



EIT Manufacturing Doctoral School

*Smart Systems for
Resilient Manufacturing*

10 - 21 July 2023

STUBA and CTU
(Bratislava & Prague)



Co-Funded by the
European Union



**PAVEL BURGET, Ph.D**

He heads the Testbed for Industry 4.0 at CIIRC CTU, and his research interests are Industrial communication and control systems, Optimization of robotic manufacturing cells, and Discrete event systems. He leads the research teams involved in many national and research projects focused on Industry 4.0 and multi-agent systems applications. He is also an assistant professor at the Department of control engineering at CTU in Prague.

**MARTIN MACAŠ, Ph.D.**

He is a researcher at the Czech Institute of Informatics, Robotics, and Cybernetics of CTU, where he is a member of the Cognitive Systems and Neurosciences research group and Intelligent Systems for Industry and Smart Distribution Networks research group. He has more than 70 publications on artificial intelligence, data analysis, and optimization (WoS H-index 9) and is a recipient of the Best Presentation Award at the 13th International Conference on Ubiquitous Computing and Ambient Intelligence.

**ŠTĚPÁN FIALA, Ph.D.**

He completed postgraduate studies at the Czech Technical University in Prague, Faculty of Mechanical Engineering, Department of Production Machines and Equipment. Now, at the mentioned Institute, he works on machine communication between devices, SCADA systems, and IOT hardware. His particular focus is the control of hydrostatic servo drives.

**TOMÁŠ KRANNICH, Ph.D.**

He completed postgraduate studies at the CTU, Faculty of Mechanical Engineering, Department of Production Machines and Equipment. Now, at the aforementioned Institute, he focuses generally on pneumatic and hydraulic systems, with an emphasis on safety and energy conservation. He is also involved in developments in the construction of machining and forming machines and deals with the basic measurement of hydraulic quantities.

**MARTIN JUHÁS, Ph.D.**

He is an Assistant Professor at the Faculty of Mechanical Engineering of the Slovak University of Technology in Bratislava. He specialized in industrial automation, information technology, and control systems. His activities include the implementation of technologies for machine safety, online diagnostics, and machine health monitoring, and implementation of Industry 4.0 concepts, such as development and integration of digital twins.

**HENRI MENNENS**

Founder & CEO of Innpulse Consulting, Director of the Incubation Program at EAE Business School, Program Leader of the Master of Design & Innovation at Instituto Europeo di Design, Madrid, and one of the Entrepreneurship Program Leads at the EIT Manufacturing Doctoral School. He pioneered and led one of the first open innovation ecosystems for over five years, funded by the national government, the EU, and the regional investment bank.

**SARA ALONSO**

Senior Strategic & Research Designer, with a background in Industrial Design. Passionate about Social Entrepreneurship and innovation, she combines consultancy projects with academics (being IED's Master Professor in Design Research, among other punctual collaborations). With over 8 years of experience working in various innovation consultancies, she is an expert in the broad world of innovation methodologies.

**JANNIK BÖCKENHOLT**

Senior Innovation Manager at the headquarters of Lead Innovation in Vienna, one of Europe's premier boutique innovation consulting firms. Has a profound experience in New Business Development, restructuring innovation processes, and leading innovation transformation projects. Besides, he is an expert in storytelling and innovation facilitation workshops.




10 July, Monday

Time Frame	Activity	Notes
09:00 - 09:30	Welcome ceremony	Speakers: Viltare Platzner Martin Mareš Henri Mennens & Sara Alonso Lucia Ramundo Mikulaš Bittera
10:30 - 11:00	Coffee break	
11:00 - 13:00	Summer Symposium I	Presentation: PhD project abstract
13:00 - 14:30	Lunch break	
14:30 - 16:00	Summer Symposium II	Presentation: PhD project abstract
16:00 - 16:30	Coffee break	
16:30 - 18:00	Summer Symposium III	Presentation: PhD project abstract
19:30 - 22:00	Welcome dinner	


11 July, Tuesday

Time Frame	Activity	Notes
09:00 - 10:30	Keynote speaker	Presenter: LEAD Innovation Vienna
10:30 - 11:00	Coffee break	
11:00 - 13:00	Presentation: Design Research Projects I	Student presentation
13:00 - 14:30	Lunch break	
14:30 - 15:30	Presentation: Design Research Projects II	Student presentation
15:30 - 16:00	Coffee break	
16:00 - 17:00	Presentations Design Research projects III	Student presentation
17:00 - 18:00	Team bonding	Activity for connecting internal and external students


12 July, Wednesday

Time Frame	Activity	Notes
09:00 - 09:30	MEB INTRO: Program Presentation	Presenter: Henri Mennens & Sara Alonso Topic: Bootcamp presentation and methodology explanation
09:30 - 10:30	MEB INTRO: Company Presentation	
10:30 - 11:00	Coffee break	
11:00 - 13:00	MEB WORKSHOP: Ecosystem mapping and ethnographic/ netnographic techniques	Presenter: Henri Mennens & Sara Alonso
13:00 - 14:30	Lunch break	
14:30 - 17:00	Visit to Faculty of Mechanical Engineering of STU and an interactive session on Skills.move	Presenter: Martin Juhás <i>Students will have a hands-on exercise on EITM learning platform Skills.move</i>
17:30 - 19:00	City visit	Meeting point: In front of Carlton Hotel (Hviezdoslavovo námestie 3)


13 July, Thursday

Time Frame	Activity	Notes
09:00 - 11:30	MEB FIELD RESEARCH: Training observing buyer personas	Presenter: Henri Mennens & Sara Alonso
11:30 - 12:30	MEB FEEDBACK	Presenter: Henri Mennens & Sara Alonso <i>Evaluating field research results</i>
12:30 - 13:30	Lunch break	
14:00 - 16:30	Company visit	Mondelēz SR Production (mondelezinternational.com)


14 July, Friday

Time Frame	Activity	Notes
09:00 - 10:30	MEB WORKSHOP: Survey creation	Presenter: Henri Mennens & Sara Alonso
10:30 - 11:00	Coffee break	
11:00 - 13:00	MEB WORKSHOP: Interview script creation	Presenter: Henri Mennens & Sara Alonso
13:00 - 14:30	Lunch break	
14:30 - 16:30	Meet EIT Manufacturing	
Weekend	Travel to Prague	<i>Open ticket will be provided, students can choose when to travel</i>



17 July, Monday

Time Frame	Activity	Notes
09:00 - 12:00	MEB FIELD RESEARCH: Launching the survey and interviewing buyer personas	Presenter: Henri Mennens & Sara Alonso
12:00 - 13:00	MEB FEEDBACK: Evaluating Field Research results	Presenter: Henri Mennens & Sara Alonso
13:00 - 15:00	Lunch break	
15:00 - 16:30	Academic seminar I	Presenter: Martin Macas & Pavel Burget Topics: <ul style="list-style-type: none"> - Machine learning in statistical regulation of processes - Optimizing inspection plans using CMM - Anomaly Detection for Robotic Assembly - Flexible assembly <ul style="list-style-type: none"> ▪ overview "big picture" ▪ testbed hands-on (montrack, robotic 3D printing, etc.)
16:30 - 17:00	Coffee break	
17:00 - 18:30	Academic seminar II	



18 July, Tuesday

Time Frame	Activity	Notes
09:00 - 10:30	MEB WORKSHOP: Persona and Customer Journey definition	Presenter: Henri Mennens & Sara Alonso
10:30 - 11:00	Coffee break	
11:00 - 13:00	MEB WORKSHOP: Problem prioritization and defining value propositions	Presenter: Henri Mennens & Sara Alonso
13:00 - 14:30	Lunch break	
14:30 - 18:00	Cultural visit	<i>Guided tour of the National Museum</i> (https://www.nm.cz/en)


19 July, Wednesday

Time Frame	Activity	Notes
09:00 - 12:00	MEB FIELD RESEARCH: Validating Persona, Customer Journey Map and related topics	Presenter: Henri Mennens & Sara Alonso <i>Workshop outside the Faculty.</i>
12:00 - 13:00	MEB FEEDBACK: Evaluating Field Research results	Presenter: Henri Mennens & Sara Alonso <i>Feedback session at Faculty.</i>
13:00 - 14:30	Lunch break	
14:30 - 16:00	MEB WORKSHOP: Consolidation and Design Challenge definition	Presenter: Henri Mennens & Sara Alonso
16:30 - 18:30	Lab experience	Presenter: Tomáš Krannich & Štěpán Fiala Topic: Energy conservation in fluid mechanisms
19:30 - 22:00	Gala dinner	Restaurace Ladronka - Plzeňská 2575/208 Praha 5


20 July, Thursday

Time Frame	Activity	Notes
09:00 - 10:30	MEB WORKSHOP: Preparing final Presentations Part I	Presenter: Henri Mennens & Sara Alonso <i>Individual mentoring sessions per team at Faculty.</i>
10:30 - 11:00	Coffee break	
11:00 - 13:00	MEB WORKSHOP: Preparing final Presentations Part II	Presenter: Henri Mennens & Sara Alonso <i>Individual mentoring sessions per team at Faculty.</i>
13:00 - 14:30	Lunch break	
14:30 - 18:00	FREE time to prepare for the MEB final presentations	


21 July, Friday

Time Frame	Activity	Notes
9:00 - 10:30	MEB Final Presentations I	Student presentation
10:30 - 11:00	Coffee break	
11:00 - 12:30	MEB Final Presentations II	Student presentation
12:30 - 13:00	Closure act	Presenter: Lucia Ramundo
13:00 - 16:00	Outdoor lunch & Farewell party	Venue: Planned in the garden at the same place as Doctoral Summer School (Hotel Michael)

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