MADE IN EUROPE 2026

ONLINE PITCHING

Presented by:

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Sustainable Manufacturing Systems

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Aalborg University, Department of Materials and Production

Department of Materials & Production at Aalborg University (AAU) conducts research in the intersection between advanced materials, mechanical constructions, digital production technologies and industrial management. We cover the entire value chain from basic material understanding, mechanical design and applications to industrial production systems and management.

Research Areas:

- Materials Science and Engineering
- Physics and Advanced Materials
- Mechanical Engineering and Biomechanics
- Manufacturing Technologies
- Robotics and Automation
- Artificial Intelligence and Operations Research
- Manufacturing Systems and Circular Manufacturing

*Between 500 and 600 research partnerships are annually established between AAU and public/private actors.

*AAU ranks first on the list from the Confederation of Danish Industry (DI) of how satisfied Danish companies are with collaborating with Danish universities

Sustainable Manufacturing Systems Research Group
Automation & Robotics Research Group

1. Resilient manufacturing and servitization eco-systems: Design of resilient manufacturing systems capable of handling disruptions and uncertainty, Integration of servitization and platform-based Manufacturing-as-a-Service (MaaS), Supply chain resilience, Regionalisation and distributed production, Data-driven decision support for adaptive and robust operations.

2. Circular Manufacturing and remanufacturing: Design and optimisation of circular production systems, Remanufacturing, refurbishment, and reuse strategies, AI-supported inspection, disassembly, and sorting, Lifecycle engineering and end-of-life decision-making, Closed-loop supply chains and resource-efficient production.

3. Modular and Reconfigurable Manufacturing: Design of modular and reconfigurable production systems (RMS), Scalable and flexible system architectures, Rapid system adaptation to product variety and demand changes, Plug-and-produce and interoperability principles, Configuration planning and real-time system reconfiguration.

4. Smart Production: Advanced robotics and automation, Digital manufacturing and Industry 4.0 technologies, Digital twins and data-driven production systems, Swarm and matrix production paradigms, Industrial metaverse and cyber-physical production environments.

5. Robotics and Embodied Artificial Intelligence: Multi-modal analysis, Learning-based robot skill acquisition and adaptation, Human–robot collaboration and interaction, Natural Language Processing, Reinforcement learning and embodied AI for robotics, AI and machine learning applications in manufacturing systems.

Ann-Louise Andersen
Associate Professor
Aalborg University
Sustainable Manufacturing Systems

Kjeld Nielsen
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Sustainable Manufacturing Systems

Thomas Ditlev Brunø
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AP 30 RESEARCH PROJECT

RESEARCH ON THE FUTURE OF ASEPTIC PRODUCTION SYSTEMS FOR SMALL BATCH PRODUCTION IN BIOTECH AND PHARMA.

addsmart

THE EUROPEAN DIGITAL INNOVATION HUB OF NORTH DENMARK

Selected Laboratory and Demonstration Facilities:

Sapient
A Structured Approach to Perception and Interactive Embodiment for Robotic Intelligence

AAU SMART PRODUCTION LAB
smartproduction.aau.dk

Danish National Demonstration Center for Circular Manufacturing

AALBORG UNIVERSITY

Selected Recent Relevant National & Horizon EU Projects:

Den Cirkulære Fabrik
Nationalt demonstrationscenter for cirkulære produktionsprocesser

Coordinator

THE CIRCULAR FACTORY, Danish INDUSTRY FOUNDATION, ***2025-2027***

MADE REACT

RESILIENT AND AI-POWERED MANUFACTURING, INNOVATION FUND DENMARK, ***2025-2027***

MAASive

Coordinator

MANUFACTURING AS A SERVICE TO INCREASE RESILIENCE IN VALUE NETWORKS, ***RIA 2025-2027***

5G ROBOT

MOBILE ROBOTS AND MOBILE MANIPULATORS WITH 5G COMMUNICATION AS INFRASTRUCTURE

AAU AI:CYBERNETICS

Lab Directors

CREATING ROBOTS THAT FEEL MORE LIKE HELPFUL PARTNERS THAN COMPLICATED MACHINES YOU HAVE TO CONSTANTLY CONTROL.

CALL TOPIC

Factory processes and automation for de- and re-manufacturing (RIA) (Made in Europe partnership) HORIZON-CL4-2027-01-MAT-PROD-03

Role: *Open to lead and/or partner in this call.*

Expertise: *Factory-level design of de- and remanufacturing systems under high variability in returned products, AI-enabled decision-making for value retention (reuse, repair, remanufacture, recycle), Multi-modal perception and learning-based robotic disassembly, sorting, and inspection, Human–robot collaboration for complex, unstructured de-/remanufacturing tasks, AI for adaptive process planning and decision-making under uncertainty, Digital twins of products, processes, and circular decisions, Proven experience with industrial pilots in circular and de-/remanufacturing environments.*

Partners sought: *OEMs with de-/remanufacturing needs (e.g. wind, white goods, industrial equipment), Recycling and material recovery partners, Robotics and automation providers (disassembly, handling, HRC), AI, data, and digital twin technology providers, Service and logistics partners (on-site/off-site circular operations)*

CALL TOPIC

Advanced manufacturing for key products (IA) (Made in Europe partnership) HORIZON-CL4-2027-01-MAT-PROD-02

Role: *Open to partner in this call.*

Provides: *Expertise and relevant industrial Danish use cases across sectors.*

Expertise: *Manufacturing under material uncertainty and supply chain disruptions, MaaS and platform-based production models, Integration of secondary raw materials and revalorised components, Flexible production architectures adapting to product variability and demand, AI/ML for adaptive and uncertainty-aware production systems.*

New approaches for Human/AI collaboration for the workforce of the future (RIA) (Made in Europe and AI, Data and Robotics partnerships) HORIZON-CL4-2027-02-DIGITAL-EMERGING-52-two-stage

Role: *Open to lead and/or partner in this call.*

Expertise: *Multi-modal perception and learning-based robot skill acquisition, Human–robot collaboration and reinforcement learning, AI-enabled decision support and digital production systems, AI for adaptive operations and decision-making under uncertainty, AI for decision automation in remanufacturing.*

Partners sought: *Industrial partners with complex and dynamic/circular production environments, Robotics and AI developers, SSH partners (human factors, ergonomics, inclusion, ethics), Training and education providers (upskilling, workforce transition), Digital interface and human–machine interaction developers.*

THANK YOU

Contact:

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