

Program Scientific Track – ERF2026

Contents

Wednesday, 25 March 2026 – Robotics I	1
Wednesday, 25 March 2026 – Robotics II	2
Wednesday, 25 March 2026 – Pitch/Poster Session I	2
Wednesday, 25 March 2026 – Pitch/Poster Session II	3
Wednesday, 25 March 2026 – Pitch/Poster Session III	4
Thursday, 26 March 2026 – AI for Robotics I	5
Thursday, 26 March 2026 – AI for Robotics II	6
Thursday, 26 March 2026 – Pitch/Poster Session IV	6

Wednesday, 25 March 2026 – Robotics I

Start: 8.30. Each presentation 20 minutes including Q&A.

Location: Vindafjord

Session Chair: Eleni Kelasidi | Jan Tommy Gravdahl | Daniel Hagen

Time	ID	Title/Authors
8:30-8:50	8	Energy-Efficient Trajectory Tracking through Economic Nonlinear Model Predictive Control for Articulated Intervention-AUVs
		<i>Erling Tvetter (NTNU)</i> <i>Eirik Foseid (NTNU)</i> <i>Kristin Pettersen (NTNU)</i> <i>Jan Tommy Gravdahl (NTNU)</i>
8:50-9:10	48	Lifetime assessment of offshore moorings using a robotic platform with integrated 3D vision system
		<i>Trine Kirkhus (SINTEF)</i> <i>Jens T. Thielemann (SINTEF)</i> <i>Jostein Thorstensen (SINTEF)</i> <i>Marius E. Andersen (SINTEF)</i> <i>Terence Coudert (SINTEF)</i> <i>Kristoffer Brungot (Oceantech Innovation)</i>
9:10-9:30	39	Towards an Autonomous Mobile Robotic System for Deburring Large-Scale Components
		<i>Rafael Herguedas (Instituto Tecnológico de Aragón)</i> <i>María T. Lázaro (Instituto Tecnológico de Aragón)</i> <i>Sara Mata (IDEKO)</i> <i>Oihane Busselo (IDEKO)</i>
9:30-9:50	33	Coverage Planning for Automated ROV Inspections of Aquaculture Net Pens
		<i>Herman Amundsen (NTNU, SINTEF Ocean)</i> <i>Tuva Vika Tholo (NTNU)</i> <i>Jan Tommy Gravdahl (NTNU)</i>

Wednesday, 25 March 2026 – Robotics II

Start: 11:10. Each presentation 20 minutes including Q&A.

Location: Vindafjord

Session Chair: Eleni Kelasidi | Jan Tommy Gravdaahl | Daniel Hagen

Time	ID	Title/Authors
11:10-11:30	10	Resistance is futile: the feasibility of integrating robotic exoskeleton systems within upper body spacesuit design
		<i>Andrew Garrick (University of Birmingham, Star Helix)</i> <i>Mason Robbins (University of Arizona, Star Helix)</i>
11:30-11:50	26	Evaluating Dexterous Manipulator Technologies for In-Orbit Services
		<i>Manu Nair (University of Manchester)</i> <i>Mini C. Rai (OrbitRise Ltd)</i>
11:50-12:10	77	Mobile Manipulator with Passive Mechanical Coupling for Autonomous Object-Handling
		<i>Daniel Hagen (University of Agder)</i> <i>Marcus Eide (University of Agder)</i> <i>Tollak Liland (University of Agder)</i> <i>Muhammad Faisal Aftab (University of Agder)</i>

Wednesday, 25 March 2026 – Pitch/Poster Session I

Start: 12:10. Each presentation 7 minutes including Q&A.

Location: Vindafjord

Session Chair: Eleni Kelasidi | Jan Tommy Gravdaahl | Daniel Hagen

#	ID	Title
1	20	OmniABiD: Evaluating Sim2Real Transferability in Safety and Risk Monitoring of Human-Robot Collaboration using NVIDIA Omniverse
2	46	Enabling pedestrian-like crossings for sidewalk robots through ETSI C-ITS integration in ROS 2
3	81	Hierarchical HMM-Based Intuitive Programming for Grip-Force-Oriented Robotic Manipulation: Pilot Experimental Validation

Wednesday, 25 March 2026 – Pitch/Poster Session II

Start: 14:00. Each presentation 7 minutes including Q&A.

Location: Vindafjord

Session Chair: Eleni Kelasidi | Jan Tommy Gravdahl | Daniel Hagen

#	ID	Title
1	18	Interoperability by Design: Schema- and LLM-Guided Authoring for Non-Expert Usability in Robotic Service Descriptions
2	4	Admittance Control of Exoskeleton for Task-Oriented Physiotherapy Using a Multi-Criteria Cost Function
3	17	Inverse Dynamics Based Force Prediction in Industrial Robots with Hybrid Drives
4	21	The Language of Deformation: Semantic Failure Analysis as a Prerequisite for Dexterous Manipulation of Deformable Objects
5	59	Assessing 6D Pose Estimation Pipelines for Reflective Part Handling
6	64	Towards Kinematic Assessment of Robotic AM Toolpaths, Evaluating A Contour Manipulability-Based Pre-Production Metric
7	72	A main-side virtual RCM approach for intuitive teleoperated endoscope control
8	23	A Fully Coupled Non-Singular Fast Terminal Sliding Mode Control for Commercial Mobile Manipulators
9	12	Supporting Caregivers with Robotics: A User-Centered Platform for Tailored Nursing Interventions
10	19	Towards Optimal Trajectories in Cooperative Multi-Robot Processes Based on Kinetostatic Criteria
11	5	From Screws to Tools: Detection, Classification, and Tool Suggestion for Robotic Disassembly

Wednesday, 25 March 2026 – Pitch/Poster Session III

Start: 16:00. Each presentation 7 minutes including Q&A.

Location: Vindafjord

Session Chair: Eleni Kelasidi | Jan Tommy Gravdahl | Daniel Hagen

#	ID	Title
1	3	Synthetic Data-Driven Perception and Motion Planning for Mobile Robot Manipulation
2	15	Perception-aware Exploration for Consumer-grade UAVs
3	14	Multi-Camera Human Pose Estimation for Minimal Distance Monitoring in Industrial Robot Cells
4	76	Comparative study of two hand-eye calibration methods for laser profile scanners in robotic welding
5	30	Establishing Understanding: A Modular Cognitive Architecture for Multimodal Human–Robot Collaboration
6	34	Feasibility Study on Dual-Arm Throwing Exploiting End-Effector Elasticity
7	63	Development and Deployment of a High-Speed Pneumatic Finger Gripper for Construction and Demolition Waste Sorting
8	22	Identification of Pose-Dependent Compliance in Industrial Robots under Variable Static Loads
9	80	User-centred evaluation of a glove-controlled collaborative robot for brick handover in construction
10	70	A MP-TEB based controller for human-aware navigation of mobile robots: a cross-platform comparative analysis
11	61	Evaluation of Wireless Networks for Teleoperation of Industrial Manipulators

Thursday, 26 March 2026 – AI for Robotics I

Start: 8:30. Each presentation 20 minutes including Q&A.

Location: Vindafjord

Session Chair: Eleni Kelasidi | Jan Tommy Gravdahl | Daniel Hagen

Time	ID	Title/Authors
8:30-8:50	57	Hierarchical LLM-Driven Mission Planning for Heterogeneous Maritime Robot Teams <i>Barbara Arbanas (University of Zagreb)</i> <i>Thi Tran (University of Zagreb)</i>
8:50-9:10	53	Benchmarking Short- and Wide-baseline Stereo Matching on Marine Surface Vessel <i>Eivind Sunde Eriksen (NTNU)</i> <i>Edmund Førland Brekke (NTNU)</i> <i>Rudolf Mester (NTNU)</i> <i>Annette Stahl (NTNU)</i>
9:10-9:30	52	Natural Language to PDDL: An Error-Correcting Pipeline for Robotic Inspection and Maintenance Mission Planning <i>Magnus Bjerkgeng (SINTEF Digital)</i> <i>Bjørnar Luteberget (SINTEF Digital)</i> <i>Ahmed Mohammed (SINTEF Digital)</i> <i>Morten Smedsrud (SINTEF Digital)</i> <i>Synne Fossøy (SINTEF Digital)</i> <i>Frédéric Py (SINTEF Digital)</i> <i>Aksel Transeth (SINTEF Digital)</i>
9:30-9:50	16	EL3DD: Extended Latent 3D Diffusion for Language Conditioned Multitask Manipulation <i>Jonas Bode (University of Bonn)</i> <i>Raphael Memmesheimer (University of Bonn)</i> <i>Sven Behnke (University of Bonn)</i>

Thursday, 26 March 2026 – AI for Robotics II

Start: 11:10. Each presentation 20 minutes including Q&A.

Location: Vindafjord

Session Chair: Eleni Kelasidi | Jan Tommy Gravdahl | Daniel Hagen

Time	ID	Title/Authors
11:10-11:30	6	Smart Condition Monitoring with a Mobile Robot using Large Language Models and FIWARE as a Middleware <i>Antti Martikkala (Tampere University of Applied Sciences)</i> <i>Kari Naakka (Tampere University of Applied Sciences)</i> <i>Katri Salminen (Tampere University of Applied Sciences)</i>
11:30-11:50	24	Non-verbal Real-time Human-AI Interaction in Constrained Robotic Environments <i>Alina Marcu (University Politehnica of Bucharest)</i> <i>Dragos Costea (University Politehnica of Bucharest)</i> <i>Cristina Lazar (University Politehnica of Bucharest)</i> <i>Marius Leordeanu (University Politehnica of Bucharest)</i>
11:50-12:10	66	EMPERA: Event-Based Multitask Learning Model with Motion Dynamics and Event Density Analysis for Joint Person-Action Recognition <i>Muhammad Hamza Zafar (University of Agder)</i> <i>Syed Kumayl Raza Moosavi (University of Agder)</i> <i>Furqan Shoukat (University of Engineering and Technology, Taxila)</i> <i>Sanfilippo, Filippo (University of Agder)</i>
12:10-12:30	83	Transformer-Based Human Trajectory Prediction in Manufacturing Settings <i>Even Langås (University of Agder)</i> <i>Atle Aalerud (NORCE Norwegian Research Center)</i> <i>Daniel Hagen (University of Agder)</i> <i>Filippo Sanfilippo (University of Agder)</i>

Thursday, 26 March 2026 – Pitch/Poster Session IV

Start: 14:00. Each presentation 7 minutes including Q&A.

Location: Vindafjord

Session Chair: Eleni Kelasidi | Jan Tommy Gravdahl | Daniel Hagen

#	ID	Title
1	13	In-Graph Softmax for Hard-Soft Attention in Multi-Agent Reinforcement Learning
2	49	Curriculum Reinforcement Learning for Central Pattern Generator Regulated Locomotion in Snake Robots
3	27	Learning on the Fly: Replay-Based Continual Object Perception for Indoor Drones
4	58	In situ Multiview 3D Reconstruction of Strawberry Plants
5	54	HARTU: AI-Enhanced Robotic Technologies for Flexible Handling in Manufacturing and Logistics Environments
6	45	PRISM: Personalized Refinement of Imitation Skills for Manipulation via Human Instructions
7	32	Multimodal Thermal Arctic Winter Dataset and Evaluation thereof with YOLO