

MONDAY 21 APRIL

12noon	Registration
1:30-2:30pm	Executive meeting - Decima Glenn Room (260-310)
2:30-3:00pm	Afternoon tea
3-4:30pm	Executive meeting and International representatives - Decima Glenn Room (260-310)

TUESDAY 22 APRIL

8am	Registration					
9am-9:30am	Conference opening - Fisher & Paykel Auditorium					
9:30-10:20am	Plenary 1					
10:20-10:50am	Morning tea					
10:50am-12:10pm Session 1.1	Polymer Composites Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Modelling and Simulation OGGB 4, 260-073	Additive manufacturing OGGB 5, 260-051	Biopolymers Case Room 2, 260-057	Morphology and Structural Development Case Room 3, 260-055
12:10-1pm	Lunch					
1pm-1:50pm	Plenary 2 - Fisher & Paykel Auditorium					
2-3:30pm Session 1.2	Polymer Composites Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Modelling and Simulation OGGB 4, 260-073	Additive manufacturing OGGB 5, 260-051	Foams and Membranes Case Room 2, 260-057	Morphology and Structural Development Case Room 3, 260-055
3:30-4pm	Afternoon tea					
4-5:30pm Session 1.3	Polymer Composites Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Fibres and Films OGGB 4, 260-073	Additive manufacturing OGGB 5, 260-051	Foams and Membranes Case Room 2, 260-057	Injection moulding Case Room 3, 260-055
6-8pm	Welcome function and Poster Session					

WEDNESDAY 23 APRIL

8:30-9:20am	Plenary 3 - Fisher & Paykel Auditorium					
9:20-10:30am Session 2.1	Special Symposia Lecture Theatre, 260-098	Nanotechnology OGGB 3, 260-092	Industry 4.0 and AI OGGB 4, 260-073	Rubbers and elastomers OGGB 5, 260-051	Biopolymers Case Room 2, 260-057	Rheology and characterisation Case Room 3, 260-055
10:30-11am	Morning tea					
11am-12:30pm Session 2.2	Polymer Composites Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Polymerisation and synthesis OGGB 4, 260-073	Extrusion OGGB 5, 260-051	Polymer Blends and Alloys Case Room 2, 260-057	Mixing and Compounding Case Room 3, 260-055
12:30-1:30pm	Lunch Editorial board meeting - Case Room 2, 260-057					
1:30-2:20pm	Plenary 4 - Fisher & Paykel Auditorium					
2:20-3:40pm Session 2.3	Extrusion Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Modelling and Simulation OGGB 4, 260-073	Additive manufacturing OGGB 5, 260-051	Biopolymers Case Room 2, 260-057	Injection moulding Case Room 3, 260-055
3:40-4:10pm	Afternoon tea					
4:10-5:20pm Session 2.4	Polymer Composites Lecture Theatre, 260-098	Nanotechnology OGGB 3, 260-092	Modelling and Simulation OGGB 4, 260-073	Rubbers and elastomers OGGB 5, 260-051	Biopolymers Case Room 2, 260-057	Biomedical applications Case Room 3, 260-055

THURSDAY 24 APRIL

8:30-9:20am	Plenary 5 - Fisher & Paykel Auditorium					
9:20-10:20am Session 3.1	Industry 4.0 and AI Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Functional Additives and Reactive Processing OGGB 4, 260-073	Additive manufacturing OGGB 5, 260-051	Rubbers and elastomers Case Room 2, 260-057	Biomedical applications Case Room 3, 260-055
10:20-11am	Morning tea					
11am-12:30pm Session 3.2	Polymer Composites Lecture Theatre, 260-098	Fibres and Films OGGB 3, 260-092	Degradation, biodegradation and composting OGGB 4, 260-073	Injection moulding OGGB 5, 260-051	Foams and Membranes Case Room 2, 260-057	Biomedical applications Case Room 3, 260-055
12:30-1:30pm	Lunch Business Lunch - OGGB3, 260-092					
1:30-2:20pm	Keynote: Early Career Winner 2024 - Fisher & Paykel Auditorium					
2:20-3:50pm Session 3.3	Polymer Composites Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Modelling and Simulation OGGB 4, 260-073	Injection moulding OGGB 5, 260-051	Biopolymers Case Room 2, 260-057	Degradation, biodegradation and composting Case Room 3, 260-055
3:50-4:20pm	Afternoon tea					
4:20-5pm Session 3.4	Industry 4.0 and AI Lecture Theatre, 260-098	Circular Economy for Plastics and Recycling OGGB 3, 260-092	Polymerisation and synthesis OGGB 4, 260-073	Morphology and Structural Development OGGB 5, 260-051	Rheology and characterisation Case Room 2, 260-057	Biomedical applications Case Room 3, 260-055
7-11pm	Conference Banquet at the Auckland Museum (Buses depart from Owen G Glen Building from 5:15pm)					

FRIDAY 25 APRIL

1-2:30pm	Plenary 7: Lamda Award Winner 2025 & Keynote: Early Career Winner 2025 Fisher & Paykel Auditorium					
2:30-3pm	Afternoon tea					
3-4:30pm Session 4.1	Polymer Composites Lecture Theatre, 260-098	Functional Additives and Reactive Processing OGGB 3, 260-092	Modelling and Simulation OGGB 4, 260-073	Morphology and Structural Development OGGB 5, 260-051	Polymer Blends and Alloys Case Room 2, 260-057	Fibres and Films Case Room 3, 260-055
4:45-5:15pm	Conference Closing - Fisher & Paykel Auditorium					

TUESDAY 22 APRIL

8am	Registration					
9-9:30am	Conference opening - Conference chair: Johan Vereek ; President of PPS: Sadhan Jana - Fisher & Paykel Auditorium					
9:30-10:20am	Plenary - The ever increasing complexity of plastics innovation and manufacturing: A medical device manufacture's perspective. Andrew Somervell , Fisher & Paykel Healthcare - Chair: Johan Verbeek					
10:20-10:50am	Morning tea					
10:50am-12:10pm Session 1.1	Polymer Composites Lecture Theatre, 260-098 Chair: Umasankar Patro	Circular Economy for Plastics and Recycling OGGB 3, 260-092 Chair: Rudinei Florio	Modelling and Simulation OGGB 4, 260-073 Chair: Franco Costa	Additive manufacturing OGGB 5, 260-051 Chair: Shi-Jung Liu	Biopolymers Case Room 2, 260-057 Chair: Peter Halley	Morphology and Structural Development Case Room 3, 260-055 Chair: Ines Kühnert
10:50am	Self-reinforced thermoplastic polyurethane composite with excellent mechanical properties, heat resistance and sustainable recycling Gao, Xiulu. China	Transforming E-Waste into Flame-Retardant Fillers for Recycled LLDPE: A Path to Sustainable Innovation Jinfeng, Zhang. Canada	Predicting the orientation of flake pigments in injection-molded metallic polymer using smoothed particle hydrodynamics Sasayama, Toshiki. Japan	Scarless support removal in vat photopolymerization: towards enhanced surface and dimensional control Artemeva, Marina. Denmark	Development of plant polymers-based bioplastics/biocomposites for industrial applications Liu, Qiang. Canada	Suppression of the Skin-Core Structure of Poly(vinyl alcohol) Films to Improve the Mechanical and Optical Properties Han, Yanchun. China
11:10am	Processing of polymer based ionogels and their applications in flexible sensors Zhu, Yutian. China	Enabling the Recyclability of Industrial Waste EPDM via Twin Screw Extrusion Joosten, Liliana. France	Deriving equivalent shear viscosity of polymer melt under non-isothermal state using digital twin model of slit rheometry Chen, Jian-Yu. Taiwan	Development of Recyclable and Halogen-Free Flame-Retardant Powders for Laser-Sintering: Material Evaluation and Performance Enhancement Neitzel, Fabian. Germany	Elucidating the Pyrolysis Behaviour of Extracellular Polymeric Substances-based Biomaterials from Wastewater Sludge for Flame-Retardant Applications: Effects of Component Interactions Le, Tan. NZ	Visualization of Polymer Chain Scission during Melt Processing Using a Mechanochromic Probe Ito, Hiroshi. Japan
11:30am	Boosting Flame Retardancy of Polyolefin/CaCO ₃ composites reinforced with Halogen-Free Flame Retardants for Construction Materials Sundararaj, Uttandaraman. Canada	Innovative Recycling of Cross-linked Polyethylene: Regeneration and Reincorporation for Enhanced Circularity in Cable Industry Rigatelli, Benedetta. France	Detailed Boundary Layer CFD-Microsimulation of Mineral-Filled Polyamid 6 using ANSYS Rocky Buschmann, Jan. Germany	Additive Manufacturing of Polymer Covalent Adaptable Networks Xia, Hesheng. China	Alternative biobased polymer additives – a comparison of the stabilization efficiency of conventional antioxidants, biobased alternatives derived from existing biomass, and their extracts Hiller, Benedikt. Germany	Observation of Scratch Behavior of Polystyrene with Fluorescent Molecular Probe Yuki, Hayafuji. Japan
11:50am	High aspect ratio carbon nanotubes as tire tread rubber reinforcement toward improved fuel efficiency Rhue, Mason. USA	Sintering and Densification Behaviour of Virgin/Recyclate Blends for use in Rotomoulding Kelly-Walley, Jake. United Kingdom	Improvement of a Numerical Two-Phase Simulation Model for the Melting Process in Single-Screw Extruders Based on Experimental Investigations Knaup, Felix. Germany	Metal Nanoparticle Coating of 3D Printed PLA Structures Jin, Tingting. New Zealand	Influence of spirulina biomass addition on the polymer properties Becker, Daniela. Brazil	Crystallization behavior of polypropylene blends after shear flow Yamaguchi, Masayuki. Japan
12:10-1pm	Lunch					
1-1:50pm	Plenary - Fisher & Paykel Auditorium Multi-Component Technology and Material Combinations: Past and Future Ines Kühnert , Leibniz-Institute of Polymer Research - Chair: Simon Bickerton					
2-3:30pm Session 1.2	Polymer Composites Lecture Theatre, 260-098 Chair: Yongjin-Li	Circular Economy for Plastics and Recycling OGGB 3, 260-092 Chair: Maedeh Amirpour	Modelling and Simulation OGGB 4, 260-073 Chair: Mohammed Althaf Hussain	Additive manufacturing OGGB 5, 260-051 Chair: Shi-Jung Liu	Foams and Membranes Case Rm 2, 260-057 Chair: Takeshi Kikutani	Morphology and Structural Development Case Rm 3, 260-055 Chair: Nam Kyeun Kim
2pm Keynote sessions	Empowering Polymers with Multifunctionality: The Role of Graphene Nanoplatelets in Advanced Nanocomposites Ma, Jun. Australia	The conformational preference of dynamic crosslinker modulates the 'closed-loop' circular economy in polypropylene vitrimer Misra, Ashok. India	Leibniz Collaborative Excellence Project ML4SIM: AI and Digital Material Characterization Revolutionize Composites Process Simulation Duhovic, Miro. Germany	3D polymer powder printing by SAS: Selective Acoustic Sintering Anderson, Patrick. Netherlands	High Surface Area Polymer Gels For Oil-Water Separation Jana, Sadhan. USA	Revisiting structure-property relations in PP/HDPE blends: From processing to performance with recycled polyolefins Looijmans, Stan. Netherlands
2:30pm	Mechanical Recycling Strategies for Waste Sandwich Panels with Glass Fiber-Reinforced Polypropylene Outer Layers: Process Optimization and Fiber Length Preservation Mohammadkarimi, Shiva. Germany	Characterization and recycling potential of partially cross-linked EVA-foam scrap for orthopaedic insole manufacturing Shaik, Shameem Aktar. Germany	Assessing solids conveying in injection moulding machines using coupled numerical simulations based on the Discrete Element Method (DEM) and Multibody Systems (MBS) Landgraeber, Jan. Germany	Optimal Design of Soft Gripper Mechanisms Combining Finite Element Analysis and Machine Learning Park, Keun. Korea	Green Preparation of Biodegradable Polyester Foams with Supercritical Fluid Hu, Dongdong. China	Smart materials processed by spatial-temporal programming of polymer crystalline structures Pan, Pengju. China
2:50	Thermoelectric materials based on carbon nanoparticles for the utilization of process waste heat during photocatalytic reactions Gültner, Marén. Germany	Addressing the global plastics problem – value added adhesives derived from recycled plastics Oakley, Simon. New Zealand	Identification of a kinetic model for thermal oxidation of stabilized polypropylene Cruz, Camilo. Germany	Additive-Free Aqueous-Based Graphene Ink for 3D Printing Functional Aerogels Sundararaj, Uttandaraman. Canada	A novel semi-continuous preparation mode of ultra-low density thermoplastic polyurethane foam Chen, Yichong. China	New Processing Methods and Applications for Fluorinated Polymer Functional Membranes Guo, Shaoyun. China
3:10pm	Double-layer electromagnetic interference shielding materials with microcellular structure for low reflection Wang, Zixuan. China	Uncertainty in Reported Cost (Prediction), the Case of Plastics Recycling Van Camp, Nicola. Netherlands	Investigation the Influence of the Melt Rotation on the Fiber Orientation Variation in FRP Injection Molding Parts Huang, Chao-Tsai. Taiwan	Online Rheological Measurement in Screw Extrusion Additive Manufacturing for Improved Process Modelling Curmi, Albert. Malta	Multi-scale studies on CO ₂ bubble nucleation mechanism at polymer/metal interface for material recycling Taki, Kentaro. Japan	Morphological understanding and Comparative Analysis of HDPE/Starch-Based Blends Verberckmoes, Annabelle. Belgium
3:30-4pm	Afternoon tea					
4-5:30pm Session 1.3	Polymer Composites Lecture Theatre, 260-098 Chair: Evan Mitsoulis	Circular Economy for Plastics and Recycling OGGB 3, 260-092 Chair: Samuel Kenig	Fibres and Films OGGB 4, 260-073 Chair: Takeshi Kikutani	Additive manufacturing OGGB 5, 260-051 Chair: Chanelle Gavin	Foams and Membranes Case Room 2, 260-057 Chair: Volker Altstaedt	Injection moulding Case Room 3, 260-055 Chair: Franco Costa
4pm Keynote sessions	Feasibility study on radar-based monitoring of fiber reinforced composites during tensile testing Puch, Florian. Germany	Enhancing Plastic Waste Compatibilization: Universal dynamic crosslinkers for optimized recycling Roman, Allen. USA	Bio-mimic hydrogel fiber: Design of Spinning process and Construction of high performance Yan, Yurong. China	Design automation of 3D printed polymer products Diegel, Olaf. New Zealand	Advancing Polyimide Aerogels for Energy and Thermal Management Applications with AI-Enhanced Design Naguib, Hani. Canada	Comprehensive Cause Analysis of Injection Molding Anomaly by Integrated Capacitance-Pressure-Temperature Sensor Zheng, Wenjia. China
4:30	Interfacial enhancement and properties of the PTFE-based composite films Chen, Rong. China	Breaking the Unbreakable Bond: Towards Adhesives' Sustainable Future Dodiuk, Hanna. Israel	Efficient circularly polarized luminescence with dual-sided opposite chirality of polar liquid crystal template-induced perovskite nanofiber composites Lu, Mingyang. China	Influence of Filler Type and Volume Fraction on the Electrical Conductivity and Shore Hardness of TPU Composites in Fused Filament Fabrication Salm, Maximilian. Germany	The Effects of Ultra High Molecular Weight and CO ₂ Solubility on the Structure of PMMA Nanocellular Foam Yeh, Shu-Kai. Taiwan	Development and Analysis of Novel Freeform Conformal Cooling Channels in Additively Manufactured Injection Moulding Tools Clark, Rebecca. Malta
4:50pm	Mechanical performance of in-line plasma bulk modified PA6 and PP reinforced with plasma surface treated flax fibre Kim, Nam. New Zealand	Innovative Processes to Improve Polymer Properties - From Mechanical Recycling to Virgin Product Production Yao, Shigeru. Japan	Enhanced Hydrogen Spillover on Oriented PEDOT:PSS Fibers for Highly Sensitive Detection of H ₂ Mixed CO via Tunable Adsorption Sites Wu, Shiteng. China	Organic Neuromorphic Transistors Fabricated by Direct-Ink-Writing Huang, Ruiran. China	Microcellular foaming of high-hardness TPU/MOF nanocomposites through combined heterogeneous nucleation and gas enrichment effects Wang, Jun. China	Cavity balance improvement via automated gate location and flow leader optimization Porcher, Felipe. Germany
5:10pm	Non-destructive fiber-matrix adhesion measurement of glass fiber reinforced thermoplastic composite laminates using ultrasound Brandes, Philipp. Germany	Mild chemical recycling of fiber reinforced epoxy composites and utilization of the recyclate for preparation of new composites Zhang, Jinwen. USA	Passive Daytime Radiative Cooling film based on Sustainable biomaterial composites Manuspiya, Hathaikarn. Thailand	Isotropic cellular structure design strategies based on triply periodic minimal surfaces Daynes, Stephen. New Zealand	Phosphorylated Bacterial Cellulose-Poly(vinyl alcohol) Membrane for Enhanced Water Purification with High Efficiency Methylene Blue Adsorption Kocharat, Pornsuda. Thailand	Transfer learning to predict part quality for injection molding Huang, Ming-Shyan. Taiwan
6-8pm	Welcome function and Poster Session					

WEDNESDAY 23 APRIL

8:30-9:20am	Plenary - Fisher & Paykel Auditorium: Modelling Crack Propagation through Adhesives at Cryogenic Temperatures - Kim Thompson, Rocket Lab - Chair: Mark Battley					
9:20-10:30am Session 2.1	Special Symposia Lecture Theatre, 260-098 Chair: Julia Fehrer	Nanotechnology OGGB 3, 260-092 Chair: Luyi Sun	Industry 4.0 and AI OGGB 4, 260-073 Chair: Holger Fiedler	Rubbers and elastomers OGGB 5, 260-051 Chair: Volker Altstaedt	Biopolymers Case Room 2, 260-057 Chair: Pablo Raimonda	Rheology and characterisation Case Room 3, 260-055 Chair: Jesna Ashraf
9:20am Keynote sessions	Commercialization and Challenges in Shaping a Circular Economy for Plastics	Ethylene methyl acrylate copolymer (EMA) assisted dispersion of graphene nanoplatelets (GNP) in poly(ethylene terephthalate) (PET) McNally, Tony. United Kingdom	Digital Technologies: Catalysts for Advancing Polymer Research Ruckdaeschel, Holger. Germany	Design Strategies to Improve Thermo-mechanical Performance of TPUs Manas-Zloczower, Ica. USA	Reactively processed poly(butylene adipate terephthalate) composite-based multilayered films for sustainable packaging applications Ray, Suprakas. South Africa	Elucidating the effect of strain hardening on contraction flow of coextruded polymer melts using visualization and simulations Takeda, Keiko. Japan
9:50am		Integrative material characterization of crystalline nanocellulose reinforced filaments for fused-filament fabrication Wurzer, Stefan. Austria	Use of Machine Learning to Predict the Product Properties in the Cable Manufacturing Process Lee, John. South Korea	Review on FEM-based Fatigue Life Prediction Models for Dynamically Stressed Elastomers Ternes, Sabrina. Germany	Influence of fibre characteristics on PHA-based biocomposites properties Mathel, Vincent. Australia	Challenges in the Rheological Characterization of Heterophasic Thermoplastic Elastomers Wiessner, Sven. Germany
10:10am		Magnetic Field Assisted "Z" orientation of Nickel Particles along Microcolumns to Produce Thickness Functionalized Piezoelectric films on a Roll-to-Roll Manufacturing Platform Cakmak, Miko. USA	Can you listen to the sound of polymer melts? Ahn, Kyung Hyun. Korea	Defect Detection in Silicone Sealants via Ultrasonic Non-Destructive Testing and Data Analysis Wei Yang, Chung. Taiwan	Unlocking the Potential of Bio-Refinery Waste Humins for Functional Material Development: Esterification and Diels-Alder Reaction Strategies Kandemir, Dilhan. Belgium	Rheological behavior of nanostructured polymeric fluids with two-dimensional (2D) materials Andrade, Ricardo. Brazil
10:30-11am	Morning tea					
11am-12:30pm Session 2.2	Polymer Composites Lecture Theatre, 260-098 Chair: Mark Battley	Circular Economy for Plastics and Recycling OGGB 3, 260-092 Chair: Florian Puch	Polymerisation and synthesis OGGB 4, 260-073 Chair: Ashok Misra	Extrusion OGGB 5, 260-051 Chair: Gan-Ji Zhong	Polymer Blends and Alloys Case Room 2, 260-057 Chair: Jesna Ashraf	Mixing and Compounding Case Room 3, 260-055 Chair: Kentaro Taki
11:00 Keynote sessions	(Dis)advantage of melt-mixed thermoplastic polymer composites for energy generation through the thermoelectric effect Krause, Beate. Germany	Time-Dependent Mechanical Enhancement of Polylactic Acid Through Biaxial Cold Rolling Wnek, Gary. USA	Improved mechanical properties of bioderived and biodegradable polymers via block-copolymer synthesis from polyhydroxyalkanoates (PHAs) Kockler, Katrin. Australia	Reactive extrusion of biomass for value chemicals and solid biofuels Theobald, Beatrix. New Zealand	Journey from Processing to Recycling of Multilayer Waste Films: Main Challenges and Prospects with innovative approaches Khalid, Lamnawar. France	Study on Carbon Fiber Breakage in Blending Process Using Twin Screw Extruder Matsushita, Chihiro. Japan
11:30	Hierarchically ordered structure in thermally conductive polymer composites and its application Wu, Hong. China	Closing the Loop: University-Industry Collaboration for a Circular Plastic Economy Naebe, Minoo. Australia	Synthesis and characterization of PEG-based hydrogels for pollutant sequestration Grizzuti, Nino. Italy	Real-time prediction of melt pressure in polymer extrusion process integrating physics-informed neural networks and random forest Wu, Wenyu. China	Enhancement of Vibration Damping and Viscoelastic Properties of MABS Through Novel Polymer Blends with VDT and SEBS-g-MAH Compatibilizer Islam, Aminul. Denmark	Dispersive and distributive mixing effect of screw elements on the co-rotating twin-screw extruder Oldemeier, Jan Philipp. Germany
11:50	Linking Chemical Structure to Performance: Acrylates as a Styrene Replacement in Unsaturated Polyester Resins Max, Florian. Germany	From PP Waste to High-Quality Products – Comparing Contamination Levels of Different Waste Streams in Mechanical Recycling Processes Czaker, Sandra. Austria	MOF/Photopolymer Composites for Selective Adsorption of Cationic Dyes Zhang, J. Australia	Experimental determination of the degassing performance of twin screw extruders for the material system Methylmethacrylate in PMMA Biermann, Lars. Germany	Formation of rigid core-soft shell structure of polymer blends by reactive processing Li, Yongjin. China	Ultrasound-assisted extrusion of nanoparticles reinforced HDPE: Cavitation impact Demarquette, Nicole. Canada
12:10	Synergistic Anchoring Strategy of Liquid Metal with CuS and CNTs to Achieve Homogeneous Dispersion in Silicone Rubber for Efficient Solar Energy Harvesting and Motion Sensing Pan, Yang. China	Research on Recycling and Utilization of Waste Polymer Materials Difficult to be Regenerated by Solid State Shear Milling (S3M) Bai, Bing. China	Hydroxyester mediated epoxy vitrimer systems with improved recyclability Zhang, Jinwen. USA	The Design and Validation of Shape Forming Elements for Architected Composites Olanrewaju, Rebecca. USA	Anchoring Ties: Improving Environmental Stress Crack Resistance in recycled HDPE with a Styrenic Triblock Copolymer Khaki, Amir. Netherlands	Tuning Mechanical Properties of Acid-grafted Polyethylene Using Ionic Interaction Tavakoli, Negar. New Zealand
12:30-1:30 pm	Lunch & Editorial board meeting - Case Room 2, 260-057					
1:30- 2:20pm	Plenary - Fisher & Paykel Auditorium: Quality in Polymer Recycling: Science vs System - Kim Ragaert, Maastricht University - Chair: Jadranka Travas-Sejdic					
2:20-3:40pm Session 2.3	Extrusion Lecture Theatre, 260-098 Chair: Beatrix Theobald	Circular Economy for Plastics and Recycling OGGB 3, 260-092 Chair: Giada Lo Re	Modelling and Simulation OGGB 4, 260-073 Chair: Roberto Pantani	Additive manufacturing OGGB 5, 260-051 Chair: Carla Martins	Biopolymers Case Room 2, 260-057 Chair: Suprakas Sinha Ray	Injection moulding Case Room 3, 260-055 Chair: Florian Puch
2:20pm	Extrusion-based processing of cellulosic feedstocks for thermofomed packaging applications Wade, Kelly. New Zealand	Assessing the degradation level and stability of recycled polypropylene via chemiluminescence analysis Fiorio, Rudinei. Netherlands	Advanced Fan-Out Packaging Interface Strength Measurement and Hygro-Thermal Coupling Delamination Investigation Shih, Meng-Kai. Taiwan	Macro/Micro Synergistic Construction of Three-Dimensional Porous Piezoelectric Materials and Devices Li, Yijun. China	Thermoplastic polyesters in packaging applications: Tribute to furan-based polyesters Paszkievicz, Sandra. Poland	Evaluating Purgeability in Additive and Conventional Manifold Systems: An Experimental and Numerical Approach Schulz, Lucas. Germany
2:40pm	Applications of Twin-Screw Extruder with Ultra-High Length-to-Diameter Ratio in Polymer Mixing Wang, Jian. China	Controlling Silicone Degradation - A First Step in Circularising the Silicone Economy. Battley, Andrew. New Zealand	Packing Frustration and Polymer Glass Formation Xu, Wen-Sheng. China	A Low-cost Pellet Extruder for Material Extrusion-based Additive Manufacturing Chan, YukLun. New Zealand	Development of starch film for food packaging Gauthier, Emilie. Australia	Data-driven optimization of part quality and energy consumption during injection molding Müller, Dennis. Germany
3:00	Design and Modelling of an Advanced Filament Extrusion Die with In-line Rheological Analysis Tikhani, Farimah. Canada	Circular bio-based polymers for the construction industry Holzer, Clemens. Austria	Development of a model for the temperature response of melting surfaces in ultrasonic heating systems Inoue, Tamotsu. Japan	Characterisation of process-induced defects in strut-based polymeric lattice structures Amirian, Amirali. New Zealand	Antioxidant biopolymers for prolonging food shelf life utilizing tannins derived from grape marc Kilmartin, Paul. New Zealand	Improvement of injection molding simulation by application of modeled pressure-dependent viscosity data Hanselle, Felix. Germany
3:20	Producing TPU-TPU/SWCNT multi-layered composites using melt multipliers Covas, Jose. Portugal	Post-consumer recycling of PA66-GF Composites from Electrical Waste: Performance Retention through Accelerated Aging Models Salvi, Alessandro. Italy	Development of physics-informability measurement in resin transfer molding and process surrogate modeling Kao, Yikai. Taiwan	Improved FGF 3D printing using biocarbon additive Deceur, Sofie. Belgium	Impact of electron beam irradiation on blends made from P3HB and P3HB4HB Krieg, David. Germany	Determination of pVT data of thermoset moulding compounds for the simulation of the warpage behavior Schmeißer, Nils. Germany
3:40-4:10pm	Afternoon tea					
4:10-5:20pm Session 2.4	Polymer Composites Lecture Theatre, 260-098 Chair: Andreas Leuteritz	Nanotechnology OGGB 3, 260-092 Chair: Tony McNally	Modelling and Simulation OGGB 4, 260-073 Chair: Miro Duhovic	Rubbers and elastomers OGGB 5, 260-051 Chair: Sven Wiessner	Biopolymers Case Room 2, 260-057 Chair: Suprakas Sinha Ray	Biomedical applications Case Room 3, 260-055 Chair: Ines Kühnert
4:10 Keynote sessions	Development of Induction-Heating-Assisted Direct Joining Technology for Fabricating Polymer-Metal Hybrid Structures Ren, Jiaying. Japan	Multifunctional Biomimetic Nanocoatings Sun, Luyi. USA	Fiber Spinning Simulations with Integral Constitutive Equations Mitsoulis, Evan. Greece	Processing and Properties of Electrospun Rubber-Rubber Composites Mather, Patrick. USA	Plastification of dialcohol cellulose for stable melt processing Lo Re, Giada. Sweden	Double-Expanded Polytetrafluoroethylene (PTFE)-Hydrogel Vascular Grafts with Enhanced Mechanical and Biological Properties
4:40	Characterization of Plasma-Treated Glass Fibre-Reinforced Polypropylene and Polyamide-6 Blends Saroya, Jabran. New Zealand	High-Performance Polymer Processing via Integration of Nanostructured Carbon Scaffolds Park, Byeongho. South Korea	Enhancing the synthesis of polyurethanes: controlling side reactions and solvent dependencies Trossaert, Lynn. Belgium	High-Performance and Recyclable Silicone Rubber based on Hybrid Cross-linked Networks Xu, Guifa. China	Rheological and thermal evaluation of modified thermoplastic starch/poly (butylene succinate adipate) blends with tartaric acid and dicumyl peroxide as coupling agents Medina, Jorge. Colombia	New Forms of Electrospun Nanofiber Materials for Biomedical Applications Xie, Jingwei. USA
5:00	Designing Microstructural Architecture in Butterfly-Inspired Hybrid Composites with Hierarchically Structured Fibrous Assemblies Sansone, Nello. Canada		Ultrasonically aided extrusion: a CFD and experimental analysis of polymer chain scission Mateboer, Tijmen. Netherlands	Effect of High-Pressure Fluids Mixing on Development of Carbon or Silica Nano-filler Rubber Composites Kihara, Shin-ichi. Japan	Tailoring of lignin based biopolymer to polyelectrolyte for dye removal in textile effluent Raghavendar, Sivasakthi. India	Towards a new generation of medical fibers for local drug delivery Perret, Edith. Switzerland

THURSDAY 24 APRIL

8:30-9:20am	Plenary - Fisher & Paykel Auditorium Sustainable plastics - Case study on developing high performance bioplastics - Peter Halley, University of Queensland - Chair: Erin Leitao					
9:20-10:20am Session 3.1	Industry 4.0 and AI Lecture Theatre, 260-098 Chair: Yurong Yan	Circular Economy for Plastics and Recycling OGGB 3, 260-092 Chair: Allen Jonathan Roman	Functional Additives and Reactive Processing OGGB 4, 260-073 Chair: Jinwen Zhang	Additive manufacturing OGGB 5, 260-051 Chair: Patrick Anderson	Rubbers and elastomers Case Room 2, 260-057 Chair: Sven Wiessner	Biomedical applications Case Room 3, 260-055 Chair: Lih-Sheng Turng
9:20am	Predicting and Optimizing Extrusion Dies – Bypassing CFD-Simulations by Using an Artificial Neural Network Vorjohann, Felix. Germany	Progress in plastic mechanical recycling: Development of extrusion process for regeneration of mechanical properties and lamellar structures of recycled polyethylene Phanthong, Patchiya. Japan	Photocatalytic Generation of Polar Polyolefin Surfaces with Long-term Stability Henrotte, Jules. Belgium	Melting and crystallization phenomena in 3D printing Pantani, Roberto. Italy	Composites of 2D Materials and Rubber Blends Achuthanunni, Ajitha. United Kingdom	Degradable drug-eluting mesh/nanofibers for therapy of muscle injury Liu, Shih-Jung. Taiwan
9:40	Digital transformation technologies of plastic compounds Choi, WooJin. South Korea	Towards the circularity of thermoformed parts for packaging industry Duarte, Fernando. Portugal	Mechanocatalysis-Driven In-Situ Synthesis of Two-dimensional Covalent Organic Frameworks within One-Dimensional Linear Polymer Chains of Nylon 12 and Utilizing Injection Molding to Achieve Polymer Chains Weaving Lai, shuangxin. China	Buckling-stretch-buckling dominated hybrid mechanical metamaterials for improving mechanical properties Nazir, Aamer. Saudi Arabia	Stereochemistry-Tuned Hydrogen-Bonding Synergistic Covalent Adaptive Networks: Towards Recycled Elastomers with Recorded Creep-Resistant Performance Wang, Zhanhua. China	Adhesive hydrogel patches fabricated from the design of polymer network for the wound dressing LAN, Bin. China
10:00	Predicting Flow Channels in Water-Assisted Injection Molding with AI: A Step Toward Real-Time Feasibility Checks Wimmer, Markus. Austria	Assessing Closed-Loop Recyclability of Polyethylene Films in Food Packaging Applications Rodrigues, PedroVeiga. Portugal		High-Speed MEX Additive Manufacturing of High-Performance Polymers – Process and Parts' Quality Analysis Rochman, Arif. Malta	Superior vibration-damping silicone elastomers via combining segment motion and chain reptation Feng, Qiang. China	High Elastic PTFE-based Dressing with Wound Microenvironment Management Ability for Outdoor Wound Care Qin, Jingxian. China
10:20-11am	Morning tea					
11am- 12:30pm Session 3.2	Polymer Composites Lecture Theatre, 260-098 Chair: Camilo Cruz	Fibres and Films OGGB 3, 260-092 Chair: Yurong Yan	Degradation, biodegradation and composting OGGB 4, 260-073 Chair: Pablo Raimonda	Injection moulding OGGB 5, 260-051 Chair: Roberto Pantani	Foams and Membranes Case Room 2, 260-057 Chair: Kentaro Taki	Biomedical applications Case Room 3, 260-055 Chair: Edith Perret
11am	Preparation and Promising Use of Bacterial Cellulose Sáha, Petr. Czech	Impact of Low-Energy Electron Modification during Melt-Spinning of PLA/PCL Blends Müller, Michael. Germany	Analysis of hydrolysis reaction behavior of poly(lactic acid) (PLA) based on its solid-state structure Koike, Takanari. Japan	Investigation of surface-textured area affecting polymer-metal joining manufactured by injection molding Kimura, Fuminobu. Japan	Advancing Cryogenic Insulation: The Integration of Rigid Polyurethane Foams and Phase Change Materials Cabulis, Ugis. Latvia	Development of a Multifunctional Calcium-Based Polymer Composite for Bioabsorbable Implants Oosthuizen, Hester. Germany
11:20am	Improved toughness-stiffness balance of glass fibers reinforced Polypropylene composites through hybridization with polyolefin elastomers and polymeric fibers for automotive applications Falath, Wail. Saudi Arabia	Manipulation of the Shape of Fibers through Melt-Spinning Process Kikutani, Takeshi. Japan	Preparation and Performance of PBAT-based Composites Chen, Ning. China	Innovative Air Trap Mitigation in Injection Moulding: Efficiency and Effectiveness Assessment Mifsud, Sarah. Malta	Porous polymer nanocomposites for energy storage and environmental remediation Patro, Umasankar. India	Deep Eutectic Solvent as Chain Extender of Polyurethane and Its Application in Triboelectric Nanogenerator Wang, Lian. China
11:40am	Modelling The Mechanical Properties of Microfibrillar Composites (MFCs) Davis, Dipin. New Zealand	Assessing the impact of polyurethane adhesives on the recyclability of laminated polyethylene films Ebrahimi, Ali. Netherlands	Marine-Biodegradability and Mechanical Properties of Polybutylene Succinate with Melt-Blended Enzymes Yamanaka, Asahi. Japan	Advancing Projectile-Assisted Injection Molding for Non-Circular Cross-Sections Heiml, Eva. Austria	Nucleating Foams with Waste Mussel Shell Gavin, Chanelle. New Zealand	EPL-g-O3HT Copolymers as Transient Polymer Electronics for Multifunctional Applications Sun, Xin. New Zealand
12:00noon	The Effect of Solvent Ratio on Conductivity, EMI Shielding, and Crystallinity of PVDF/CNT/Graphene Oxide Films Moaref, Roxana. Canada	Fabrication of Bio-Based Poly(ethylene 2,5-furandicarboxylate) Nanofiber Webs via Laser-Heated Melt Electrospinning Takasaki, Midori. Japan	Enzymatic Degradation of Polybutylene Terephthalate (PBT): Influence of Material Properties on Degradability Pongratz, Annalena. Germany	Metal-polymer direct joining on cylindrical surfaces using injection molding Ishioka, Eigo. Japan	Foaming behavior of polymer blends with oriented dispersed structures and their mechanical properties Zhang, Cai-Liang. China	
12:30 1:30pm	Lunch & Business Lunch OGGB3, 260-092*					
1:30-2:20pm	Keynote: Early Career Winner 2024 - Fisher & Paykel Auditorium Learning from nature, mathematics, and artificial intelligence for sustainable materials design and manufacturing - Grace Gu Chair: Nam Kim					
2:20-3:50pm Session 3.3	Polymer Composites Lecture Theatre, 260-098 Chair: Miro Duhovic	Circular Economy for Plastics and Recycling OGGB 3, 260-092 Chair: Rudinei Fiorio	Modelling and Simulation OGGB 4, 260-073 Chair: Evan Mitsoulis	Injection moulding OGGB 5, 260-051 Chair: Naum Naveh	Biopolymers Case Room 2, 260-057 Chair: Hani E Naguib	Degradation, biodegradation and composting Case Room 3, 260-055 Chair: Petr Saha
2:20pm Keynote sessions	Harnessing Synergy-Induced Multifunctionality in Bio-inspired Hybrid Composites via Physio-Geometric Architecture Optimization Lee, Patrick. Canada	Circularity micro-indicators: a way to assess the circularity in plastic products Martins, Carla. Portugal	Multimodal Shear Molecular Dynamics Analysis of Semicrystalline Polymers Hussain, Mohammed Althaf. Japan	Ensembled Explainable Artificial Intelligence (XAI) for Quality Prediction of Injection Molded Parts Turng, Lih-Sheng. USA	Biopolymers and their composites for packaging applications: Scientific challenges and prospects Maazouz, Abderrahim. France	Processing of Biodegradable Plastics and their Biodegradability for Single-use Plastic Alternatives: Challenges and New Opportunities Mohanty, Amar. Canada
2:50pm	Enhanced Actuation of Liquid Crystal Elastomer Composites Bin, Fei. China	Modelling the New Zealand Plastics Ecosystem to Test the Efficacy of Circular Economy Strategies. A Game Design Approach. Polson, Deb. Australia	Robomould Product Quality Prediction and Parameter Optimization using a Bayesian Network Goris, Mathijs. Belgium	Challenges and opportunities in processing recycled materials by injection molding Bruchmüller, Matthias. Germany	Compounding of high heat service temperature Poly(lactic acid) for hot fill food packaging applications Meekum, Utai. Thailand	Organic vs. enzymatic polymerization in circular polyester design Avella, Angelica. Sweden
3:10pm	High viscosity, lignocellulose reinforced UV curing bio-resins for 3D printing Gromova, Anda. Latvia	Envisioning circular futures: Enabling conditions for industry-level transitions in New Zealand's plastics sector Fehrer, Julia. New Zealand	Improved Accuracy of Process and Shrinkage Predictions for Talc-Filled Injection Molding Compounds Costa, Franco. Australia	Influence of the processing parameters on the mechanical strength of injection moulded BMC components for direct screwing Held, Christian. Germany	Engineered Polysaccharides and the Modification of Polysaccharides and Poly(lactic acid) for Sustainable Multiphase Polymer Development Mekonnen, Tizazu. Canada	PLA-LDH nanocomposites for Implants and its degradation Leuteritz, Andreas. Germany
3:30pm	Controlled filler exfoliation and thermal conductivity of polymer composites with hybrid fillers Ye, Lijun. China	Hybrid Chemical-Mechanical In-Melt Separation and Upcycling of PE/PET Blends: A First Step Towards Recycling at Scale of Mixed Plastic Waste Maia, Joao. USA		Transfer of powder-based direct coating in the injection molding process from two-dimensional components to three-dimensional components Lingnau, Kai. Germany	Investigation of novel polymer nanocomposites based on PLA/lignin-MWCNTs for printed electronics (PE) Bikiaris, Dimitrios. Greece	Environmentally friendly matrices for Enhanced Efficiency Fertilizers: design, release, and degradation Faez, Roselena. Brazil
3:50-4:20pm	Afternoon tea					
4:20-5pm Session 3.4	Industry 4.0 and AI Lecture Theatre, 260-098 Chair: Stan Looijmans	Circular Economy for Plastics and Recycling OGGB 3, 260-092 Chair: Andreas Leuteritz	Polymerisation and synthesis OGGB 4, 260-073 Chair: Edith Perret	Morphology and Structural Development OGGB 5, 260-051 Chair: Giada Lo Re	Rheology and characterisation Case Room 2, 260-057 Chair: Patrick Mather	Biomedical applications Case Room 3, 260-055 Chair: Hani E Naguib
4:20pm	Decoupling data acquisition, data analysis and decision making in an injection molding workflow, by use of Dataspaces and Asset Administration Shells Seebach, Gabriel. Austria	Recycling of Rigid Polyolefins: how Polymer Matrices can Mitigate the Impact of Contaminants Siebers, Charmayne. Netherlands	Optimisation of the process of obtaining furan-based polyesters employing the design of experiment method (DoE) Irska, Izabela. Poland	Toward high performance by stress-induced hierarchical structure during polymer processing Zhong, Gan-Ji. China	Deformation and Fracture Analysis of Glassy Polymers under Uniaxial Tension by Acoustic Emission Method Ougizawa, Toshiaki. Japan	Biodegradable tissue scaffolds and coronary stents using nano-/micro-fibrillar polymer composites approach Somasekar, Arcot. New Zealand
4:40pm	Multi-Quality Prediction in Injection Molding Using CPS and Ensemble Learning Ke, Kun-Cheng. Taiwan	Breakthrough strategies for recyclable cross-linked polyolefins Zamboulis, Alexandra. Greece	Polyethyleneimine and molecularly imprinted polymers in designed magnetic nanocomposites for extraction and determination of gallic acid in green tea Dramou, Pierre. China	Construction of entwined TiN-CNT hybrid network via electrostatic self-assembly: Achieving a durable and photothermal superhydrophobic surface for anti-icing/de-icing application Li, Lingtong. China	Influence of degree of fusion on Rigid PVC rheology for industrial processing Desplentere, Frederik. Belgium	A 4D-printed biopolymer triboelectric nanogenerator (TENG) device for mechanical energy harvesting Gaidukovs, Sergejs. Latvia
7-11pm	Conference Banquet at the Auckland Museum Buses depart from Owen G Glen Building from 5:15pm					

FRIDAY 25 APRIL

1-1:50pm	Plenary: Lamda Award Winner 2025 - Fisher & Paykel Auditorium - Flexible 3D-Printed Cellulosic Constructs for Electromagnetic Interference Shielding and Piezoresistive Sensing Mohammad Arjmand, University of British Columbia					
1:50-2:30pm	Keynote: Early Career Winner 2025 - Fisher & Paykel Auditorium - Polyolefin innovations for clean air and water - Zhe Qiang - Chair: Sadhan Jana					
2:30-3pm	Afternoon tea					
3-4:30pm Session 4.1	Polymer Composites Lecture Theatre, 260-098 Chair: Nam Kyeun Kim	Functional Additives and Reactive Processing OGGB 3, 260-092 Chair: Petr Saha	Modelling and Simulation OGGB 4, 260-073 Chair: Maedeh Amirpour	Morphology and Structural Development OGGB 5, 260-051 Chair: Hanna Dodiuk	Polymer Blends and Alloys Case Room 2, 260-057 Chair: Ashok Misra	Fibres and Films Case Room 3, 260-055 Chair: Chanelle Gavin
3pm Keynote sessions	Innovations on Advanced Biocarbons and their Sustainable Composites: Materials to Real-World Applications Misra, Manjusri. Canada	Reactive extrusion of poly(lactic acid): a model-based design study for viscosity control Debrie, Simon. Belgium	Advanced Simulation of Morphology and Property Distributions in Polymer Injection Molding Roberto, Pantani. Italy	Synergistic Effects of Graphite Particle Size, Hybrid Graphite, and Reduced Graphene Oxide on the Properties of Co-Continuous PET/PVDF Composites Mighri, Frej. Canada	Toward Processable Upcycled Blends with Enhanced Mechanical Properties Using Electron Beam Irradiation Kenig, Samuel. Israel	Flow-Assisted Gel Spinning Technique for Fabricating Stretchable and Thermally Insulating TPU-Silica Aerogel Fibers Park, Chul. Canada
3:30pm	Role of biological routes in surface modification of natural fiber and biopolymer extraction Doddipatla, Purnima. India	Application of Cold Atmospheric Pressure Plasma Jet Treatment for Producing Functional Polymers by Melt Grafting Processes Bertin, Maicon. New Zealand	Influence of mold-sheet interaction in thermoforming processes Schwär, Florian. Germany	In-situ studies on the crystallization of stereo complex polylactic acid Boldt, Regine. Germany	Correlation of Processing and Aging in Styrene-butadiene-styrene (SBS) Modified Bitumen Kaya Ozdemir, Derya. United Kingdom	Effect of High-Temperature Local Heating in the Vicinity of Spinning Nozzle on the Structure and Properties of Poly(Ethylene Terephthalate) Fibers Hahm, Wan-Gyu. South Korea
3:50	Counterintuitive effect of the degree of cure of some epoxy resins on the compressive strength of continuous fibre composites Keryvin, Vincent. New Zealand	Laser holographic processing of plastics for augmented reality Peng, Haiyan. China	Modelling of Robotic Rotational Moulding Using the Discrete Element Method Martin, Peter. United Kingdom	Bulk Acoustic Wave resonators fabricated from modified piezoelectric polymers Fiedler, Holger. New Zealand	Appealing Through Annealing: Exploiting Filler-Enhanced PEEK/PEI Blend Behavior for High-Frequency PCB Applications Scherzer, Tim. Germany	Scalable In-Situ Micro/Nanofibrillar All-Organic Polymer Dielectric Films for Electric Energy Storage Huang, Hua-Dong. China
4:10	Graphene and its derivatives as fillers for biodegradable polymer matrices: Ecofriendly and performance improvements Fechine, Guilhermino. Brazil	Novel epoxy vitrimer chemistry with improved melt processability Naveh, Naum. Israel		Effects of Plasma Treatment on Morphology, Rheology and Mechanical Properties of Microfibrillar Composites Gray, Narges. New Zealand	Influence of blasted metal surface textures on joining strength via injection molded direct joining Wang, Shuohan. Japan	
4:45-5:15pm	Conference Closing - Fisher & Paykel Auditorium					