

Hellenic Robotics Forum (HRF) 2026

July 1-2, 2026, Athens, Greece



Wednesday, July 1 (Day 1)

Poster Session 1 (11:30-12:30)

No	Authors	Title
1	Georgios Kamaras, Subramanian Ramamoorthy	Distributional Treatment of Real2Sim2Real for Object-Centric Agent Adaptation in Vision-Driven DLO Manipulation
2	Vasiliki Fiska, Konstantinos Mitsopoulos, Vasiliki Mantiou, Vasileia Petronikolou, Panagiotis Antoniou, Konstantinos Tagaras, Konstantinos Kasimis, Konstantinos Nizamis, Markos G. Tsipouras, Alexander Astaras, Panagiotis D. Bamidis, Alkinoos Athanasiou	Integration and Validation of Soft Wearable Robotic Gloves for Sensorimotor Rehabilitation of Human Hand Function
3	Giorgos Sfikas, George Retsinas	Unlocking the matrix form of the Quaternion Fourier Transform and Quaternion Convolution: Properties, connections, and application to Lipschitz constant bounding
4	Dimitrios Papageorgiou, Konstantinos Plotas, Emmanouil Papadakis, Drosakis Drosakis, Panos Trahanias	A control scheme for collaborative object transportation between a human and a quadruped robot using the MIGHTY suction cup
5	Leonidas Koutras, Sotiris Stavridi, Christos Papakonstantinou, Zoe Doulgeri	Robotic Shelf Replenishment by Combining Non-Prehensile Object Manipulation with Simple Grasping
6	Dimitris Chaikalis, Anthony Tzes	Safe and Compliant Cooperative Manipulation with Heterogeneous Mobile Robots
7	Ioannis Poulakakis, Shubham Kumbhar, Abhijeet Kulkarni	Capturable Humanoid Locomotion in Constrained Environments

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8	Argyris Manetas, Nikos Giannakakis, Panagiotis P. Filntisis , Petros Maragos, George Retsinas	Object-Centric Action-Enhanced Representations for Robot Visuo-Motor Policy Learning
9	Anatoli Tziola, Savvas Loizou	An Approach to Automated Task Planning
10	Panagiotis Mermigkas, Argyris Manetas, Petros Maragos	SDPL-SLAM: Introducing Lines in Dynamic Visual SLAM and Multi-Object Tracking
11	Dimitrios Kotsinis, George Karras, Charalampos Bechlioulis	Autonomous Exploration in Unknown Indoor 2D Environments Using Harmonic Fields and Monte Carlo Integration
12	Vasiliki Balaska, Ioannis Tsampikos, Ioannis Tsampikos Papapetros, Katerina Maria Oikonomou, Loukas Bampis, Antonios Gasteratos	UAV Object Detection and Positioning in a Mining Industrial Metaverse with Custom Geo-Referenced Data
13	Aikaterini Smyrli, Anargyros-Nektarios Skafidas, Evangelos Papadopoulos	Exploiting passive descent bipedal gait dynamics for steady-state uphill walking
14	Ilias Zournatzis, Panagiotis Polygerinos	TUBERS: A Modular Soft Inchworm Robot for Pipe Locomotion, Inspection, and Maintenance
15	Athanasios K. Gkesoulis, Haris Psillakis, George Karras, Charalampos Bechlioulis	Prescribed Performance Control of Uncertain MIMO Nonlinear Systems with Coupled and Constrained Inputs
16	Alexia Karantana, Vassilis Kaburlasos	Enhanced Deep Learning for Robots

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17	Chanaka Bandara, Herbert Tanner	Marine Surface Vehicle Formations in Confined Environments
18	Panagiotis Zoumpoulis, Panorios Benardos, Angelos Amditis, Fotios Konstantinidis	Design and Development of a Robotic Two-Finger Gripper Using Generative Design and Additive Manufacturing.
19	Areistidis Stavros Geladaris, Panagiotis Polygerinos	Exploiting a Variable-Sized Map and Vicinity-Based Memory for Dynamic Real-Time Planning of Autonomous Robots
20	John Fasoulas, Michael Sfakiotakis, Vasileios Bekas	A Mechatronic Thumb for Grasping and In-Hand Manipulation Tasks
21	Grigorios M. Chatziathanasiou, Konstantina Tsintzira, Panagiotis Polygerinos	Modular Soft Actuators: A Unified Framework Towards Lightweight Hybrid Joints
22	Paris Oikonomou, George Retsinas, Petros Maragos, Costas Tzafestas	Proactive tactile exploration for object-agnostic shape reconstruction from minimal visual priors
23	Odysseas Simatos, Nikolaos Charalampous, Panagiotis Polygerinos	PNEUMA: A Soft Pneumatic Fabric Bidirectional Actuation Module for Wearable Robotics
24	Konstantinos Papoutsakis, Nikolaos Bakalos, Athena Zacharia, Konstantinos Frangkoulis, Georgia Kapetadimitri, Maria Pateraki	A vision-based framework and dataset for human behavior understanding in industrial assembly lines
25	Stelios Zarifis, Ioannis Kordonis, Petros Maragos	Diffusion-Based Forecasting for Uncertainty-Aware Model Predictive Control
26	Ergina Kavallieratou	Autonomous AUV Operation for Inspection of Open-Sea Aquaculture Net Cages

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Wednesday, July 1 (Day 1)

Poster Session 2 (17:00-18:00)

No	Authors	Title
1	Despina Ekaterini Argiropoulos, Michael Maravgakis, Changda Tian, Dimitrios Papageorgiou, Panos Trahanias	Optimal Torque Distribution via Dynamic Adaptation for Quadrupedal Locomotion on Slippery Terrains
2	Dimitrios Chatziparaschis, Elia Scudiero, Brent Sams, Konstantinos Karydis	An Annotation-to-Detection Framework for Autonomous and Robust Vine Trunk Localization in the Field by Mobile Agricultural Robots
3	Mariliza Tzes, Nikolaos Bousias, Evangelos Chatzipantazis, George Pappas	Graph Neural Networks for Multi-Robot Active Information Gathering
4	Theodora Kastritsi, Luigi Villani, Bruno Siciliano, Fanny Ficuciello	Safe Mode-Switching Control Architecture for Robotic-Assisted Surgery Integrating Teleoperation and Autonomy
5	Katerina Papadimitriou, Panagiotis P. Filntisis, George Retsinas, Gerasimos Potamianos, Petros Maragos	Seeing in 2D, Thinking in 3D: 3D Hand Mesh-Guided Feature Learning for Continuous Fingerspelling
6	Panagiotis Filntisis, Efthymios Tsaprazlis, Paraskevas Oikonomou, Francesco Mattioli, Vieri Giuliano Santucci, George Retsinas, Petros Maragos	Towards Open-ended Robotic Exploration using Vision-Inspired Similarity and Foundation Models
7	Athanasios K. Gkesoulis, Panagiotis Georgakis, George Karras, Charalampos Bechlioulis	Autonomous Sea Floor Coverage with Constrained Input Autonomous Underwater Vehicles: Integrated Path Planning and Control
8	Georgios Bertos, Anestis Mablekos-Alexiou, Evangelos Papadopoulos, Spiros Kontogiannopoulos, Nikos Koukoulas, Zacharias Vangelatos	Biomechatronic Extended Physiological Proprioception (EPP) for Upper-Limb Prosthesis Control

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9	Georgios Bolanakis, Evangelos Papadopoulos	Mag-Net: Rapid Electromagnetic Actuation for Soft Grippers and Untethered Soft Robots
10	Spyridon Syntakas, Kostas Vlachos	Gramian-Based Sea Current-Aware MPC for Energy-Efficient Autonomous Surface Vehicle Navigation
11	Nikolaos Kardaris, Panagiotis Mermigkas, George Moustris, Costas Tzafestas, Petros Maragos	Automated Thermal Fault Detection in Ultra-High Voltage Substation Equipment
12	Giorgos Petteimeridis, Nikolas Souli, Panayiotis Kolios, Gerogios Ellinas	PROTECDOME: PROTECTION DOME for Public Spaces against Rogue Drones
13	Konstantinos Chaldaiopoulos, Niki Efthymiou, Athanasia Zlatintsi, Panagiotis Filntisis, Katerina Pastra, Petros Maragos	PredJSal: Video Saliency via Predictive Self-Supervised Representations
14	Ioannis Alamanos, George Moutris, Costas Tzafestas	Localization and Offline Mapping of High-Voltage Substations in Rough Terrain Using a Ground Vehicle
15	Farhan Mahmood, Michalis Karamousadakis, Antonis Porichis, Vishwanathan Mohan, Panagiotis Chatzakos	Order-Aware Compression for RF-DETR on Edge Devices: Overcoming Graph Fragmentation and Quantization Instability
16	Dimitrios Kotsinis, Charalampos Bechlioulis	Sub-Optimal Decentralized Navigation of Multiple Holonomic Agents in Simply-Connected Workspaces
17	Leonida Droukas, Zoe Doulgeri	Shared-Control for Teleoperated Mechanical Cutting with Task Constraints and Haptic Feedback
18	Thomas Scillian	Cognitive Imprinting: Stabilizing Interaction in Human-AI Cybernetic Systems
19	Mehrnoosh Ayazi, Ipsita Sahin, Caio Mucchiani, Elena Kokkoni, Konstantinos Karydis	Data-driven Modeling of Forces Exerted by Pneumatic Actuators for a Pediatric Exosuit

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20	Georgios Chatzichristodoulou, Niki Efthymiou, Panagiotis Filntisis, Georgios Pavlakos, Petros Maragos	Age-Inclusive 3D Human Mesh Recovery for Action-Preserving Data Anonymization
21	Aritra Samanta, Jayanta Banik, Dimitrios Chatziparaschis, Elia Scudiero, Konstantinos Karydis	Field Deployment of an Agricultural Robot for Informed Sampling of Soil Apparent Electrical Conductivity using Aisle Graphs
22	Konstantinos Spathis, Nikolaos Kardaris, Petros Maragos	Multi-task Learning For Joint Action and Gesture Recognition
23	Niki Efthymiou, Panagiotis Filntisis, Gerasimos Potamianos, Petros Maragos	Visual Robotic Perception System with Incremental Learning for Child-Robot Interaction Scenarios
24	Georgios Bertos	A 2nd Order Model of the Vertical Impedance of the Locomotor System During Human Walking: Applications in Prosthetics & Humanoids Design
25	Dimitris N. Makropoulos, Christos Garoufis, Antigoni Tsiami, Panagiotis P. Filntisis, Petros Maragos	Representation-diverse self-supervision for cross-domain bioacoustic learning in low-resource settings
26	Emmanuel Raptis, Athanasios Kapoutsis	Overcome the Fear Of Missing Out: Active Sensing UAV Scanning for Precision Agriculture

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Thursday, July 2 (Day 2)

Poster Session 3 (10:30-11:30)

No	Authors	Title
1	Marios Xanthidis	Underwater Dense Mapping with the First Compact 3D Sonar
2	Christos Belogiannis, Ioannis Giannoulas, Vasileia Diamanti, Dimitris Siskos, Iordana Gaisidou, Christos Vrakatselis, Natalia Angeli, Fotios Plessas	HERMES EXO: Empowering Mobility with Modular Lower-Limb Robotic Exoskeleton for CYBATHLON 2024
3	Andreas Vatistas, George Moustris, Constantinos Tzafestas	A Visibility-Based Near-Optimal Planner for Robotic Inspection in Ultra High Voltage Centers
4	Isidoros Maroungkas, Dhruv Metha Ramesh, Joe Doerr, Edgar Granados, Aravind Sivaramakrishnan, Abdeslam Boularias, Kostas Bekris	Integrating Model-based Control and RL for Sim2Real Transfer of Tight Insertion Policies
5	Charis Stamouli, Anastasios Tsiamis, Manfred Morari, George J. Pappas	Layered Multirate Control of Constrained Linear Systems
6	Nikolaos Bousias, Lars Lindemann, George Pappas	Symmetry-infusion in multi-robot safety certificates
7	Kostas Kyriakopoulos, Raksi Kopo, Fotis Panetsos, Armando Nicolella, Spyridon Tarantos	Underwater Vehicle-Manipulator Systems (UVMS): Towards Reliable Underwater Inspection and Repair
8	Christos Spatharis, Dimitrios Koutrintzes, Maria Ntagioglou	First Impressions Matter: How Primacy Bias Undermines Robot Adaptation in Collaborative Tasks
9	Dimitrios Papageorgiou, Charalampos Athanasiadis, John Fasoulas, Michael Sfakiotakis	Towards multi-modal Learning by Demonstration: Combining depthless visual data with kinesthetic teaching

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10	Ilias Papadeas, Georgios Sandalis, Georgios Zamanakos, Ioannis Pratikakis	Crop and weed multispectral semantic segmentation with Vision-Language Foundation models
11	Aristeidis Geladaris, Panagiotis Polygerinos	POWERS: Developing Attentive Soft Wearable Robotic Exosuits for Upper Body
12	Socratis Gkelios, Savvas Apostolidis, Pavlos Kapoutsis, Elias Kosmatopoulos, Athanasios Kapoutsis	Beyond coverage path planning: Can UAV swarms perfect scattered regions inspections?
13	Ilias Panagiotopoulos, Konstantinos Zervakis	Ranking Inversion in Risk-Parameterised UAV Path Planning for Wildfire Emergency Response
14	Vasiliki Vasileiou, Panagiotis Filntisis, Petros Maragos, Kostas Daniilidis	VGGT-HPE: Relative Head Pose Estimation for Human-Robot Interaction and Augmented Reality
15	Valsamis Ntouskos, Sotiris Spanos, Christos Antoniou, Angelos Mallios, Paraskevi Polymenakou, Paraskevi Nomikou, Konstantinos Karantzalos	THEIA: A Compact Underwater Multispectral Imaging System
16	Naman Patel, Nikolaos Evangeliou, Prashanth Krishnamurthy, Anthony Tzes, Farshad Khorrami	StealthBAT: Crafting Stealthy Blackbox Adaptive Adversarial Triggers for Monocular UAS Navigation and Tracking
17	Konstantinos Kokkalis, Fotios Konstantinidis, Maria Koskinopoulou, Georgios Tsimiklis, Angelos Amditis, Panayiotis Frangos	RaapWaste: Robot- and Application-Agnostic Planning for Efficient Construction and Demolition Waste Sorting
18	Christos Vlachos, Charalampos Bechlioulis	Neuro-Adaptive Direct Inverse-Model-Based Control for Uncertain Nonaffine in the Control Systems with Prescribed Performance
19	George Moustris, Costas Tzafestas	A shared-control framework for a human-robot front-following behaviour in unknown dynamic environments

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20	Alexandros Dimitriadis, Costas Tzafestas, George Moustiris	2D Surgical Tool Pose Estimation via Top-Down Deep Learning and Adaptive Temporal Filtering
21	Spyros Lalis, Giorgos Polychronis, Foivos Pournaropoulos, Christos Antonopoulos	Using Machine Learning to Take Stay-or-Go Decisions in Data-driven Drone Missions
22	Marios Glytsos, Panagiotis Filntisis, George Retsinas, Petros Maragos	Category-Level 6D Object Pose Estimation in Agricultural Settings Using a Lattice-Deformation Framework and Diffusion-Augmented Synthetic Data Conference
23	Emmanouil Papadakis, Dimitris Tsakiris, Michael Sfakiotakis	Bioinspired Soft Robots: An Octopus-Inspired Soft Pneumatic Robotic Manipulator Arm
24	Antonios Gikakis, Dimitrios Dimitriadis	LEAP: A Jumping Platform for the Lunar Economy
25	Spyridon Tsilimpokos, Ilias, Panagiotopoulos, Georgios Dimitrakopoulos	SAR-UGV Simulation: A Browser-Based Platform for Autonomous Search and Rescue Mission Planning and Evaluation
26	Spyridon Syntakas, Kostas Vlachos	Real time uncertainty quantification of NMPC employing deep learning in safety-critical autonomous marine systems
27	George Bertos, Evangelos Papadopoulos	Upper-Limb Prosthetics
28	Jingzong Zhou, Zhichao Liu, Konstantinos Karydis	Hierarchical Tri-manual Planning for Vision-assisted Fruit Harvesting with Quadrupedal Robots

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Thursday, July 2 (Day 2)

Poster Session 4 (15:30-17:00)

No	Authors	Title
1	Vasiliki Balaska, Nikolaos Efsthathopoulos, Nikolaos Kounalakis, John Fasoulas, Dimitrios Papageorgiou	GRAsPAD: Generalized framework for optimal grasp key-points active detection
2	Zhuoyun Zhong, Seyedali Golestaneh, Constantinos Chamzas	ACTIVE PUSHER: Active Learning and Planning with Residual Physics for Nonprehensile Manipulation
3	Stavros Vougioukas, Yuankai Zhu	Fast Scheduling and Trajectory Planning for Robotic Fruit Harvesters With Multiple Cartesian Arms
4	Georgia Kouvousakis, Caio Muchiani, Pamodya Peiris, Elena Kokkoni, Konstantinos Karydis	Exploration of a New Inter-Limb Coordination Training Paradigm using Socially Assistive Aerial Robots and Humanoid Synthetic Agents
5	Aikaterini Smyrli, Evangelos Papadopoulos	Design Investigation of Biomechanically Inspired Bipedal Robots And Morphological Intelligence in Passive Dynamics
6	Athanasios Polydoros, Emlyn Williams	Zero-Shot Sim-to-Real Reinforcement Learning for Fruit Harvesting: Extended Abstract
7	Ioannis Rekleitis, Michalis Chatzisprou, Luke Horgan, Hyunkil Hwang, Harish Sathishchandra, Chinmay Burgul, Monika Roznere, Alberto Quattrini Li, Philippos Mordohai	Multi-Session Visual-Inertial SLAM and 3D Reconstruction of an Underwater Shipwreck
8	Dimosthenis Angelis, Rasmus Andersen, Valeria Alexandra Feraru, Evangelos Boukas	UAV Design for Fully Autonomous Man Overboard Detection
9	Smaragda Reppa, Kakia Panagidi, Stathes Hadjiefthymiades	ARROW: Energy-Aware Real-Time Navigation of Mobile Robots with Edge-Cloud Orchestration

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10	Vasileios Kochliaridis, Chrysoula Moschou, Alexandra Dimitrakopoulou, Ioannis Vlahavas	Learning to InMoov: A Deep Learning Approach to Modeling Human Hand
11	Aikaterini Adam, Torsten Sattler, Konstantinos Karantzas, Tomas Pajdla	Objects Can Move: 3D Change Detection by Geometric Transformation Consistency
12	Panagiotis Sapoutzoglou, Orestis Vaggelis, Athina Zacharia, Evangelos Sartinas, Maria Pateraki	IndustryShapes: An RGB-D Benchmark dataset for 6D object pose estimation of industrial assembly components and tools
13	Evangelos Asitzoglou, Daniela Papa, Vassilis Alimisis, Andreas Papathanasiou, Vasileios Moustakas, Evangelos Georgakilas, Paul Sotiriadis	A Power-Efficient Analog Hardware Type-2 Fuzzy Classifier Architecture for Robot Failure Detection
14	Eirini Dellagrammatika Bizmpiki	The EU AI Act, Lethal Autonomous Weapons and the Imperative for Human-Centric AI
15	Georgios Kladis, Lefteris Doitsidis, Nikos C. Tsourveloudis	Energy-efficient path-planning for UAV swarm based missions: A genetic algorithm approach
16	Ammar Qammaz, Nikolaos Vasilikopoulos, Iason Oikonomidis, Antonis Argyros	Y-MAP-Net: Learning from Foundation Models for Real-Time, Multi-Task Scene Perception
17	Kostas Nanos, Evangelos Papadopoulos	Robust Coordinated Compliant Control for Space Manipulators under Flexible and Uncertain Dynamics
18	Ilias Papadeas, Lazaros Tsochatzidis, Ioannis Pratikakis	Efficient Dual-Task Semantic Segmentation for Real-Time Autonomous Driving
19	George Dimas, Panagiotis Vartholomeos, Panagiotis Kalozoumis, Dimitrios	Image-Based Navigation of Soft-Growing Robots in the Spinal Sub-Arachnoid Space

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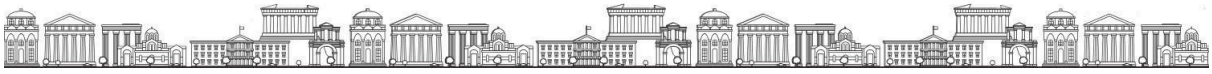
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20	Dario Pisanti, Robert Hewitt, Roland Brockers, Georgios Georgakis	Geometry-aided Vision-based Localization of Future Mars Helicopters in Challenging Illumination Conditions
21	George Stamatelis, George Alexandropoulos,	Filtering Markov Jump Systems with Partially Known Dynamics: A Model-Based Deep Learning Approach
22	Georgios Rekleitis, Evangelos Papadopoulos	Space Robot Parameter Identification and its effect on Robust Control Performance
23	Prodromos Boutis, Anastasios Dimou	Drone and Robotic Control in Augmented Reality: Gesture-Based Operation, Tracking, and Contextualized Video on VR/AR Devices
24	Athanasios Mastrogeorgiou, Ioannis Zerras, Konstantinos Machairas, Konstantinos Koutsoukis, Evangelos Papadopoulos	Vinymap: a Vineyard Inspection and 3D Reconstruction Framework for Agricultural Robots
25	Niki Efthymiou, Dafni Anagnostopoulou, Christina Papailiou, Petros Maragos	Child Engagement Estimation in Heterogeneous Child-Robot Interactions Using Spatiotemporal Visual Cues
26	Dimitra Koumoutsou, Spencer Sweeney, Hongbo Li, Michael Ziegltrum, Andromachi Maria Delfaki, Taskin Padir, Dimitrios Kanoulas	Autonomous Vineyard Exploration using LiDAR Sensing: A Field Evaluation on Legged-Wheeled Quadruped Robot
27	Plouto – Antiopi Syrinoglou, Katerina Paisiou, Ioannis Papaioannou, Panagiota Kappi, Ioanna Papoutsi, Dionissis Milidakis, Marios Kalyviotis, Kalliopi Lappa, Ioulia – Eleni Panagiotopoulou, Damiani Tsiamasfirou, Sofia Ferfeli, Georgios Lygizos, Yannis Dionyssiotis	Robot-Assisted Verticalization in Spinal Cord Injury (SCI): A Case Report on Bone Mineral Density (BMD) Changes and Mechanical Loading
28	George Bertos, Evangelos Papadopoulos	Lower-Limb Prosthetics
29	Panagiotis Vartholomeos, Zicong Wu, Christos Bergeles, Hadi Sadati	Lumped Parameter Dynamic Model of an Eversion Growing Robot: Analysis, Simulation and Experimental Validation

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30	Keran Ye, Konstantinos Karydis	Deformable Multibody Modeling for Model Predictive Control in Legged Locomotion with Embodied Compliance
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