

8th April 2025 (Day 2 sessions from 8:30-17:30, and Gala Dinner 19:00-20:30 UK time)

Timetable					
8:30-9:00		Registration and Tea break			
		Lecture Theatre B (1st and 2nd Floor Core 4, Nancy Rothwell Building, Booth Street East, M1 7HL)			
9:00-9:40		Plenary keynote 3: Professor Aoife Foley - Chair in Net Zero Infrastructure, School of Engineering, The University of Manchester, The Role of Lifecycle Engineering in Decarbonising Our Built Environment			
9:40-10:00		Tea break			
		Lecture Theatre B, Nancy Rothwell Building	Room 2A.013, 2nd Floor, Core 1, Nancy Rothwell Building	Room 2A.014, 2nd Floor, Core 1, Nancy Rothwell Building	Room 2A.012, 2nd Floor, Core 1, Nancy Rothwell Building
10:00-11:00		Session 5A: Life Cycle Assessment (Prof. Giuseppe Ingarao)	Session 5B: Circular economy (Dr. Joan Manuel F. Mendoza)	Session 5C: Decarbonisation (Prof. Thomas Spengler)	Session 5D: Manufacturing for Sustainability (Prof. Karl Haapala)
	10:00	PROCIR-D-24-00941 Holistic life cycle assessment of cryo-assisted drilling of additively manufactured Inconel 625 Tarang Lotwala; Gannavarapu Kshitij; Harsh Salvi; Jay Airao; Navneet Khanna	PROCIR-D-24-00661 Towards sustainable aviation: end-of-Life scenarios for Lithium-ion batteries used in hybrid electric aircraft <u>Stefany Villacis</u> ; Antonia Rahn	PROCIR-D-24-01588 The carbon footprint of machine tools and metal working machinery in U.S. manufacturing <u>Edgar G. Hertwich</u> ; Meng Jiang	PROCIR-D-24-00932 A platform for tele-collaboration with multiple robots via digital twin spaces <u>Mizuki Kawakami</u> ; Sawa Yoshioka; Khota Seki; Shinichi Fukushima
	10:15	PROCIR-D-24-00641 Potentials of bio-based fiber composites in aircraft structures: an environmental and economic analysis along the life cycle Leonard Dietz; Alexander Barke; Yin Hsuan Tsao; Johanna Haupt; Christoph Herrmann; Thomas S. Spengler	PROCIR-D-24-00686 Towards a circular spare parts management for commercial vehicles: a framework proposal for the case of batteries <u>Marius Hermesen</u> ; Jan Felix Niemeyer; Edith Uhlig; Mark Mennenga	PROCIR-D-24-00662 Concept for the transformation of manufacturing systems towards circular economy using discrete event simulation <u>Max Werrel</u> ; Matthias Klar; Jan C. Aurich	PROCIR-D-24-00920 Towards evaluating material compliance maturity in manufacturing companies - conceptual basics of a model-based assessment approach Anne-Kathrin Nuffer; <u>Charlotte Schmidt</u> ; Sophia Biggel; Sarah Deckelmann; Ralph Schneider; Robert Mieke
	10:30	PROCIR-D-24-00649 Evaluating the environmental impact of end-of-life management in aircraft components: a life cycle assessment approach <u>Joséphine Koffler</u> ; Anne Oestreicher; Antonia Rahn; Gerko Wende	PROCIR-D-24-00689 Concepts, strategies and business models of the circular economy for the manufacturing industry: a Systematic literature review Fabian Holly; Clemens Schild	PROCIR-D-24-01606 Design interventions to reduce embodied emissions and in-use energy losses of radial switched reluctance motors for electric vehicles Julian Mark Allwood; <u>Frederick William Follows</u>	PROCIR-D-24-00928 Electrification of the French automotive industry: modeling the influence of main parameters of the lithium extraction and electric vehicle industries <u>Édouard Millet</u> ; Tom Bauer; Gabriel Banvillet; Tatiana Reyes
	10:45	PROCIR-D-24-00676 Sustainable approaches to asphalt: life cycle analysis and innovation opportunities in the asphalt industry in Norway Sander Dønnum; Martin Werner Pedersen; <u>Alexander Grøddum Vetnes</u> ; Reyn O'Born	PROCIR-D-24-00670 Circular economy in the power electronics industry: innovative design strategies for sustainable life cycle management. Irati Ruiz de Azua Lahidalga; Eider Mendiburu Valor; Daniel Justel; <u>Joan Manuel F. Mendoza</u>	PROCIR-D-24-00940 Assessment of machine tool related environmental impacts for sustainable machining processes <u>Chris Martin Taylor</u> ; Krystian Wika; Tim Cockerill; Nan Xu; Nik Kapur	PROCIR-D-24-00643 Digital product passport data to improve the material flow and stock monitoring and projections at EU-level: the case of EV-batteries <u>Jelmer Lennartz</u> ; Kas Jansen; Elmer Rietveld
11:00-11:20		Tea break			
11:20-12:20		Session 6A: Life Cycle Assessment (Prof. Stephan Krinke)	Session 6B: Circular economy (Dr. Carin Rösiö)	Session 6C: Decarbonisation (Dr. Shun Yang)	Session 6D: Manufacturing for Sustainability (Dr. Lewis Jones)
	11:20	PROCIR-D-24-00665 A comprehensive approach to evaluating environmental sustainability of EV batteries: integrating BatPaC with LCA indicators for EV battery eco-design	PROCIR-D-24-00788 Circularity in automotive electronics design: a comparative evaluation of headlight control units	PROCIR-D-24-00885 Environmental assessment of wire arc additive manufacturing technology and consideration of the influence of process parameters on mechanical properties of manufactured parts	PROCIR-D-24-00748 A logic-assisted assembly support system to promote the inclusion of neurodiverse operators in manufacturing

	Mattia Gianvincenzi; Silvio Viglia; Marco Marconi ; Enrico Maria Mosconi; Francesco Tola	Henning Peitzmeier ; Claas Tebruegge; Ghada Bouattour; Arthur Seibel	Ons Mrabet ; Raoudha Gaha; Julie Marteau; Benoit Eynard	Alessandro Simeone ; Yuchen Fan; Angioletta Rita Catalano; Dario Antonelli; Paolo Claudio Priarone; Luca Settineri
11:35	PROCIR-D-24-00811 A methodology for absolute environmental sustainability assessment of batteries: a comparative case study of sodium-ion and lithium-ion battery Manish Kumar; Manuel Baumann; Marcel Weil	PROCIR-D-24-00935 Life cycle assessment of circular economy strategies for high-strength connection bolts in wind turbines Joshua Stütze; Matthias Stammer; Jan Hendrik Dege; Christian Thies	PROCIR-D-24-00500 A process-focused guide for sustainable manufacturing: integrating indicator-based sustainability assessments Kutloano Letlape; Annize Marnewick; Carl Marnewick	PROCIR-D-24-00792 Methodology for a holistic product circularity analysis (HPCA) Dominik Neumann ; Simon Mörsdorf; Michael Vielhaber
11:50	PROCIR-D-24-00738 Enhancing Transparency: Reporting data reliability in prospective assessments of emerging battery technologies Svenja Weber-Harmann; Kira Fischer; Nelli Kononova; Nikolas Dilger; Joris Baars; Sabrina Zellmer; Christoph Herrmann	PROCIR-D-24-01128 Potentials of WEEE in the circular economy – an analysis of home-stored discarded mobile phones Thomas Hofmann, Rainer Erne , Annkatrin Ott-Schwenk, Christian Richter	PROCIR-D-24-00543 A universal recycling index to quantify the recyclability of products: a case study Daniele Jung ; Denis Skvorc; Lars Arnemann; Benjamin Schleich	PROCIR-D-24-00635 Production ramp-up in multi-stage discrete manufacturing systems: A conceptual framework for model-based quality maturity assurance in the automotive industry based on a systematic literature review Marcos Padrón Hinrichs ; Felix Sohnus; Robert H. Schmitt
12:05	PROCIR-D-24-00680 Life cycle sustainability assessment strategy for NMC Lithium-ion battery Sara Pinto; Rui Reis; Carolina Fraga; Emanuel Lourenço	PROCIR-D-24-01376 A typology of scalability strategies of circular startups Caroline de Souza Resende; Ricardo Zimmermann; Ana Ines; Gustavo Dalmarco	PROCIR-D-24-00614 Optimising the energy consumption of multifunctional buildings in the UK via phase change materials Ziqing Xu ; Akilu Yunusa Kaltungo; Clara Cheung; Qingyao Qiao	PROCIR-D-24-00785 Case study on assessing the environmental impact of end-of-life vehicle dismantling Joanna Steiner ; Janine Mügge; Sina Dupslaff; Luise Lehnerdt; Philip Staufenbiel; Theresa Riedelsheimer; Kai Lindow
12:20-13:50	Lunch break			
13:50-14:50	Session 7A: Life Cycle Assessment (Prof. Alejandro Gallego-Schmid)	Session 7B: Circular economy (Prof. Erik Sundin)	Session 7C: Decarbonisation (Prof. Matthew Doolan)	Session 7D: Manufacturing for Sustainability (Dr. Murat Kilic)
13:50	PROCIR-D-24-00675 Comparative environmental impact analysis of friction-based additive manufacturing techniques Simone Amantia ; Kirill Kalashnikov; Giuseppe Ingarao; Gianluca Buffa; Livan Fratini	PROCIR-D-24-01434 Development of a data planning framework for part assessment with computer vision in context circular economy. Alexander Moltschanov ; Joachim Metternich	PROCIR-D-24-00910 Implementation of reuse and recycling strategies in railway infrastructure: insights from a case study Shantal Kartoidjojo; Thomas Kortekaas; Willem Haanstra ; Jan Braaksma	PROCIR-D-24-00966 Chip length control and adjustment through high frequency pulsed cryogenic jet cooling in turning of aluminum alloys Jan Harald Selzam ; Trixi Meier; Nico Hanenkamp
14:05	PROCIR-D-24-00790 Life cycle assessment of an additive manufacturing system for sustainable fibred composite production Joana Gouveia; Sara Campos; Luís Oliveira; Emanuel Lourenço	PROCIR-D-24-01429 Exploring smart circular systems: intersection of servitization, digitalization, and circularity Yuya Mitake ; Yusuke Kishita; Yasushi Umeda	PROCIR-D-24-00872 Four decades of magnets: how literature has addressed their sustainability Jessica Raspini; Gisele Chaves; Lucila Campos	PROCIR-D-24-01215 Comparative microstructural analysis of aluminum alloy 7075 under dry and chilled air drilling conditions Zailani Zainal Abidin
14:20	PROCIR-D-24-00936 Automation in LCA, reconciliation of inventory data: case study on manufactured products subject to the French RE2020 building regulation to validate the proposed method	PROCIR-D-24-01627 Early steps for a measurable and impactful ecodesign process: the case of urea production	PROCIR-D-24-00757 Towards sustainable water management in manufacturing - a review of various facets of water efficiency and effectiveness	PROCIR-D-24-00713 Enhancing sustainable machining of Inconel 718 using Multi-Walled Carbon Nanotubes and TiO2 based nanofluid minimum quantity lubrication

		Axelle Noémie Bertrand ; Tom Bauer; Carole Charbuillet; Nicolas Perry; Martin Bonte; Marie Voyer	Laura Talens Peiró ; Anna Petit-Boix	WeiJia Fu ; Adri Abu Bakar; Yee Shee Tan	Ramazan Hakkı Namlu
14:35		PROCIR-D-24-00951 Environmental and social life cycle assessment based on input-output analysis of the Thai financial sector Chantima Rewlay-Ngoen; Seksan Papong	PROCIR-D-24-00707 Integrating circular economy and Industry 4.0 within circular supply chains: a literature review and network analysis insights Mojdeh Morshedi ; Pezhman Ghadimi	PROCIR-D-24-01607 Accelerating the decarbonization of incumbent firms through progressive resource efficiency entrepreneurship Julian Mark Allwood; Camilla Frances Hurst	PROCIR-D-24-00939 Characterising resource usage for a supercritical carbon dioxide cooling and lubricating system used in machining processes Chris Martin Taylor; Ian Cook ; Jack Secker; Muhammad Raihan; Ardian Morina; Harvey M Thompson
14:50-15:10		Tea break			
15:10-16:10		Session 8A: Life Cycle Assessment (Dr. Laurence Stamford)	Session 8B: Circular economy (Prof. Christian Thies)	Session 8C: Decarbonisation (Prof. Luca Settineri)	Session 8D: Manufacturing for Sustainability (Dr. Zailani Zainal Abidin)
	15:10	PROCIR-D-24-01012 Tools to measure the environmental impact of a product Edith Tubón-Núñez; Miguel Ángel Vigil Berrocal; Vicente Rodríguez-Montequín; Francisco Ortega-Fernández	PROCIR-D-24-01159 “Technodiversity” for Analysing Sustainability Transitions perceived by Students in Engineering Pauline Picot ; Alexis Lalevee	PROCIR-D-24-00769 Embedding sustainability in requirements capture at the design stage Annlize L Marnewick ; Paul T Mativenga	PROCIR-D-24-00938 A review of movable factory sustainability: a triple bottom line perspective Rasmus Andersen; Ann-Louise Andersen; Thomas Ditlev Brunoe ; Kjeld Nielsen
	15:25	PROCIR-D-24-01427 Toward the sustainable use of conveyor belts: life cycle assessment of end-of-life options Andrew Robert McLauchlin ; Laurence Stamford; Jair Esquivel; Craig Spencer-Smith; David Waite; Michael Shaver; Alejandro Gallego-Schmid	PROCIR-D-24-00694 E-waste collection and recycling behaviours: an agent-based model for intervention assessment in Singapore Quoc Khanh Tran ; Lan Zhao; Yajuan Sun; Gaoxi Xiao; Zhiquan Yeo; Chuan Fu Tan	PROCIR-D-24-00776 Beyond compliance: designing value-creating, service-oriented, and integrated product passports that contribute to the circular economy René Herbert Reich ; Luc Alaerts; Karel Van Acker	PROCIR-D-24-00794 Introducing absolute sustainable lightweight design Kristian König; Michael Vielhaber
	15:40	PROCIR-D-24-00666 Development of a decentralized digital product passport for enhanced lifecycle management of electrical and electronic equipment Alessandro Paolucci; Mattia Gianvincenzi; Marco Marconi ; Claudio Favi; Diego Pennino	PROCIR-D-24-00862 Adapting business models for circular economy: practical step-by-step methodology and case study analysis from a German SME Benjamin Gellert ; Felix Budde; Dirk Buße; Ronald Orth	PROCIR-D-24-00799 Resilience in manufacturing enterprises – connecting resilience, factory flows and sustainability dimensions Nelli Kononova; Max Jurasche ; Sina Marie Rudolf; Gabriela Ventura Silva; Christoph Herrmann	PROCIR-D-24-00975 Cross-generational remanufacturing: identifying high-potential subsystems through differential analysis of product generations Leonard Tusch ; Vanessa Pirc; Michael Jäckle; Albert Albers
	15:55	PROCIR-D-24-01439 The life cycle, recyclability and sustainability of plastics used in mass manufacture of single use bottle caps within the UK drinks industry Amrik Singh ; Andrew Longstaff.; Simon Fletcher	PROCIR-D-24-00819 Textile recycling – positive change or toxic truth? Claudia E. Henninger ; Taylor Brydges; Claudia E Henninger; Eri Amasawa; Jane Wood; Rachael Wakefield-Rann	PROCIR-D-24-00864 Merging sustainability strategies of efficiency, consistency and sufficiency with corporate climate protection measures Felix Budde ; Benjamin Gellert; Ronald Orth	PROCIR-D-24-00775 Thermal simulations in additive manufacturing using machine learning Shradha Ghansiyal ; Svenja Ehmsen; Matthias Klar; Jan C Aurich
16:10-16:30		Tea break			
16:30-17:30		Session 9A: Life Cycle Assessment (Prof. Lucia Rigamonti)	Session 9B: Circular economy (Prof. Annlizé Marnewick)	Session 9C: Decarbonisation (Prof. Nicla Frigerio)	Session 9D: Manufacturing for Sustainability (Dr. Wen Li)
	16:30	PROCIR-D-24-01443	PROCIR-D-24-00822	PROCIR-D-24-00690	PROCIR-D-24-01047

	Advancing planetary boundaries allocation: systematic comparison of sharing principles for national-level absolute environmental sustainability assessments Qiang Yang; <u>Andrea Paulillo</u>	How circular are circular business models? the case of the fashion industry <u>Claudia E. Henninger</u> ; Taylor Brydges; Eri Amasawa; Brian Hrats	A posthumanist social approach to energy transition <u>Khaled Aboalez</u>	Exploring a framework for assessing socio-ecological impacts of systems – toward an absolute sustainability paradigm <u>Alexis Lalevee</u> ; Vincent Hilaire
16:45	PROCIR-D-24-01585 LCA comparison of three types of freestanding kitchens: electric, gas and induction hobs Sarrah brahem; Claudio Favi	PROCIR-D-24-00840 Strategies and action plans for Scandinavian municipalities and their climate goals relating to circular economy <u>Thea Mork Kummen</u> ; Rolf André Bohne; Jardar Lohne; Freja Nygaard Rasmussen	PROCIR-D-24-00719 Towards more sustainable photovoltaics: Reducing environmental impact at the laboratory scale Bethany L Willis; Michael D K Jones; Oliver M Rigby; Lewis C R Jones; Elliot Woolley; Claire Vialle; Caroline Sablayrolles; Yongtao Qu; Neil Beattie	PROCIR-D-24-00696 From Steam Power to Laser Power: Resource Analysis of Direct Surface Heating for Textile Dyeing <u>Lewis C R Jones</u> ; Francesca Wheeler; Toby Williams; Jay J. Robus; Emily Roberts; Daniel Lloyd; John R. Tyrer
17:00	PROCIR-D-24-00831 Developing an environmental assessment method for sharing business considering consumer behavior: a case study of bike-sharing in Japan <u>Tatsuki Watanabe</u> ; Christian Clemm; Yusuke Kishita	PROCIR-D-24-00918 Introduction of a method for establishing requirements based on circular economy processes in model-based systems engineering <u>Lars Everding</u> ; Bjarne Käberich; Thomas Vietor	PROCIR-D-24-00693 Environmental impacts of extended producer responsibility programs for plastic sachets Famela Rose Lacang; Andrea Isabel Medina; Lance Dominic Tria; <u>Jhud Mikhail Aberilla</u>	PROCIR-D-24-00956 Industry 5.0 competence model for production companies Olivia Bernhard; Johannes Brandstetter; Patrick Jordan; Michael F. Zaeh; <u>Nora Reinbold</u>
17:15	PROCIR-D-24-00739 Life cycle assessment of artificial intelligence applications: research gaps and opportunities <u>Christiane Plociennik</u> ; Ponnapat Watjanatepin; Karel Van Acker; Martin Ruskowski	PROCIR-D-24-00878 Transforming global production networks: a comprehensive methodology to integrating circularity Steffen Prank; <u>Michael Martin</u> ; Sina Peukert	PROCIR-D-24-00826 Microfibre and nanofibre: pollution and environmental impacts <u>Elisabeth Allen</u> ; Jane Wood; Claudia E. Henninger; Arthur Garforth; Edidiong Asuquo; Alejandro Gallego-Schmid; David J. Lewis	PROCIR-D-24-01566 Enhancing reliability of a hybrid solar-wind systems: a Weibull-driven maintenance framework Aminu Tijjani; <u>Zied Hajej</u> ; Aaime Nyongue; Aisha Saad
18:00	Pickup point: Booth Street East Side of Nancy Rothwell Building at 6pm			
19:00	Conference Dinner and Leo Award (Dinner location: Old Trafford Football Stadium, International Suite, 7pm)			