FOAMS® 2025 Preliminary Program

DAY 1: Thursday October 2, 2025

8:00	8:05	Welcome to FOAMS 2025 – **Ernesto Di Maio,** Conference Chair	
8:05	**8:35**	Keynote: Title TBD – **Enrico Troisi, SABIC**	
	SESSION 1 : FOAM CIRCULAR ECONOMY		**Moderator: Cristina Saiz-Arroyo, CellMat Technologies**
8:35	**8:55**	Valorization of undervalued mixed color rPET by supercritical CO2-assisted extrusion foaming. **Daniel Vadas, Cidaut, Spain**	
8:55	9:10	Microwave assisted foaming of acrylated epoxydized soybean oil **Salvatore Iannace, SCITEC-CNR, Milan, Italy**	
9:10	9:25	Reuse of ground polyurethane foam and the granulated composite of polyurethane reinforced with glass fiber **Michele Limuti, Cannon Afros, Italy**	
9:25	9:40	Study and development of fully recyclable and very light Vacuum Insulated Panels based on open-cell foam and end-of-life ground foam **Simone Bechi, Cannon Afros, Italy**	
9:40	10:15	Coffee Break / Exhibit	
	SESSION 2: SUSTAINABLE AND BIOBASED FOAMS		**Moderator: Judith Martin, U. Valladolid, Spain**
10:15	**10:35**	Title TBD – **Makrina Chairopoulou, adidas**	
10:35	**10:55**	AlgiFoam : an innovative bio-based foam with outstanding properties **Benjamin Gallard, Rodolphe Sonnier, Ecoles des Mines d'Alès, France**	
10:55	**11:15**	Forest-based biodegradable foam for thermal insulation **Mónica Simões, Alma Science, Aveiro, Portugal**	
11:15	11:30	Characteristics of novel bio-based foams from PLA-copolymers with enhanced flexibility and elasticity **Christian A. Backhaus, Fraunhofer Institute for Chemical Technology, Germany**	
11:30	11:45	PLA/CNC nanocomposite foams produced by supercritical CO2 method **Ana Beatriz Valim Suquisaqui, U. São Carlos, São Paulo, Brazil**	
11:45	12:00	Influence of chemical chain modification on the foamability of poly(hydroxyalkanoates) **Janne-Constantin Albrecht, Fraunhofer Institute for Chemical Technology, Germany**	
12:00	13:30	Lunch	
	SESSION 3: FOAM SCIENCE AND MODELING		**Moderator: Ernesto Di Maio, U. Naples Federico II, Italy**
13:30	**13:50**	Visual observation and modeling of heterogeneous bubble nucleation in physical polymer foaming **Kentaro Taki, Kanazawa University, Japan**	
13:50	**14:10**	Unveiling the true three-dimensional structure of nanocellular polymers and automatizing their characterization using neural networks **Jorge Torre-Ordás, U. Valladolid, Spain**	
14:10	**14:30**	The role of the critical radius in expanded polypropylene processing **Chul Park, U. Toronto, Canada**	
14:30	14:45	Optimizing computational accuracy in polymer foam bubble growth simulation **Shu-Kai Yeh, NTUST, Taiwan**	
14:45	15:00	Study of the influence of supercritical nitrogen content on the microstructure and creep behavior of HDPE foams produced by MuCell injection molding process **Achref Elhasni, INSA Lyon**	
15:00	15:15	New insights into the molecular confinement and ageing of nanocellular Polymers **Javier Pinto, Jorge Torre, U. Valladolid, Spain**	
15:15	15:50	Coffee Break / Exhibit	
	SESSION 4: FORMULATIONS AND ADDITIVES		**Moderator: Shu Kai Yeh, NTUST, Taiwan**
15:50	**16:10**	Title TBD – **Ingo Bellin, BASF**	
16:10	**16:30**	Halogen-free and sustainable FR solutions for foams **Micaela Lorenzi, GreenChemicals, Italy**	
16:30	16:45	Rheology and foaming of linear and branched polyolefins **Salvatore Costanzo, U. Naples, Italy**	
16:45	17:00	Foam, antifoam and foam maker ... the multifaceted silicone technology **Alexis Bobenrieth, DuPont, Belgium**	
17:00	17:15	Influence of nucleating agents on the foam morphology of high consistency silicon rubber **Timo Hofmann, Uni Kassel, Germany**	
17:15	17:30	Rheological Characterization of Flow-Induced Crystallization in Extensional Flow: Implications for Polymer Foaming **Mahmoud Embabi, U. Toronto, Canada**	
18:00	21:00	Exhibitor reception & Poster session	

DAY 2: Friday October 3, 2025

8:00	**8:30**	"TPM&F Outstanding Achievement Award" presentation and keynote (award presented by Prof. Chul Park)
	SESSION 5: ENHANCED MECHANICAL PROPERTIES	**Moderator: Chul Park, U. Toronto, Canada**
8:30	**8:50**	Modeling and mechanical response of PEBA foam microstructures under compression **Edouard Duriez, Arkema, France**
8:50	**9:10**	The ballistic application of microcellular TPU **Judith Martín-de León, U. Valladolid, Spain**
9:10	**9:30**	Aging mechanisms in EVA foams reinforced with bio-sourced nanofillers: Insights from X-ray microtomography **Dimitri Ferré Sentis, Decathlon, France**
9:30	9:45	Polypropylene-based formulations to produce lightweight parts with high-impact resistance **Cristina Saiz-Arroyo, Cellmat / Dynasol, Spain**
9:45	10:20	Coffee Break / Exhibit
	SESSION 6: FOAMING PROCESS INNOVATION	**Moderator: Miguel Angel Rodriguez Perez, U. Valladolid, Spain**
10:20	**10:40**	Foam extrusion – a controlled process **Krischan Jelltsch, Promix Solution AG, Switzerland**
10:40	**11:00**	New experimental approaches to explore the dynamics of expansion and relaxation in foaming with physical blowing agents: A unique foaming mold with expandable boundaries **Erdogan Kiran, Virginia Tech**
11:00	11:15	New polyamide foam extrusion process **Geerds, Jan, Fraunhofer Institute for Chemical Technology, Germany**
11:15	11:30	New strategies to optimize the foaming process in expanded polypropylene (EPP) **Victoria Bernardo, CellMat Technologies, Spain**
11:30	11:45	A new approach for the enhanced insulation of water heaters **Andrea Castelnovo, Cannon Tipos, Italy**
11:45	12:00	Development and processing of biobased TPU bead foams **Robert Lang, Fraunhofer Institute for Chemical Technology, Germany**
12:00	13:30	Award Luncheon – Students awards and Poster competition results
	SESSION 7: FUNCTIONAL AND ANISOTROPIC FOAMS	**Moderator: Erdogan Kiran, Virginia Tech, USA**
13:30	**13:50**	Mechanical and morphological characterization of polystyrene anisotropic foams **Dino Ferri, Versalis S.p.A., Italy**
13:50	**14:10**	Modeling and production of structure- and density-layered foams **Maria Laura Di Lorenzo, Institute for Polymers, Biomaterials and Composite, CNR, Italy**
14:10	14:25	Investigating the mechanics of graded polymer foams via in-situ uniaxial compression combined with synchrotron radiation x-ray microcomputed tomography: insights across multiple scales **Paolo Iaccarino, Scuola Superiore Meridionale, Naples, Italy**
14:25	14:40	Dual drug release mechanism in graded PCL foams **Paolo Trucillo, University of Naples Federico II, Italy**
14:40	14:55	Developing electrochemical sensors from electrospun microfibers by gas dissolution foaming **Suset Barroso-Solares, U. Valladolid, Spain**
14:55	15:10	Polyester aerogels as a carrier of drug-saturated hydrogel **Anna Trusek, Wroclaw U., Poland**
15:10	15:45	Coffee Break / Exhibit
	SESSION 8: FORMULATIONS AND ADDITIVES	**Moderator: Stephane Costeux, DuPont, USA**
15:45	**16:05**	In-situ foam 3D-printing of lightweight structures utilizing a physically loaded, biobased filament and the manufacturing process of it **Moritz Becker, Fraunhofer Institute for Chemical Technology, Germany**
16:05	**16:25**	Foam Additive Manufacturing: tailored foam structures produced via material extrusion **Andrea Detry , U. Naples Federico II**
16:25	16:40	Hierarchical porous PEEK via combined physical foaming and additive manufacturing: bringing circularity to advanced engineering materials **Lucía Doyle, IMDEA Materials**
16:40	16:55	The influence of nozzle diameter on the foaming mechanism in in-situ foam 3D printing **Márton Tomin, Budapest U of Technology & Economics, Hungary**
16:55	17:10	Foamablity of thermoplastic polyurethanes: influence of processing conditions **Lorenzo Miele, University of Naples Federico II, Italy**
17:10	17:15	Best paper award – **Gary Wilkes**
17:15	17:20	Adjourn FOAMS 2025 and FOAMS 2026 announcement – **Ernesto Di Maio**