

ICE/IEEE ITMC Conference 2021

Innovation, Technology, and Engineering Management for our Societal, Environmental, and Economic Resilience

Any technical issues during the conference please contact:

Tom Beach - BeachTH@cardiff.ac.uk

Conference Program

Note: All times in Central European Summer Time (CEST)

Friday 18th June 2021

1500 to 1800 – Zoom Testing

Information	Zoom Details
Authors are free to connect to zoom to test their connection and presentation of slides.	Click here to join the Zoom

Monday 21st June 2021

0900 – 1030 Plenary

Information	Zoom Details
Plenary & Keynote – Chair: Professor Y Rezgui	
Professor Yacine Rezgui & Dr Thomas Beach – Welcome and Agenda Yves Paindaveine – European Commission – <i>An EU perspective on the digitalisation of the economy</i>	Click here to join the Zoom

1030 – 1100 Break - [Click here to join the zoom](#)

1100 – 1300 Workshops

Information	Zoom Details
Digitalisation in the Built Environment	
Papers: <ul style="list-style-type: none"> • Explorative implementation of open source Peer-to-Peer energy trading approaches – Gabriel, Alex (238) • Leveraging BIM and Blockchain for Digital Twins – Celik, Yasin (285) • Optimal Control Based Price strategies for Smart Fishery ports Micro-Grids – Alzahrani, Ateyah Ahmed (287) • Industry Engagement for Identification of Cybersecurity Needs Practices for Digital Twins – Alshammari, Kaznah (274) • Digitalising Risk of Fire Resilience for UK buildings – Hodorog, Andrei (284) • Using mixed methods around a digital twin to study the prevalence of Sick Building Syndrome symptoms among University students – Yeung, Jonathan (264) 	Click here to join the Zoom
Open Innovation and NPD	
<ul style="list-style-type: none"> • The Role of Social Intensity within App-ideas and its Impact on UX and Potential Adoption - Topolewski, Marcin (288) • Application of Combined SWOT and AHP in Innovation Ecosystems Management - Ngongoni, Chipso Nancy (276) • Conceptual framework to support the design of innovation spaces in universities - Delgado, Lorena (209) 	Chair: Dr Marc Pallot (TB) Click here to join the Zoom

<ul style="list-style-type: none"> • Investigating the Impact of Visual Representations during Ideation: Towards Immersive eXperience Design - DUPONT, Laurent (301) • A Bibliographical Study of Software Product Management Research - Seppänen, Marko (246) • Industry Collaboration with Large Research Infrastructures: What factors influence knowledge benefits for companies? - Magazinik, Anastasiya (262) 	
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1300 – 1400 Break – [Click here to join the zoom](#)

1400 – 1530 Paper Sessions

Information	Zoom Details
Digitalisation	Chair: Professor Ricardo Goncalves (TB)
<ul style="list-style-type: none"> • Analysis of AGV indoor tracking supported by IMU sensors in intra-logistics process in automotive industry - Costa, Ruben (275) • MODEL AND MECHANISM MANAGEMENT OF THE DIGITAL TRANSFORMATION - NIKITIN, IURII (233) • Why We should be Careful when Using Self-driving Vehicle Features! - Schwarz, Manuel (300) • Master Data Taxonomy - A systematic approach to assess and migrate master data - Knapp, Matthias (269) • Blockchain & IoT based Drugs Traceability for Pharma Industry - Konapure, Rahul Ramakant (281) • Image Registration Methods and Transformation Types - Darwajkar., Aiman (291) 	Click here to join the Zoom
Service Design and Engineering	Chair: Dr Abdul Rahman Abdel Razek (AH)
<ul style="list-style-type: none"> • The Case of Digital Transformation in Grocery Industry: A Conceptual Model of Digital Grocery Ecosystem - Abbu, Haroon (234) • Value Changes during Service Delivery - AGARWAL, GIRISH (255) • No more flat tires: Overcoming data defects to achieve supply chain resilience - Pehlken, Alexandra (266) • Towards a Framework for the Classification of Digital Twins and their Applications - Pronost, Guillaume (232) • Area Efficient Hexadecimal Divider Circuit Implementation Based on USP-Awadhoot Division Algorithm - Patankar, Udayan (270) 	Click here to join the Zoom

<ul style="list-style-type: none"> Measures for Integrated Logistics Support (ILS) in Early Life Cycle of Aerospace and Defense Systems – Review of Established System Measures - Vaskic, Ljubisa (271) 	
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1530 – 1600 Break – [Click here to join the zoom](#)

1600 – 1700 Paper Sessions

Information	Zoom Details
Industry 4.0	Chair: Professor David Romero (AH)
<ul style="list-style-type: none"> Using Model Lifecycle Management to support Models for Manufacturing methodology - Racero, Jesus (258) Industry 4.0 Entrepreneurship: Essential Characteristics and Necessary Skills - Wahl, Dario Raphael (237) Building Manufacturing Resilience through Production Innovation - Romero, David (228) The War for Talent in Software Business — How are Finnish software companies perceiving and coping with the labor shortage? - Hyrynsalmi, Sami (249) 	Click here to join the Zoom
Sustainability	Chair: Dr Tom Beach
<ul style="list-style-type: none"> Thermal and Residual Strain Measurement Due to Gradual and Repetitive Thermal Loading in Rails and Rail Joints Using ESG - MAHARANA, Sumedha (295) Application of Low Cost and Sustainable Wastewater Treatment Technologies in Gold Processing: A Review of Bio char as an Option - Manyuchi, Mercy (212) Data Envelopment Analysis (DEA) on European Green Capitals (EGC) Fostering Circular Economy (CE): A Preliminary Study - Amaral, António (240) 	Click here to join the Zoom

Tuesday 22nd June 2021

0930 – 1030 Plenary

Information	Zoom Details
Plenary & Keynote – Chair: Dr Thomas Beach	
Andy Sutton – Sero Homes <i>Net Zero, Retrofit and the role of data</i>	<u>Click here to join the Zoom</u>

1030 – 1100 Break - [Click here to join the zoom](#)

1100 – 1300 Workshops

Information	Zoom Details
Applications of Artificial Intelligence	
Papers: <ul style="list-style-type: none"> • Meta-learning approach for implementation of AI methods in the context of CRISP-DM with case studies from master data management - Pontello, Victor (245) • Equipment data-based activity recognition of construction machinery - Fischer, Anne (289) • Classification of software-based automation technologies: Derivation of characteristics through an empirical investigation - Götzen, Rafael (260) • Artificial Intelligence as Enabler for Sustainable Development - Baumann, Sabine (219) • Automated Graph Representation Learning: A Survey - Madurapperuma, Sanjula (290) • Artificial Intelligence for Futuristic Banking - Kulathilaka, Moksha Thisarani (206) 	<u>Click here to join the Zoom</u>
Digital Innovation Management	
<ul style="list-style-type: none"> • A Generalized Framework for Algorithm Based Team Formation - Sidhu, Ikhlaq (227) • How to Prioritize Your Product Roadmap When Everything Feels Important: A Grey Literature Review - Trieflinger, Stefan (221) • Process benefits of virtual co-creation: a case study - Manu, Marko Tapio (263) • Impacts on business models resulting from digitalization - Simões, Ana Correia (220) 	<u>Click here to join the Zoom</u>

<ul style="list-style-type: none"> • Feature Removal on Software Platforms – Discontinued Core Features on Browser Platforms – A Case Study on Mozilla Firefox - Bender, Benedict (215) • Digital Innovation Hubs supporting SMEs digital transformation - Sassanelli, Claudio (224) 	
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1300 – 1400 Break - [Click here to join the zoom](#)

1400 – 1530 Paper Sessions

Information	Zoom Details
Digitalisation of the Built Environment	Chair: Professor Yacine Rezgui
<ul style="list-style-type: none"> • Smart Cities Concept and Innovative Strategies in Mexico: A Bibliometric Analysis using VOSviewer - Alvarez-Sosa, Damaris (279) • BIM for Energy Efficiency Training Requirements in the Context of a Developing Country: The Case of Saudi Arabia - Alhamami, Ali (299) • A Real-Time Centralized Ticketing Architecture for Public Transportation – Lourenço, Luis (278) • Geo-Fencing Model for Real-time Querying of Land Status in Njoro Town, Kenya -Waruguru Mburu, Lucy (126) 	Click here to join the Zoom
Innovators and Wellbeing	Chair: Dr Luke Maki (AH)
<ul style="list-style-type: none"> • Real Gender Barriers to Virtual Realities? - Pröbster, Monika (243) • Glimpse on Women in Entrepreneurial Context. A Machine Learning based Literature Review - Off, Rebecca (286) • Quantifying the Typology of Well-Being: BOOST, a Functional, IRT-Backed Instrument for Assessing Subjective Well-Being - Talaei, Kian (235) • Effectiveness Factors for Algorithm Based Team Formation for Data Science Projects - Sidhu, Ikhlaq (229) • Wellness in the Sky: Analysis and Regenerative Perspectives of the Modernist Social High-Rises in London, UK - Kadar, Manuella (236) 	Click here to join the Zoom

1530 – 1600 Break – [Click here to join the zoom](#)

1600 – 1700 Paper Sessions

Information	Zoom Details
<p>Open Innovation</p>	<p>Chair: Dr Laurent Dupont (AH)</p>
<ul style="list-style-type: none"> • Towards Student-Led Open Innovation Approach in Teaching Research and Development - Montero Teran, Heidi Noelia (282) • On a theoretically cup of inspiration with Schumpeter and von Foerster – creative destruction and emergence as means to prevent system lethargies: conceptual paper - Maurer, Florian (277) • Toward a systemic decision-making tool of territorial resilience based on multicriteria methodologies – The case of the DHDA Project - Enjolras, Manon (242) • Evaluating Process Maturity in Creative and Cultural Industries - Signore, Stefano (252) 	<p><u>Click here to join the Zoom</u></p>
<p>Digitalisation</p>	<p>Chair: Dr Ioan Petri</p>
<ul style="list-style-type: none"> • Towards the utilization of Cloud-based Integration Platforms - Hyrynsalmi, Sonja M. (251) • Pseudocode to Sourcecode conversion using Sequence-to-sequence learning - Arefin, Minhazul (280) • Robust and resource-efficient cooperative exploration and mapping using homogeneous autonomous robot teams - Hutter, David (241) • A fractional 0-1 decision making approach for process variant management - Schmidtner, Markus (213) • An Adaptive Control Scheme for a Three-Phase Active Power Filter - Milasi, Rasou (293) 	<p><u>Click here to join the Zoom</u></p>

Wednesday 23rd June 2021

0930 – 1030 Plenary

Information	Zoom Details
Plenary & Keynote – Chair: Professor Yacine Rezgui	
Professor Sergio Terzi - Politecnico di Milano School of Management <i>“Smart Manufacturing vs Smart Innovation: what should come first?”</i>	Click here to join the Zoom

1030 – 1100 Break - [Click here to join the zoom](#)

1100 – 1300 Workshops

Information	Zoom Details
Data Management and Use of Artificial Intelligence in Manufacturing	
<ul style="list-style-type: none"> • Zero-Defect Manufacturing using data-driven technologies to support the natural stone industry - Sousa, João (257) • Towards A Conceptual Framework for Developing Sustainable Digital Innovation Hubs - Zamiri, Majid. (256) • Moving from ‘black box’ to ‘glass box’ Artificial Intelligence in Manufacturing with XMANAI - Lampathaki, Fenareti. (254) • An IoT-based Reliable Industrial Data Services for Manufacturing Quality Control - Poler, Raul (253) • Resilient Manufacturing Systems enabled by AI support to AR equipped operator - Sesana, Michele (222) 	Chair: Dr Carlos Agostinho (TB) Click here to join the Zoom
Industry 4.0	
<ul style="list-style-type: none"> • Product Roadmaps in the New Mobility Domain: State of the Practice and Industrial Experiences - Trieflinger, Stefan (247) • Digitalizing agri-food supply chains to achieve Sustainable Development Goals: a systematic literature review - Masi, Antonio (244) • Ambiguity Tolerant Commissioning Ontology: Targeting Client Communication - Ellwein, Carsten (211) • Impact of Industry 4.0 on Quality Management: identification of main challenges towards a Quality 4.0 approach - Masiero, Sara (239) 	Chair: Prof. Klaus-Dieter Thoben (AH) Click here to join the Zoom

<ul style="list-style-type: none"> • Extended Analysis of a Service Prototyping Experiment Conducted in Germany & France - Abdel Razek, Abdul Rahman (217) • A Digital Twin with Runtime-Verification for Industrial Development-Operation Integration (205) • Artificial Intelligence Inspired Supply Chain Collaboration: A Design-Science Research and System Dynamics Approach - Nitsche, Anna-Maria (216) • An updated review of PLM impact on US and EU Aerospace Industry - Mas, Fernando(203) 	
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1300 – 1400 Break - [Click here to join the zoom](#)

1400 – 1530 Paper Session

Information	Zoom Details
Corporate Venturing & Digital Entrepreneurship	Chair: Dr Christoph Selig (AH)
<ul style="list-style-type: none"> • Applying Text Analytics to Business Plans in New Technology-Based Firm Survival Research - Ungerer, Christina (233) • Innovation Labs - a Taxonomy of four different Types - Selig, Christoph J. (273) • Guiding through the Fog: Understanding Differences in the Goal Setting of Corporate Entrepreneurship Programs - Lang, Christina (226) • Measuring Firm Innovativeness: Towards a New Indicator-based Approach - Valentowitsch, Johann (230) • Star Biotech Start-ups' Past R & D Investment in the Financial Crisis Time - Fujiwara, Takao (259) • Digital Leadership – Which leadership dimensions contribute to digital transformation success? - Gudergan, Gerhard (218) • Exploring the Core Values of Entrepreneurs - A Comparison to the United Nations 17 Sustainable Development Goals - Dimitris Polychronopoulos (292) 	<p>Click here to join the Zoom</p>

1530 – 1600 Break –

1600 – 1700 Closing Session

Information	Zoom Details
Closing Session – Chair: Professor Y Rezgui (TB)	
<ol style="list-style-type: none">1. Professor Yacine Rezgui & Dr Thomas Beach – Prizes and Awards2. Look forward to ICE2022	<u>Click here to join the Zoom</u>