

Schedule

Tuesday, June 20, 2023		
6:00 PM	Welcome note MHI-CICMHE IMHRC 2023 Thorsten Schmidt , <i>Technische Universität Dresden</i>	
Wednesday, June 21, 2023		
9:30 AM	Opening 2023 MHI-CICMHE IMHRC Michael Beckmann , <i>Technische Universität Dresden</i> Thorsten Schmidt , <i>Technische Universität Dresden</i> Michael Mikitka , <i>MHI</i> J. David Porter , <i>Oregon State University</i> Heidebroek Building, TU Dresden 9:30 AM – 10:00 AM	
10:00 AM	Opening Keynote: “Towards a Digital Continuum” Michael ten Hompel , <i>Fraunhofer Institute for Material Flow and Logistics</i> Heidebroek Building, TU Dresden 10:00 AM – 11:00 AM	KN1
11:00 AM	Breakout Session A-1: “Digital Continuum in Logistics” Kai Furmans , Lead, <i>Karlsruhe Institute of Technology</i> Fabio Sgarbossa , Scribe, <i>Norwegian University of Science and Technology</i> Heidebroek Building, TU Dresden 11:00 AM – 12:30 PM	BSA-1
	Breakout Session A-2: “Digital Continuum in Logistics” Leon McGinnis , Lead, <i>Georgia Institute of Technology</i> Ardavan Asef Vaziri , Scribe, <i>California State University, Northridge</i> Heidebroek Building, TU Dresden 11:00 AM – 12:30 PM	BSA-2
	Breakout Session A-3: “Digital Continuum in Logistics” Moritz Roidl , Lead, <i>Technische Universität Dortmund</i> Natalie Cherbaka , Scribe, <i>Virginia Tech</i> Heidebroek Building, TU Dresden 11:00 AM – 12:30 PM	BSA-3
	Breakout Session A-4: “Digital Continuum in Logistics” Rene De Koster , Lead, <i>Erasmus University Rotterdam</i> David Šourek , Scribe, <i>University of Pardubice</i> Heidebroek Building, TU Dresden 11:00 AM – 12:30 PM	BSA-4
1:30 PM	Introducing the Central Backup Cellular Manufacturing System (CBCMS) Salah Elaskari , <i>American International University, Kuwait</i> Uday Venkatadri , <i>Dalhousie University, Canada</i> Heidebroek Building, TU Dresden 1:30 PM – 2:30 PM	P1 M1

	<p>Design of Puzzle Based Storage Systems with Unidimensional Cells</p> <p>Héctor J. Carlo, <i>University of Puerto Rico - Mayagüez</i> Andrés F. Blanco, <i>University of Puerto Rico - Mayagüez</i></p> <p>Heidebroek Building, TU Dresden</p> <p>1:30 PM – 2:30 PM</p>	<p>P2 M2</p>
	<p>Performance Analysis of Unequal Area Facility Layout Problem when Superimposed by Load Transport and Empty Flow Networks</p> <p>Ardavan Asef Vaziri, <i>Scribe, California State University, Northridge</i> Cory Taylor, <i>Scribe, California State University, Northridge</i></p> <p>Heidebroek Building, TU Dresden</p> <p>1:30 PM – 2:30 PM</p>	<p>P3 M3</p>
	<p>A Novel Autonomous Vehicle-based Storage and Retrieval System with Movable Lifts</p> <p>Banu Y. Ekren, <i>Cranfield University</i> Tone Lerher, <i>University of Maribor, Slovenia</i> Boris Jerman, <i>University of Ljubljana, Slovenia</i></p> <p>Heidebroek Building, TU Dresden</p> <p>1:30 PM – 2:30 PM</p>	<p>P4 M4</p>
	<p>Perspectives on Automation for Omnichannel Services and the Need for New Robotic Solutions for Store Fulfillment Operations</p> <p>Jennifer Pazour, <i>Rensselaer Polytechnic Institute</i> Manmit Pahdy, <i>Karlsruhe Institute of Technology</i> Georg Fischer, <i>Karlsruhe Institute of Technology</i> Joyjit Bhowmick, <i>Rensselaer Polytechnic Institute</i> Sebastian Köhler, <i>Karlsruhe Institute of Technology</i> Gideon Arndt, <i>Karlsruhe Institute of Technology</i> Kai Furmans, <i>Karlsruhe Institute of Technology</i></p> <p>Heidebroek Building, TU Dresden</p> <p>1:30 PM – 2:30 PM</p>	<p>P5 M5</p>
	<p>Modeling Post-disruption Equilibrium for Circular Supply Chains and New Measures for Resilience</p> <p>SangWoo Park, <i>New Jersey Institute of Technology</i> Iliaria Giannoccaro, <i>Politecnico di Bari, Italy</i> LayekAbdel-Malek, <i>New Jersey Institute of Technology</i></p> <p>Heidebroek Building, TU Dresden</p> <p>1:30 PM – 2:30 PM</p>	<p>P6 M6</p>
	<p>Sorting with robots: where to drop off the parcel?</p> <p>Rene de Koster, <i>Erasmus University Rotterdam</i> Yuerong Chen, <i>Huazhong University of Science and Technology</i> Bipan Zou, <i>Zhongnan University of Economics and Law</i> Yeming Gong, <i>EM Lyon</i></p> <p>Heidebroek Building, TU Dresden</p> <p>1:30 PM – 2:30 PM</p>	<p>P7 M7</p>
	<p>How Reshoring Impacts Economy and Transportation Logistics – A US Perspective</p>	<p>P8 M8</p>

	<p>MD Sarder, <i>Bowling Green University</i> Heidebroek Building, TU Dresden 1:30 PM – 2:30 PM</p>	
2:30 PM	<p>Breakout Session B-1: “Industry 5.0” Jesus Jimenez, Lead, <i>Texas State University</i> Uday Venkatadri, Scribe, <i>Dalhousie University, Canada</i> Heidebroek Building, TU Dresden 2:30 PM – 4:00 PM</p>	BSB-1
	<p>Breakout Session B-2: “Geopolitics” MD Sarder, Lead, <i>Bowling Green University</i> Sunderesh Heragu, Scribe, <i>Oklahoma State University</i> Heidebroek Building, TU Dresden 2:30 PM – 4:00 PM</p>	BSB-2
	<p>Breakout Session B-3: “Layouting” Sadan Kulturel-Konak, Lead, <i>Penn State Berks</i> Anike Murrenhoff, Scribe, <i>Fraunhofer Institute for Material Flow and Logistics</i> Heidebroek Building, TU Dresden 2:30 PM – 4:00 PM</p>	BSB-3
4:00 PM	<p>Robotic bin-picking: Benchmarking robotic grippers with modified YCB object and model set Tone Lerher, <i>University of Maribor, Slovenia</i> Primož Bencak, <i>University of Maribor, Slovenia</i> Darko Hercog, <i>University of Maribor, Slovenia</i> Boris Jerman, <i>University of Ljubljana, Slovenia</i> Luka Bizjak, <i>University of Ljubljana, Slovenia</i> Heidebroek Building, TU Dresden 4:00 PM – 5:00 PM</p>	P9 M9
	<p>An efficient MILP formulation for the parallel load retrieval in puzzle based storage systems with simultaneous load movements Yossi Bukchin, <i>Tel-Aviv University</i> Tal Raviv, <i>Tel-Aviv University</i> Heidebroek Building, TU Dresden 4:00 PM – 5:00 PM</p>	P10 M10
	<p>Warehouse robotization with Wheel.me genius: A puzzle-based movable racks system Fabio Sgarbossa, <i>Norwegian University of Science and Technology</i> Martin Amaral Halseide, <i>Wheel.me</i> Atle Timenes, <i>Wheel.me</i> Heidebroek Building, TU Dresden 4:00 PM – 5:00 PM</p>	P11 M11
	<p>Considerations When Designing an AutoStore™ System Russell D. Meller, <i>Fortna Inc.</i> Heidebroek Building, TU Dresden 4:00 PM – 5:00 PM</p>	P14 M14

	<p>RCS/RS under throughput investigation</p> <p>Georg Kartnig, <i>Technische Universität Wien</i></p> <p>Philipp Trost, <i>Technische Universität Wien</i></p> <p>Michael Eder, <i>Technische Universität Wien</i></p> <p>Heidebroek Building, TU Dresden</p> <p>4:00 PM – 5:00 PM</p>	<p>P15</p> <p>M15</p>
	<p>5G Opportunities in Warehousing</p> <p>Roshan George, <i>Virginia Tech</i></p> <p>Natalie Cherbaka, <i>Virginia Tech</i></p> <p>Kimberly Ellis, <i>Virginia Tech</i></p> <p>Heidebroek Building, TU Dresden</p> <p>4:00 PM – 5:00 PM</p>	<p>P16</p> <p>M16</p>
	<p>Concepts for the use of knowledge-based engineering in intralogistics system planning</p> <p>Christian Lanschützer, <i>Technische Universität Graz</i></p> <p>Alexander Ortner-Pichler, <i>Technische Universität Graz</i></p> <p>Heidebroek Building, TU Dresden</p> <p>4:00 PM – 5:00 PM</p>	<p>P17</p> <p>M17</p>
	<p>Current Challenges and Approaches in Route Selection of a Fleet of AMR</p> <p>Thorsten Schmidt, <i>Technische Universität Dresden</i></p> <p>Karl-Benedikt Reith, <i>Technische Universität Dresden</i></p> <p>Frank Schulze, <i>Technische Universität Dresden</i></p> <p>Heidebroek Building, TU Dresden</p> <p>4:00 PM – 5:00 PM</p>	<p>P18</p> <p>M18</p>
Thursday, June 22, 2023		
10:30 AM	<p>Keynote: “Witron”</p> <p>Daniel Ries, <i>Witron</i></p> <p>Heidebroek Building, TU Dresden</p> <p>10:30 AM – 11:30 AM</p>	<p>K2</p>
Friday, June 23, 2023		
9:00 AM	<p>Forklift operator Safety & Productivity: A Review of Current Research and Future Directions</p> <p>Jesus A. Jimenez, <i>Texas State University</i></p> <p>Abhimanyu Sharotry, <i>Texas State University</i></p> <p>Francis A. Mendez Mediavilla, <i>Texas State University</i></p> <p>Heidebroek Building, TU Dresden</p> <p>9:00 AM – 10:00 AM</p>	<p>P19</p> <p>M19</p>
	<p>Working together — scheduling operations in assisted order picking</p> <p>Jelmer Pier van der Gaast, <i>School of Management, Fudan University</i></p> <p>Heidebroek Building, TU Dresden</p> <p>9:00 AM – 10:00 AM</p>	<p>P20</p> <p>M20</p>
	<p>Decision Rules for the Robotic Mobile Fulfillment System of A PCB Assembly Factory Warehouse</p> <p>Ching-Jung Ting, <i>Yuan Ze University, Taiwan</i></p>	<p>P21</p> <p>M21</p>

	<p>Hendra Permana, <i>Ministry of Industry, Indonesia</i> Hsien-Mi Meng, <i>Gigabyte Technology Co., Ltd., Taiwan</i> Heidebroek Building, TU Dresden 9:00 AM – 10:00 AM</p>	
	<p>Requirements for Generating Learning Environments for Autonomous Systems Behavior in a Digital Continuum Anike Murrenhoff, <i>Fraunhofer-Institute for Material Flow and Logistics IML</i> Heidebroek Building, TU Dresden 9:00 AM – 10:00 AM</p>	P22 M22
	<p>Let shoppers shop: why click and collect is not the solution Jennifer Pazour, <i>Rensselaer Polytechnic Institute</i> Kai Furmans, <i>Karlsruhe Institute of Technology</i> Heidebroek Building, TU Dresden 9:00 AM – 10:00 AM</p>	P23 M23
	<p>Evaluating business service models for on-demand warehousing: a double perspective on suppliers and customers Maria Grazia Gnoni, <i>University of Salento</i> Fabiana Tornese, <i>University of Salento</i> Heidebroek Building, TU Dresden 9:00 AM – 10:00 AM</p>	P24 M24
	<p>A Fluid Flow Queuing Network Model for Performance Analysis of Bulk Liquid Terminals Debjit Roy, <i>Indian Institute of Management Ahmedabad</i> Werner Scheinhardt, <i>University of Twente</i> Jan-Kees van Ommeren, <i>University of Twente</i> Heidebroek Building, TU Dresden 9:00 AM – 10:00 AM</p>	P26 M26
	<p>Designing Facilities to Improve Flexibility: Zone-based Dynamic Facility Layout with Embedded Input/Output Points Sadan Kulturel-Konak, <i>Penn State Berks</i> Abdullah Konak, <i>Penn State Berks</i> Heidebroek Building, TU Dresden 9:00 AM – 10:00 AM</p>	P27 M27
10:00 AM	<p>Breakout Session D-1: “Sustainability” Uday Venkatadri, <i>Scribe, Dalhousie University, Canada</i> Kimberly Ellis, <i>Scribe, Virginia Tech</i> Heidebroek Building, TU Dresden 10:00 AM – 12:30 PM</p>	BSD-1
	<p>Breakout Session D-2: “Artificial Intelligence” Sunderesh Heragu, <i>Scribe, Oklahoma State University</i> Héctor J. Carlo, <i>University of Puerto Rico - Mayagüez</i> Heidebroek Building, TU Dresden</p>	BSD-2

	10:00 AM – 12:30 PM	
	<p>Breakout Session D-3: “Robotics”</p> <p>Jennifer Pazour, Lead, <i>Rensselaer Polytechnic Institute</i></p> <p>Moritz Roidl, Lead, <i>Technische Universität Dortmund</i></p> <p>Heidebroek Building, TU Dresden</p> <p>10:00 AM – 12:30 PM</p>	BSD-3
12:30 PM	<p>Breakout Session E-1: “Resilience”</p> <p>Fabio Sgarbossa, Scribe, <i>Norwegian University of Science and Technology</i></p> <p>William Ferrell, Scribe, <i>Clemson University</i></p> <p>Heidebroek Building, TU Dresden</p> <p>12:30 PM – 2:00 PM</p>	BSE-1
	<p>Breakout Session E-2: “Information”</p> <p>Jelmer Pier Van der Gaast, Lead, <i>Fudan University</i></p> <p>Moritz Roidl, Lead, <i>Technische Universität Dortmund</i></p> <p>Heidebroek Building, TU Dresden</p> <p>12:30 PM – 2:00 PM</p>	BSE-2
	<p>Breakout Session E-3: “The Ideal GtP Characteristics”</p> <p>Russell D. Meller, Lead, <i>Fortna Inc.</i></p> <p>Uday Venkatadri, Scribe, <i>Dalhousie University, Canada</i></p> <p>Heidebroek Building, TU Dresden</p> <p>12:30 PM – 2:00 PM</p>	BSE-3
2:00 PM	<p>Optimization of Cargo Handling Equipment at the Airport</p> <p>David Šourek, <i>University of Pardubice</i></p> <p>Heidebroek Building, TU Dresden</p> <p>2:00 PM – 3:00 PM</p>	P29 M29
	<p>Supply Chain Disruptors and their Impact on the Future of Manufacturing, Logistics, and Distribution</p> <p>W. Henk M. Zijm, <i>University of Twente</i></p> <p>Sunderesh S. Heragu, <i>Oklahoma State University</i></p> <p>Heidebroek Building, TU Dresden</p> <p>2:00 PM – 3:00 PM</p>	P30 M30
	<p>On Logistics And Motion Planning – An Informal Axiomatic Approach</p> <p>Moritz Roidl, <i>TU Dortmund University</i></p> <p>Heidebroek Building, TU Dresden</p> <p>2:00 PM – 3:00 PM</p>	P31 M31
	<p>Toward Architecture Design for Discrete Event Logistics Systems</p> <p>Leon McGinnis, <i>Georgia Institute of Technology</i></p> <p>Heidebroek Building, TU Dresden</p> <p>2:00 PM – 3:00 PM</p>	P35 M35
	<p>Handling disruptions in a network with cross-docking</p> <p>Vishal Badyal, <i>Clemson University</i></p> <p>Fahim Ahmed, <i>University of South Carolina</i></p> <p>Nikhil Aditya Eti, <i>Clemson University</i></p> <p>Nathan Huynh, <i>University of Nebraska</i></p>	P38 M38

	<p>Bill Ferrell, <i>Clemson University</i> Heidebroek Building, TU Dresden 2:00 PM – 3:00 PM</p>	
	<p>Transportation Service Provider Collaboration: Benefits and Insights R. Steven Roesch, <i>Virginia Tech</i> Kimberly Ellis, <i>Virginia Tech</i> Heidebroek Building, TU Dresden 2:00 PM – 3:00 PM</p>	<p>P39 M39</p>