The 16th International Conference on Flow Processes in Composite Materials

Day 2: Wednesday, January 15, 2025

Morning Keynote: Prof. Simon Bickerton (The University of Auckland, New Zealand)

Session I "Flow in Sustainable Manufacturing"

Session I Chair: Yu Dong, David May

Time	Presentation & Author(s)
8:00	All / Mingle
8:30 - 9:20	**Keynote: Prof. Simon Bickerton, Plasma enhanced processing of polymer-polymer and fibre-polmer thermoplastic composites (The University of Auckland, New Zealand)**
9:20- 9:40	Process optimization of composite pressure vessel using liner-assisted resin transfer molding of reactive thermoplastic resin **(Biltu Mahato, Luxembourg Institute of Science and Technology, Luxembourg)**
9:40 - 10:00	Sustainable composite materials for marine applications **(Mohammed Loukil & Marie Jonsson , Linkoping University, Sweden)**
10:00 - 10:30	**Coffee Break**
10:30 - 10:50	Formulating and multi-processing of thermally conductive peek composites with selective integration of ceramic fillers for advanced aerospace applications (**Burcu Sanar Okan, Sabanci University, Turkey**)
10:50 - 11:10	Influence of the surface modification of a basalt fiber on the in-plane permeability at two scales: the tow and the fibrous preform (**Pierre-Jacques Liotier, IMT Mines Ale, France**)
11:10 - 11:30	Vacuum-assisted through-thickness melt impregnation of thermoplastic composites (**Martin Lambrechtse-Reid, The University of Auckland, New Zealand**)
11:30 - 11:50	Enhancing sustainability in large format additive manufacturing: real-time rheological monitoring and in-situ flow control for recycled ABS-GF **(Javier Bas Bolufer, Universitat Politècnica de València, Spain)**
11:50 - 12:10	Mechanical and self-sensing performance of selectively laser sintered CNT/PA12 honeycombs subject to monotonic and cyclic compression **(Andreas Schiffer, Khalifa University, UAE)**
12:10 - 12:30	Deconsolidation in thermoplastic laminates under infrared radiations **(Regis Vaudemont, Luxembourg Institute of Science and Technology, Luxembourg)**
12:30 - 13:30	**Lunch/Poster Session**

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Afternoon Keynote: Prof. Veronique Michaud (EPFL, Lausanne, Switzerland)

Session II "Flow Modeling & Simulations II"

Session II Chair: Baris Caglar, Pierre-Jacques Liotier

Time	Presentation & Author(s)
13:30 - 14:20	**Keynote: Prof. Veronique Michaud, Energy efficient processing of composites by frontal polymerization of epoxies (EPFL, Lausanne, Switzerland)**
14:20 - 14:40	Machine learning based flow velocity field prediction in large 3D fibrous microstructures **(Stefano Cassola, Leibniz-Institute, Germany)**
14:40 - 15:00	Machine learning proposal for fiber orientation prediction in large format extrusion additive manufacturing **(Cesar Garcia, Universitat Politècnica de València, Spain)**
15:00 - 15:30	**Coffee Break**
15:30 - 16:10	**Lab Tours**
16:10 - 16:30	Numerical parametric study of a wavy thin channel thermoplastic melt impregnator for carbon fibre reinforced prepreg production **(Maximilain Pitto, The University of Auckland, New Zealand)**
16:30 - 16:50	Multiphysical process modeling approach for vacuum bag only prepregs: integration of resin flow, consolidation and heat transfer **(Hatice Sas, Sabanci University, Turkey)**
16:50 - 17:10	A rate dependent visco-hyperelastic model for compaction response of 3D woven fabric (**Siddhesh Kulkarni, Khalifa University, UAE**)
17:10 - 17:30	Manufacturing, characterization, and modeling of graphene-based multifunctional composites (**Noora Alahmed, Khalifa University, UAE**)
18:30	**Banquet (Fairmont Hotel Abu Dhabi)**