Program

Day 1 - September 18th 2024

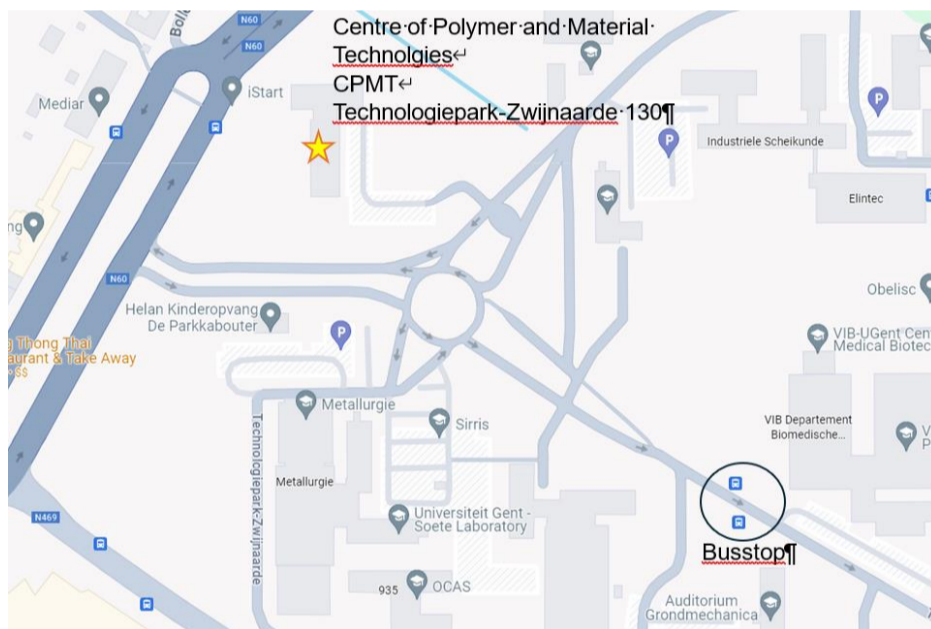|	
15:00 – 17:00	**Registration + welcome coffee** @ Centre for Polymer and Material Technologies + **Visit CPMT-facilities with sponsor demonstrations**
17:00 – 18:30	**Opening reception** @ Centre for Polymer and Material Technologies

Venue Day 1

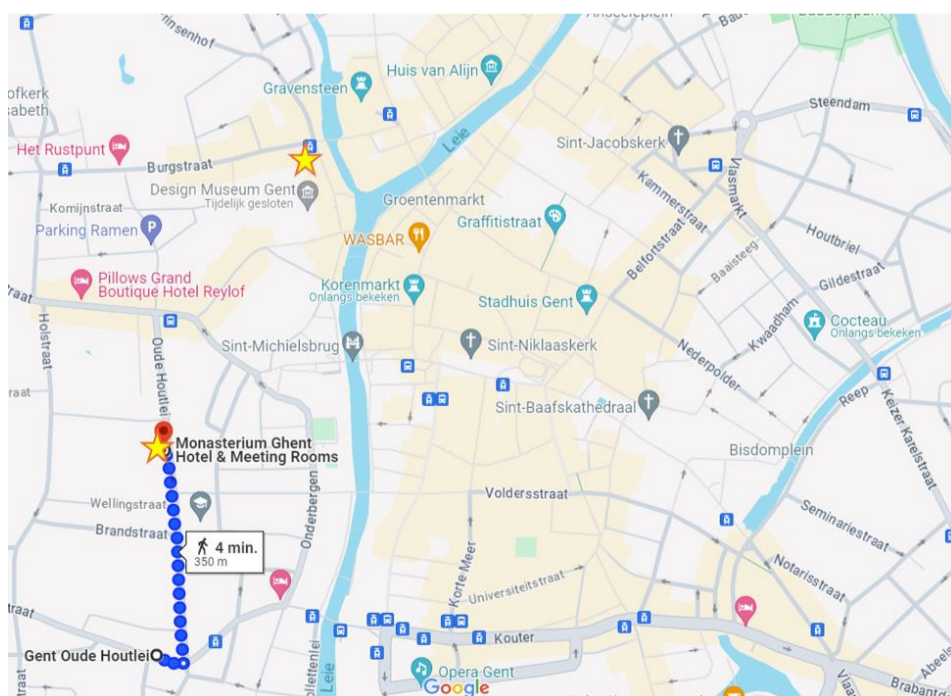Centre for Polymer and Material Technologies (CPMT)

Adress: Technologiepark 130, B-9052 Zwijnaarde, Belgium

Venue Day 2 & 3

Monasterium PoortAckere

Adress: Oude Houtlei 56, 9000 Gent, Belgium

Day 2 - September 19th 2024

Time	Room 1	Room 2
08:30 – 09:00	**Registration**	
09:00 – 09:20	**Opening**	
09:20 – 10:00	**Plenary -** Room 1	
	Circularity indicators to assess the circularity in plastic products across different industries and applications – prof. Carla Isabel Domingues Correia Martins (UMinho)	
10:00 – 11:00	**Parallel Sessions**	
	Room 1 **Polymer Recycling 1**	Room 2 **Polymer Processing Simulation 1**
10:00	Single screw vs Twin screw extrusion of post-consumer PP packaging waste - Sam Haenen (KULeuven)	Coupled Matrix Monte Carlo Modeling to Support Polymeric Composite Production, Polymer Modification and Recycling - Yoshi Marien (Ugent)
10:20	Investigation of the silver streaks dependence on process conditions in the injection molding of post-consumer recycled polypropylene - Ana Bortoletto (UoP)	Optimization of Injection Molding using AI: Numerical Modelling and Surrogate Models based on ANN - Antonio Gaspar Cunha (UoM)
10:40	Upcycling of regenerates and injection moulding through a new technological approach - Zahra Shahroodi (ULeoben)	Numerical analysis of conformal cooling channels for small injection moulding inserts produced by additive manufacturing - Ana Carina Lopes (UoM)
11:00 – 11:30	**Coffee**	
11:30 – 12:30	**Parallel Sessions**	
	Room 1 **Polymer Recycling 2**	Room 2 **Polymer Processing Simulation 2**
11:30	Material Characterisation of Industrial Textile Waste – Ivica Duretek (ULeoben)	Development of a theoretical prediction model for coefficient of friction - Angela Rodrigues (UoM)
11:50	Recycling the unrecyclable: Analyses of recycling opportunities in the winter sport industry - David Zidar (ULeoben)	Micro Injection molding of polypropylene parts: morphology distribution dependence on the molding conditions – Sara Liparoti (UNISA)
12:10	Virgin/recyclate Blends Performance Improvements for Rotomoulding – Peter Martin (QUB)	New approach to design conformal cooling channels (CCC) through 2D simulation - Daniel Porto (UFSC)
12:30 - 13:30	**Lunch Break**	
13:30 – 14:10	**Plenary -** Room 1	
	From melt- to solid-stage polycondensation: how to revolutionize the design of sustainable polymers with advanced properties – prof. Jean-Marie Raquez (University of Mons)	
14:10 – 15:10	**Parallel Sessions**	
	Room 1 **Developments in polymer processing 1**	Room 2 **Sustainable Use of Polymers**
14:10	Connecting Experimental and modeling approach for grafting of poly(lactic acid) during reactive extrusion - Simon Debrie (UGent)	Thermoforming of biocomposites with agrifood wastes and essential oils - Ana F. Costa (UoM)
14:30	Developing Recycling Strategies for Expanded Polystyrene Packaging – Mariana Vala (UoA)	Enabling Closed Loop Plastics Processing - Tiago E. P. Gomes (UoA)
14:50	Correlation of Stereo DIC and Thermographic Imaging to Monitor Vacuum-Assisted Thermoforming of Thermoplastic Sheets - Rasoul Varedi (KULeuven)	Development of an underwater pelletizer for obtaining extruded recycled expanded polystyrene beads - Carlos M. Correia (UoA)
15:10 – 15:40	**Coffee**	
15:40 – 16:10	**Plenary -** Room 1	
	Plastics Circularity: Fundamentals and Innovation Challenges - Herman Van Roost (Styrenics Circular Solutions)	
16:10 – 17:30	**Parallel Sessions**	
	Room 1 **Developments in polymer processing 2**	Room 2 **Polymer Rheology**
16:10	Development of a production methodology based on rheological parameters for robotic extrusion additive manufacturing of thermoplastic materials - Artur Costa (UoM)	Experimental viscosity measurements on gas-laden polymer melts - Ward A. R. Vandaele (KULeuven)
16:30	Insights into kinetics and mechanism of polymerization reactions via inline Raman spectroscopy - Stanislav Kasakov (ThermoFischer)	Advancing Mechanical Performance of 3D Printed Lattice Structures via Rheological Optimization: A Doehlert Experimental Design Study - Laia Farras Tasias (UGent)
16:50	Long chopped natural fiber biocomposites: Micro-Processing and characterization - Nursel Karakaya (Xplore)	Comparative study on PA12 and PA11 degradation for HP Multi Jet Fusion process - Chiara Fiorillo (UGent)
17:10	Morphology, conformation, and thermal-mechanical properties development in solid-state processed Polymer materials - Davide Nocita (QUB)	Additive Manufacturing sensor design for energy harvest and action recognition – Maofan Zhou (UGent)
17:30	**End of conference day 2**	
19:00	**Conference Dinner**	

Day 3 - September 20th 2024

Time	Room 1	Room 2
08:30 – 09:00	**Registration**	
09:00 – 09:40	**Plenary -** Room 1	
	3D Printing of Polymer Covalent Adaptable Networks – prof. Hesheng Xia (Sichuan University)	
09:40 – 11:00	**Parallel Sessions**	
	Room 1 **Additive Manufacturing 1**	Room 2 **Moulds and Mould Making Innovations A**
09:40	Mechanical Recycling and stabilization of ABS from post-consumer Electric and Electrical Equipment (EEE) waste for filament production for FFF applications - Christina Podara (NTUA)	Assessing Geometric Deviations in Plastic Parts: A Study between Conventional and Conformal Cooling Channels in Metal Molds Produced by Additive Manufacturing - Alexandre M. Popiolek (UFSC)
10:00	A preliminary study on the flow-induced crystallization phenomenon in 3D printing of Polyvinylidene fluoride - Erika Lannunziata (UTorino)	Balancing heat extraction rates on injection moulding tools through smart temperature control design - Sofia B. Rocha (UoA)
10:20	Charaterization and Computational modelling of 3D printed structure via fused filament fabrication - Yiyun Wu (UoA)	Optimizing Ejection of PLA-Based Compounds from Hot Core-Shell Molds: Experimental Investigation and Process Modelling - Hadi Saniei (UNISA)
10:40	L-PBF of aluminium: mass reduction and hybrid manufacturing of an aeronautic part - António J. Pontes (UMinho)	Developments in the Rotational Moulding of Hydrogen Tank Liners – Alex Pritchard (QUB)
11:00 – 11:30	**Coffee**	
11:30 – 12:30	**Parallel Sessions**	
	Room 1 **Additive Manufacturing 2**	Room 2 **Moulds and mould making innovations B: Hybrid Moulds**
11:30	Design for additive manufacturing - Alvaro Sampaio (Uminho)	Influence of different surface coatings on polymeric inserts for hybrid injection molding of reinforced PBT - Sérgio J. Rodrigues (UoM)
11:50	Process and material guidelines for large-scale additive manufacturing in part production: a case study between PP and ABS - Afonso Santos (Uminho)	Study of thermoplastics polymers applied to the extrusion additive manufacturing for naval industry moulds - P.J. Novo (PoL)
12:10	PLLA phase study by Fused Filament Fabrication - Artur Beata (UoA)	Investigation of the injection molding process using different concepts of molds: i) conventional cooling, ii) conformal cooling, iii) molds with high thermal conductivity (CuBe) - Janaína de Carvalho (UFSC)
12:30 – 13:30	**Lunch Break**	
13:30 – 14:10	**Plenary -** Room 1	
	Hybrid flax and self-reinforced PLA (polylactic acid) non-woven preform for lightweight – Chung-Hae Park	
14:10 – 15:10	**Parallel Sessions**	
	Room 1 **Trends in Product Development 1**	Room 2 **Polymeric Composites 1**
14:10	Study of pine resin collection bag properties to develop a more environmentally friendly system - Rita Fonseca (PoL)	Exploring the Thermal and Mechanical characteristics of Polymers with Recyclable Fillers: A Case Study – Pedro Martinho (PoL)
14:30	How do we go from PO (Polyolefins) in PMD bags in Belgium to recycled products - Veerle Balcaen (ECOO)	Manufacturing of PA-based filaments reinforced with chopped carbon fibres for 3D printing applications - Artemis Kontiza (NTUA)
14:50	Advanced design of meta-structures through additive manufacturing: A Review - João Ferreira (UoA)	Biopolymer filament with coffee silver skin for Fused Filament Fabrication (FFF) printing - Ana C. Machado (UoM)
15:10 – 15:40	**Coffee**	
15:40- 16:20	**Parallel Sessions**	
	Room 1 **Trends in Product Development 2**	Room 2 **Polymeric Composites 2**
15:40	PLA degradation during single screw extrusion: predicting the effect of PLA-grade, die geometry and screw design on the molecular weight - Ineke Velghe (KULeuven)	Sustainable carbon fiber precursors produced from lignin blended with biobased polyamides - Sofie Huysman (Centexbel)
16:00	Design and Development of a Capillary Blood Collection Device for Global Disease Diagnosis and Monitoring - José Almeida (Uminho)	Design For Manufacturing – The Integrated Workflow - Victor Tsai (Simpatec)
16:20-16:40	**Closing ceremony PPI 2024**	