15th - 26th November

WINTER SCHOOL

MANUFACTURING IN MARS BY FEUP

DOCTORAL School

WINTER School

eit Manufacturing

Co-funded by the European Union

ABOUT WINTER SCHOOL

15TH - 26TH NOVEMBER 2021

"Machines don't solve problems; humans solve them together!"

The EITM 2021 Winter School is addressing "bigger than life" challenges: unfold and produce everywhere with carbon-neutral manufacturing .. even in Mars!

Inspired in the new European Bauhaus initiative, the EITM 2021 Winter School will bring down walls between science and technoloaimgy, art, culture and social inclusion. It targets PhD students and aims at boosting skills and competencies that are needed to find solutions for complex everyday problems. It is focused on how industry can benefit from the acceleration of the twin green and digital transitions to build a more sustainable and resilient society and economy.

This is an exceptional opportunity for intercultural, cross-organizational mobility and interdisciplinary views, embedded in a unique, trans-sectoral pan-European network. The proposed programme consists of an integrated innovative "learning-by-doing" curricula on the crossroads of several disciplines, covering Science, Technology and Arts. Students will be faced with a big-challenge to be tackled by medium size multidisciplinary teams (7-8 members).

The winter school schedule includes company visits and networking events with start-ups/entrepreneurs and a session held in collaboration with the actors from the local innovation and entrepreneurship ecosystem, but also traditional Porto culture and gastronomy.

The EITM Winter School will be the opportunity for self-driven, ambitious PhD candidates to broaden their network with potential European partners and to boost their abilities and competencies in advanced tools for the design, implementation, organization, quality assessment and improvement of intelligent manufacturing systems.

MACHINES DON'T SOLVE

MinM

ONLINE ACTIVITIES

	15/Nov	16/Nov	17/Nov	18/Nov	19/Nov
09:00					
10:30					
11:00	Open session (with presentation of the challenges)				
12:30					
14:00					
16:30					
17:00	Team formation & team building	SPOC with Hugo Sereno	SPOC with Gil Gonçalves	SPOC with Peggy Zwolinski	

SPOC → Small Private Online Course → Topics: Principles of agile management; Project management tools; Eco-design and sustainable manufacturing

→ Free schedule → Work on the challenges in teams, interact with mentors, keep daily logbook of developments

MinM

ON-SITE ACTIVITIES

	22/Nov	23/Nov	24/Nov	25/Nov	26/Nov
09:00		Keynote (academia) - Digitalisation (Brissaud + Rocchi)	HCKT	Visit to the UPTEC, UPorto Technology and Science Park (networking with startups and entrepreneus; services offered; social glue with coffee; ..)	Keynote (starting at 9:30)
10:30	Registration with welcome social glue (and coffee)	Social glue (with coffee or tea) - at 10:00	Social glue (with coffee or tea)		Social glue (with coffee or tea)
11:00	Welcome session + keynote from industry	WRKS Digitalisation (Brissaud + Rocchi) - at 10:30	Keynote (society) + HCKT		Discover creativity and critical thinking
12:30	Social glue (with informal lunch)	Social glue (with informal lunch)	Social glue (with informal lunch)	Social glue (with informal lunch)	Social glue (with informal lunch)
14:00	Visit to iiLab	HCKT	WRKS - Pitch	HCKT Pitching session	Awards + closing cerimony
16:30	Social glue (with coffee or tea) - at 16:00	Social glue (with coffee or tea)	Social glue (with coffee or tea)	Social glue (with coffee or tea)	
17:00	WRKS - Agile (Hugo Sereno) - at 16:30	HCKT	WRKS - Pitch	HCKT Pitching session	
18:30	Social glue (with dinner) - 19:00	Social glue (with dinner)	Social glue (with dinner)	Social glue (with 'gala' dinner)	

WRKS → Workshops → Topics: Agile, Circular, Digitalisation, Pitch

HCKT → HackTime → Team work + interaction with mentors + daily logbook + solution for the challenge + pitch of the solution

SPOC PRESENTERS

SPOC
PRINCIPLE OF AGILE MANAGEMENT

Hugo Sereno Ferreira

Professor (tenure track) at the Faculty of Engineering of the University of Porto, and Associate Researcher at INESC TEC, with a mixture of experience both in Industry and Academy. Worked in the military R&D sector for NATO, later becoming Senior Architect. During the exercise of independent consultancy, founded (as CTO) an Ad-Tech company, with a successful exit in 2018. Independent expert for both the European Commission and the National Innovation Agency. Main research areas are Software Engineering, Cloud/Edge Computing, and Internet of Things, with a variety of publications on several other subjects, such as Blockchain technologies, Machine Learning and e-Health. The range of skills go from the very large (handling 100's of servers for massive parallelism) to the very small (FPGAs).

16 NOV. 16:30 (GMT)

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SPOC
PROJECT MANAGEMENT TOOLS

Gil Gonçalves

Systems Engineer, serial entrepreneur, assistant Professor at the Informatics Engineering Department of FEUP and researcher at SYSTEC, with more than 20 years of experience in systems development, specializing in systems engineering, control architectures and design of software for industrial applications. Gil Gonçalves is director of the scientific and industrial committee of the EIT Manufacturing Doctoral School.

17 NOV. 16:00 (GMT)

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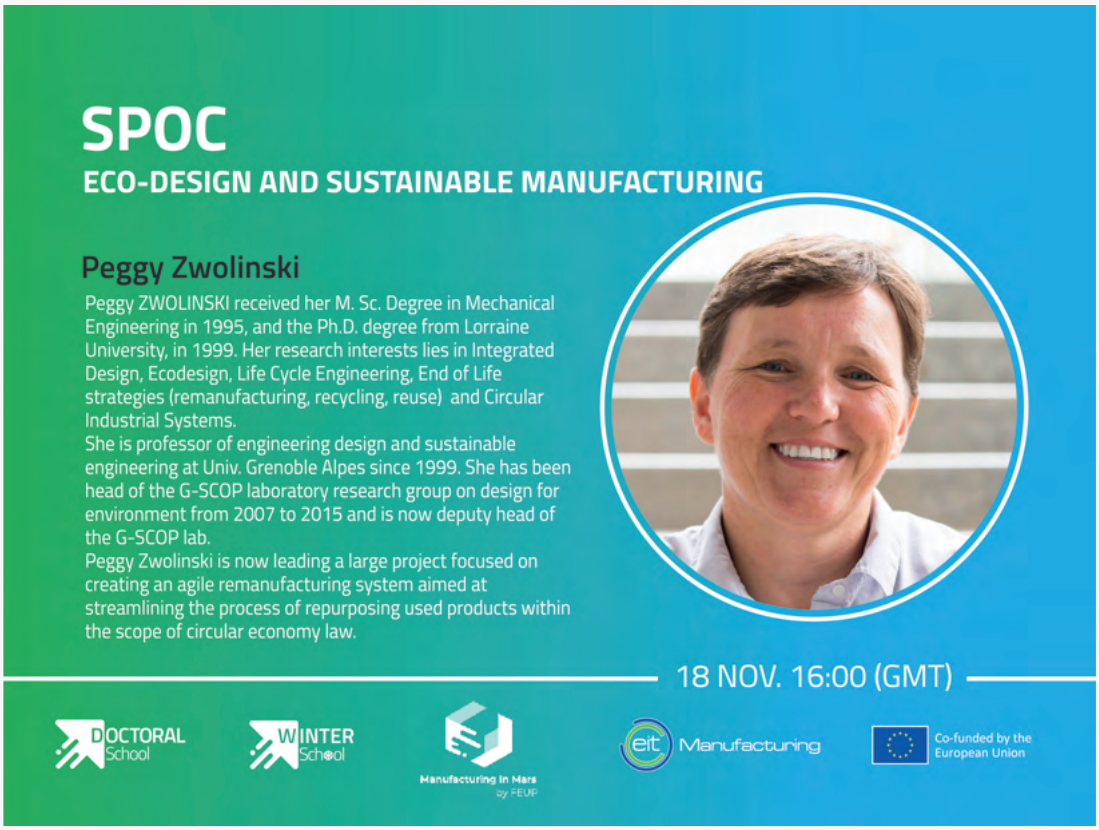
SPOC
PRESENTERS



KEYNOTE SPEAKERS

KEYNOTE SPEAKER

Nathalie Post

Cofounder at DEUS: human(ity)-centered AI.
As Head of Strategy, she helps organisations apply artificial intelligence responsibly to create value for people, business & society. I also host The Human-Centered AI Podcast, featuring inspiring stories of people who are shaping the future of artificial intelligence in a human(ity) & planet-centered way.

22 NOV. 11:30 (GMT)

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KEYNOTE SPEAKER

Ron Vrijmoet

Managing Partner - Capite Procuratio @ DEUS
Founder MOBGEN, then MD @ Accenture Interactive, international management experience @ WPP (15+ yrs.), 20+ years experience in business strategy, marketing & technology

22 NOV. 11:30 (GMT)

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KEYNOTE SPEAKERS

KEYNOTE SPEAKER

Daniel Brissaud

Professor of ENgineering Design and Eco-design at Grenoble INP since 1998. Director of the School of Industrial Engineering and Management and CIRP fellow. He was vice-president of Grenoble INP for Strategic Planning and Development, head of the research cluster on Engineering for Industry and Innovation in Rhône-Alpes area and has led the French survey on sustainable production systems for the future. He is a member of the board of the Multi-disciplinary Institute of Artifical Intelligence (MIAI). His research interest is Sustainability in Manufacturing, Eco-design, Collaboration in Industry 4.0, AI for Manufacturing.

23 NOV. 09:00 (GMT)

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KEYNOTE SPEAKER

Valérie Rocchi

Dr Valérie Rocchi is a research engineer in charge of industry of the future topics at Grenoble INP – UGA. For more than 15 years, she has been contributing to strengthen the links between industry and academia into R&D&I activities. For 12 years, she managed a French regional interdisciplinary research network dedicated to production systems. She has worked closely with several French regional and national industry clusters from different sectors and carried out studies on digitalization, skills and competences. Since 2018, she is involved in EIT Manufacturing. Her topics of interest focus on digital transformation and the implementation issues in industrial companies especially in SMEs. She has carried out research projects on the key factors and barriers that hinder companies to uptake digital technology. She is also interested in the role of human in industry of the future.

23 NOV. 09:00 (GMT)

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KEYNOTE SPEAKERS

KEYNOTE SPEAKER

Marlos Silva

Director of Granted Projects Department at SONAE. Interests in innovation, project management, technology commercialization, intellectual property, business development, industry and government liaison, co-development projects and open innovation, start-up creation and fundraising. International extense network and experience acquired in diverse organizations such as Government, Academy, Banking, Retail, Consultancy,Industry and Start-ups.

23 NOV. 14:00 (GMT)

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KEYNOTE SPEAKER

Marta Aguiar

Marta Aguiar develops projects and works in architecture, design and territorial transformation, since 1997 with the foundation of the MAG office – Marques de Aguiar.
A creative practice that crosses a technological dimension – BIM platform for information management and video and digital image manipulation – , analogical techniques - from drawing to material experimentation – and the contribution of social sciences with the involvement of customers and of the target communities.
In this creative practice, MAG privileges the potential of a (small) business structure in the effectiveness of the immediate design quality and long-term space significance.

24 NOV. 11:00 (GMT)

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KEYNOTE SPEAKERS

KEYNOTE SPEAKER

Martin Mareš

Dr. Martin Mareš is working at Czech Technical University in Prague at Research Center of Manufacturing Technology (RCMT). Dr. Mareš is an RCMT representative in European Society for Precision Engineering and Nanotechnology (euspen), is a fellow of Czech Association of Engineering Technology (SST), Czech Society for Machine Tools (SPoS) and member of Czech Institute of Informatics, Robotics and Cybernetics (CIIRC). He received his master's degree from CTU in Prague, Faculty of Mechanical Engineering, Department of Mechanics, Biomechanics and Mechatronics in 2008 and Ph.D. from Department of Fluid Dynamics and Thermodynamics in 2015. In RCMT he has been responsible or the Group of Accuracy.

26 NOV. 09:30 (GMT)

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KEYNOTE SPEAKER

Priit Kull

Priit Kull, owner of Inchworm Machines, represents the Mobile Smart Factory in Estonia. He holds a Master of Science in machine building technology, metal cutting machines and tools. He started his first engineering company in 1991 and, after the merger with ABF Baltic in 1997, the business served 9 year as a tier 1 supplier for Daimler Chrysler and other car industry OEMs, realizing projects for SLK, LS Mercedes and Bentley Continental GT. Since 2006 Priit Kull is partner in the consulting company SHG Estonia. The team carried out various technology transfer projects, production relocations, supply chain optimisation and other projects. SHG was obtained by Vestas, a global wind energy company with Danish roots. Priit headed a cost-down redesign program and debugged the technical supply chain problems in many countries. He also set up the supply chain for the largest wind turbine generator assembly line in Colorado US. He also reorganised the whole purchasing and logistics operations for the nacelle production sites in China.

26 NOV. 09:30 (GMT)

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Manufacturing in Mars

by FEUP

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