bioelectronics, ITET)** electrochemical 3D printing of metal microstructures
14:40	**Ralph Spolenak (Laboratory of Nanometallurgy, MATL)** The three Ms of Additive Manufacturing: Multi – Micro – Metal
14:50	**Jona Engel (Laboratory of Nanometallurgy, MATL)** Adding Rescilence with Metal Matix Composites
14:55	**Leopold Berger (Metal Physics and Technology (LMPT), MATL)** Out of equilibrium microstructure of Mg-alloys produced by selected laser melting

15:05	**Fabian Soffel (Machine Tools and Manufacturing (IWF), MAVT)** Direct Metal Deposition (DMD) at IWF/ETH
15:10	**Kevin Florio (Machine Tools and Manufacturing (IWF), MAVT)** Direct SLM of ceramics
15:15	**Bastian Telgen (Mechanics and Materials, MAVT)** From strong trusses to guided waves: computational challenges in mechanical metamaterials
15:25	**35‘ Coffee-Break & Matchmaking**
16:00	**Tino Stankovic (Engineering Design and Computing (EDAC), MAVT)** Taking advantages of 3D printing with computational methods and tools
16:10	**Adriaan Spierings (icams SLM, inspire)** AM research at inspire icams – an overview
16:20	**Thomas Bauer (icams SLM, inspire)** Magnetic Properties of SLM produced parts
16:25	**Francesco Sillani (icams SLM, inspire)** Surface Analytics of AM parts
16:30	**Philipp Stoll (icams SLM, inspire)** AM parts with integrated sensors
16:35	**Marc Vetterli (icams SLS, inspire)** Fundamentals of powder behaviour for Laser Sintering of polymers (LS)
16:40	**Christoph Klahn, Mirko Meboldt (Product Development (pd|z), MAVT)** Challenges of Implementing AM of Series Production
16:50	**Filippo Fontana (Product Development (pd|z), D-MAVT)** Understanding the Industrial Value of AM
16:55	**Julian Ferchow (Product Development (pd|z), D-MAVT)** Development and validation of a design guideline for optimized surface finishing of complex Internal structures for SLM produced parts
17:00	**Manuel Biedermann (Product Development (pd|z), D-MAVT)** Design automation for AM
17:05	**5’ Bio-Break**
17:10	**Paolo Ermanni (Composite Materials and Adaptive Structures (CMAS), D-MAVT)** potential and challenges of AM-CFRP-technologies
17:20	**Sampada Bodkhe (Composite Materials and Adaptive Structures (CMAS), D-MAVT)** AM of smart composite structures
17:25	**Benjamin Dillenburger (Digital Building Technologies (dbt), D-ARCH)** Printing & Building
17:35	**Pietro Odaglia (Digital Building Technologies (dbt), D-ARCH)** Binderjet 3D Printing in Construction
17:40	**Patrick Bedarf (Digital Building Technologies (dbt), D-ARCH)** Robotic Foam Extrusion
17:45	**Hyunchul Kwon (Digital Building Technologies (dbt), D-ARCH)** Digital Composites
17:50	**Lex Reiter (Physical Chemistry of Building Materials D-BAUG)** Controlling the fluid to solid transition for AM processes with concrete
17:55	**Vera Voney (Sustainable Construction, D-BAUG)** Geopolymers as inorganic binder in 3D printing in construction
18:00	**Networking-Apero**

Questions? For further information, please send us an email