



EIT Manufacturing AIESMA Summer School

Artificial Intelligence-enabled
Innovation & Entrepreneurship
for Sustainable Manufacturing



Blended Programme

Online: 08 July - 18 July, 2024

Onsite: 22 July - 02 Aug, 2024

University of Trento, Italy



UNIVERSITY
OF TRENTO



Co-funded by the
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EIT Manufacturing AIESMA Summer School Overview



The EIT Manufacturing AIESMA summer school offers a unique opportunity for developing innovation and entrepreneurship skills for the manufacturing world in an international setting considering in particular artificial intelligence as an enabling technology.

Participants are immersed in a stimulating learning-by-doing experience during which innovation experts and companies bring hands-on expertise by launching challenges, coaching team projects, and sharing their experience, while international lecturers provide state-of-the-art knowledge.

Know more about the curriculum.

[Click here](#)



Or scan this QR code

Innovative Manufacturing: Harnessing AI and Sustainability for Growth

Weblink to the online programme will be provided once enrolled

08 July, 2024 | Monday

Time	Activity	Presenter/ Speaker	Details
15:00 - 15:30	Introduction to Summer School	Enrico Blanzieri (UNITN), Milena Bigatto (HIT)	Introduction on Innovation by Design
15:30 - 17:00	Challenges Presentation	Industrial Partners	Introduction to industrial partners and their real-world challenges in manufacturing

09 July, 2024 | Tuesday

Time	Activity	Presenter/ Speaker	Details
15:00 - 15:30	Introduction to Summer School	Caterina Trevisan (UNITN)	Introduction to Design Thinking approach

15:30 - 17:00	From research to business: Knowledge transfer approach	Marco Senigalliesi <i>(HIT)</i>	Knowledge transfer in the context of research commercialization. Entre-intrapreneurial mindset and the skills needed to succeed as an innovator
17:00 - 18:00	Introduction to AI in Manufacturing	Giorgio Scarton <i>(DISI)</i>	Overview of AI technologies relevant to manufacturing, including machine learning, robotics, and predictive analytics.

11 July, 2024 | Thursday

Time	Activity	Presenter/ Speaker	Details
15:00 - 17:00	Introduction to Sustainability in Companies	Philipp Horne <i>(Voestalpine High Performance Metals GmbH)</i>	Understanding Sustainability in the Manufacturing Context Integration of Sustainability into Business Strategy and Operations

12 July, 2024 | Friday

Time	Activity	Presenter/ Speaker	Details
15:00 - 17:00	AI in manufacturing: Trends, maturity models and applications (I)	Donatella Corti - <i>(SUPSI)</i>	Define innovation in the context of manufacturing and its significance for industry growth

15 July, 2024 | Monday

Time	Activity	Presenter/ Speaker	Details
15:00 - 17:00	AI in manufacturing: Trends, maturity models and applications (II)	Donatella Corti - <i>(SUPSI)</i>	Industry 4.0 and 5.0

16 July, 2024 | Tuesday

Time	Activity	Presenter/ Speaker	Details
15:00 - 16:00	Introduction to IP management: For innovation in industry	Veronica Barchetti, Francesco Placentino <i>(HIT)</i>	Introduction to IP management for innovation in industry
16:00 - 17:00	Ethics AI: Intro	James Brusseau <i>(Pace University, New York, USA and UNITN)</i>	Foundations of Ethical AI
17:00 - 18:00	AI Act: Intro	Giulia Olivato <i>(UNITN)</i>	Ethical AI Governance and Regulation

17 July, 2024 | Wednesday

Time	Activity	Presenter/ Speaker	Details
15:00 - 17:00	Introduction to Sustainable Manufacturing Practices in Supply Chain	Marco Formentini <i>(UNITN)</i>	Introduction to Sustainable Manufacturing Practices in Supply Chain in Manufacturing

18 July, 2024 | Thursday

Time	Activity	Presenter/ Speaker	Details
15:00 - 16:00	INVERSE	Daniele Fontanelli <i>(UNITN)</i>	(INteractive robots that intuitively lEarn to inVert tasks by ReaSonIng about their Execution) project
16:00 - 17:00	Industry 5.0	Francesco Pilati <i>(UNITN)</i>	The operator of the future in the industry 5.0 Manufacturing Barriers

AI & Sustainability in Manufacturing: Problem to impact design

22 July, 2024 | Monday

Time	Activity	Presenter/ Speaker	Details
9:00 - 11:00	Ice breaking - Creativity for innovation	Milena Bigatto (<i>HIT</i>)	Introduction to Creativity and Innovation
11:00 - 13:00	Design Thinking workshop (I)	Caterina Trevisan (<i>UNITN</i>)	Design Thinking principles and methodologies for reframing the problem
13:00 - 14:00	<i>Lunch</i>		
14:00 - 15:00	Perspectives in AI: Machine Learning, symbols, bodies	Enrico Blanzieri (<i>UNITN</i>)	AI beyond statistical models
15:00 - 16:00	Process mining	Chiara Di Francescomarino (<i>UNITN</i>)	Process modelling languages & data representation
16:00 - 17:00	Human Computer interaction: A social perspective	Giovanna Varni (<i>UNITN</i>)	Social Robotics & evaluation methodology

17:00 - 19:00	Team work		
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23 July, 2024 | Tuesday

Time	Activity	Presenter/ Speaker	Details
9:00 - 10:30	Design Thinking Workshop (II)	Caterina Trevisan <i>(UNITN)</i>	Brainstorming to identify user's needs
11:00 - 13:00	Ethics AI in problem settings	Giulia Olivato <i>(UNITN)</i>	Ethical considerations in defining AI systems
13:00 - 14:00	<i>Lunch</i>		
14:00 - 15:00	How to present a problem and an innovative solution	Milena Bigatto <i>(HIT)</i>	Communicative skills for presenting innovative ideas to a company
15:00 - 19:00	Team work		

24 July, 2024 | Wednesday

Time	Activity	Presenter/ Speaker	Details
9:00 - 10:30	Onboarding in a manufacturing company	Maddalena Buzzola (<i>DANA</i>)	Innovation & company case studies
11:00 - 13:00	Data and AI readiness Assessment	Stefano Gallinaro (<i>HIT</i>)	Introduction to Data and readiness
13:00 - 14:00	<i>Lunch</i>		
14:00 - 18:00	Visit to Dana (Arco)	Enrico Blanzieri, Maddalena Buzzola, Milena Bigatto	Visiting the industrial plant

25 July, 2024 | Thursday

Time	Activity	Presenter/ Speaker	Details
9:00 - 12:00	Simulation Supply chain Sustainability	Marco Formentini <i>(UNITN)</i>	Overview of sustainability risk and opportunities in a supply chain perspective
12:00 - 13:00	Formal Ontologies in Manufacturing	Stefano Borgo <i>(LOA CNR)</i>	Role of ontologies in enhancing data interoperability, knowledge sharing and process efficiency in manufacturing domain
13:00 - 14:00	<i>Lunch</i>		
14:00 - 19:00	Team work		

26 July, 2024 | Friday

Time	Activity	Presenter/ Speaker	Details
9:00 - 13:00	Team work		
13:00 - 14:00	<i>Lunch</i>		
14:00 - 19:00	Participants' final presentations		Problem setting presentations and feedback from company/mentors

Social weekend | Candriai

27 & 28 July, 2024 | Saturday & Sunday

Participants of the AIESMA Summer School will be hosted in a training center in the mountains. They will be involved in social activities to get to know each other better and learn about some innovative aspects of the region's economy and culture. Through exploration and meetings with local actors, participants will have the opportunity to approach the topic of innovation as a driver of change.

Note: We will be staying in a hotel for the weekend. We have limited free-of-charge availability. First come first served basis. Enroll soon not to miss it.

AI & Sustainability in Manufacturing: Solution prototyping to validation

29 July, 2024 | Monday

Time	Activity	Presenter/ Speaker	Details
9:00 - 11:00	Design Thinking Workshop (III)	FABLAB <i>(DISI)</i>	Design thinking principles and methodologies
11:00 - 13:00	Design Thinking workshop (III)	Iacopo Carreras <i>(Think.in)</i>	Process optimization in manufacturing
13:00 - 14:00	<i>Lunch</i>		
14:00 - 17:00	AI and human computer Interaction	Andreas Steiner <i>(TUW)</i>	HCI human computer interaction: Risks and opportunities in manufacturing
17:00 - 19:00	Team work		

30 July, 2024 | Tuesday

Time	Activity	Presenter/ Speaker	Details
9:00 - 12:30	Circular Economy and end of life management	Stephanie (EISL)	Circular economy in manufacturing risk and opportunities
12:30 - 14:00	<i>Lunch</i>		
14:00 - 16:30	AI for solution	Giulia Olivato	Ethical considerations for AI systems
17:00 - 19:00	Team work		

31 July, 2024 | Wednesday

Time	Activity	Presenter/ Speaker	Details
9:00 - 10:00	Magician project	Luigi Palapoli	Case studies on innovation in manufacturing
10:00 - 13:00	How to present a problem and an innovative solution (II)	Milena Bigatto (<i>HIT</i>)	Communicative skills for presenting innovative ideas to a company
13:00 - 14:00	<i>Lunch</i>		
14:00 - 19:00	Team work		

01 Aug, 2024 | Thursday

Time	Activity	Presenter/ Speaker	Details
9:00 - 13:00	Team work		
13:00 - 14:00	<i>Lunch</i>		
14:00 - 19:00	Team work		Interested participants can volunteer for a video interview with EIT Manufacturing sharing their overall experience and learning from AIESMA Summer School

02 Aug, 2024 | Friday

Time	Activity	Presenter/ Speaker	Details
9:00 - 13:00	Team work		Interested participants can volunteer for a video interview with EIT Manufacturing sharing their overall experience and learning from AIESMA Summer School
13:00 - 14:00	<i>Lunch</i>		
14:00 - 19:00	Panel Presentations of solutions and feedback from companies and mentors		

EIT Manufacturing AIESMA Summer School

The Curriculum

Online | 8-18 July, 2024

The first part of the EIT Manufacturing AIESMA Summer School is an online training programme; it begins with an introduction to the objectives and themes of the programme, followed by presentations of real challenges from industry partners, with an emphasis on problem analysis.

The course bridges academia and industry, demonstrating how research can be exploited. Participants will explore the role of AI in manufacturing, covering trends, maturity models and applications, as well as sustainability at the enterprise and supply chain levels. Key topics include intellectual property management, ethical AI considerations and case studies from specific innovation projects. The course runs from 8 to 18 July, for a total of 18 hours, with late afternoon sessions.

Onsite week 1 | 22-26 July, 2024

Location: Department of Psychology and Cognitive Science University of Trento - Corso Bettini, 84 I-38068 Rovereto (TN) - Italy

The second week takes place at the University of Trento. It marks the transition from theoretical learning to practical experience in a challenge-based learning environment. This week is focused on problem analysis. Participants deepen their understanding and definition of the industrial challenges provided by the partner companies.

Through interactive workshops, team-based project work and lectures from industry experts and academic lecturers, participants deepen their understanding of AI and sustainability in manufacturing. They will engage directly with these experts. They will gain insights into real-world applications of AI technologies and sustainable practices in manufacturing. Collaboration and knowledge sharing between peers, faculty and industry professionals is encouraged through ample networking opportunities.

Onsite week 2 | 29 July - 02 Aug, 2024

Location: Department of Sociology and Social Research - via Verdi, 26- I-38122 Trento SOI-School of Innovation - Via Tommaso Gar, 16/2, 38122 Trento TN

The third week focuses on developing solutions to the previously analysed challenges, continuing this on-site experience. Participants refine their solutions, incorporating feedback from mentors and peers. They also attend presentation skills workshops to develop effective communication strategies for pitching innovative ideas.

The week culminates in final presentations to a panel of industry experts, where the solutions will be evaluated based on practicality, innovation and sustainability. The programme concludes with reflective sessions. These allow participants to discuss their learning experiences and future applications of their skills. Throughout both weeks, sustainability remains a core theme, integrated into various sessions and projects.

Get ready for a transformative learning experience.

Last day to enroll: 28 June 2024

**Apply now to the
AIESMA Summer School**

APPLY

Making Innovation Happen!



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