

ICARSC 2023 - Program

April 26th and 27th, 2023
Tomar, Portugal



26 abr. 2023

	Start	End		
	08:30	09:15	Registration	
	09:15	09:30	Opening Session	
	09:30	10:30	Invited Keynote 1: René Molengraft	Will robots beat the human world champion football in 2050?
Coffee break	10:30	10:45		
	10:45	11:00	Maciej Wozniak, Mattias Hansson, Viktor Karefjard, Marko Thiel and Patric Jensfelt	Applying 3D Object Detection from Self-Driving Cars to Mobile Robots: A Survey and Experiments
	11:00	11:15	Kieran Saunders, George Vogiatzis and Luis Manso	Dyna-DM: Dynamic Object-aware Self-supervised Monocular Depth Maps
Session 1: Computer Vision I	11:15	11:30	Niklas Kohlsch, Philipp Koch and Stefan May	LiDAR-Based Augmented Reality for the Development of Test Scenarios on Safety for Autonomous Operation of a Shunting Locomotive
	11:30	11:45	Vicente Pinto, Rui Bettencourt and Rodrigo Ventura	People Re-Identification in Service Robots
	11:45	12:00	Anastasiia Stepanova, Ha Pham, Narayan Panthi, Alireza Zourmand, Francois Christophe, Mika-Petri Laakkonen, Milan Gautam, Mika Järvinen and Vesa Tuomela	Harvesting tomatoes with a Robot: an evaluation of Computer-Vision capabilities
Lunch	12:00	13:30		
	13:30	13:45	Shalutha Rajapakshe, Dilanka Wickramasinghe, Sahan Gurusinghe, Deepana Ishtaweera, Bhanuka Silva, Peshala Jayasekara, Nick Panitz, Paul Flick and Navinda Kottege	Collaborative Ground-Aerial Multi-Robot System for Disaster Response Missions with a Low-Cost Drone Add-On for Off-the-Shelf Drones
Session 2: Navigation and Planning	13:45	14:00	Adrián Romero-Garcés, Antonio Bandera, Cristina Vicente-Chicote, Andreas Bley and Rebeca Marfil	Endowing Runtime Self-adaptation to an Autonomous Pallet Truck
	14:00	14:15	João Correia, Luís Louro, Sergio Monteiro, Wolfram Erhagen and Estela Bicho	Navigation and docking maneuvers control of an autonomous omnidirectional platform in a dynamic internal logistics environment
	14:15	14:30	Umut Uguzlar, Enes Cansu, Emre Can Contarli and Volkan Sezer	Autonomous Human Following Robot Based on Follow the Gap Method

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	14:30	14:45	Daniel Correia, Artur Pereira and Eurico Pedrosa	Semantic Navigation Applied to Narrow Passages for Intelligent Wheelchairs
	14:45	15:00	Goncalo Moniz and Hugo Costelha	Path Generation and Execution for Automatic Shotcrete in Railway Tunnels
(Interval)	15:00	15:10		
Session 3: Machine Learning I	15:10	15:25	Josué Kiefer and Klaus Dorer	Double Deep Reinforcement Learning
	15:25	15:40	Pedro Conde, Tiago Barros, Cristiano Premebida and Urbano Nunes	ECE-based Deep Ensemble for Neural Network Calibration in Satellite Image Classification
	15:40	15:55	Gabriela Simões, Ana Lopes, Carlos Carona, Ricardo Pereira and Urbano Nunes	Deep-Learning Based Classification of Engagement for Child-Robot Interaction
	15:55	16:10	Bruno M. Santos, Pedro Pais, Francisco Ribeiro, José Lima, Gil Gonçalves and Vítor H. Pinto	Deep Convolutional Neural Networks applied to Hand Keypoints Estimation
Coffee break	16:10	16:25		
Session 4: Assistive Robotics / Human Robot Cooperation	16:25	16:40	Francisco Ribeiro, Tiago Correia, Jose Lima, Gil Goncalves and Vítor Hugo Pinto	Modeling and Realistic Simulation of a Dexterous Robotic Hand: SVH Hand use-case
	16:40	16:55	Pedro Núñez, Pablo Bustos, Gerardo Pérez, Sergio Barroso, Alejandro Torrejón and Noé Zapata	Follow me: interleaving human tracking and interacting with a new assistant robot
	16:55	17:10	Sara Monteiro, Joana Figueiredo and Cristina Santos	Towards a more efficient human-exoskeleton assistance
	17:10	17:25	Rodolfo Cerqueira, José Pereira, Nuno Ferrete Ribeiro and Cristina P. Santos	Engineering a Safer Future: Electronic Design and Validation of a Cane-Type Robot for Fall Prevention
	17:25	17:40	Diogo Martins, Sara M. Cerqueira, Tiago P. Vieira, Ana Pombeiro and Cristina P. Santos	Towards a User-specific Ergonomics-based Approach for an Activity Assessment Tool
	17:40	17:55	Ana Vilas Boas, João André, Sara Cerqueira and Cristina Santos	A DMPs-based Approach for Human-Robot Collaboration Task Quality Management
(Social)	18:00	23:00	Social program and Gala Dinner	

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	08:30	09:00	Registration	
	09:00	10:00	Invited Keynote Speaker: José Santos-Victor	From humanoid robots to brain function and cognitive systems
			Nuno Pessanha Santos, Vitor Borges	
	10:00	10:15	Rodrigues, André Batista Pinto and Bruno Damas	Automatic Detection of Civilian and Military Personnel in Reconnaissance Missions using a UAV
Session 5: Computer Vision II	10:15	10:30	António Maia and Jose Gaspar	Plenoptic Camera Viewpoints Rotation to Improve 3D Face Reconstruction
	10:30	10:45	Carlos A. Silva, Sedat Dogru and Lino Marques	Camera and LiDAR Fusion for Robust 3D Person Detection in Indoor Environments
	10:45	11:00	João Andrade and Plinio Moreno	Improving the Estimation of Object mass from images
	11:00	11:15	Lee Milburn, Juan Gamba, Miguel Fernandes and Claudio Semini	Computer-Vision Based Real Time Waypoint Generation for Autonomous Vineyard Navigation with Quadruped Robots
Coffee break	11:15	11:30		
	11:30	11:45	Carlos M. Costa, Germano Veiga, Armando Sousa, Ulrike Thomas and Luís Rocha	Sensor Placement Optimization using Random Sample Consensus for Best Views Estimation
	11:45	12:00	Rui Nascimento, Tony Ferreira, Cláudia Rocha, Vitor Filipe, Manuel F. Silva, Germano Veiga and Luís Rocha	Quality Control of Casting Aluminum Parts: A Comparison of Deep Learning Models for Filings Detection
Session 6: Machine Learning II	12:00	12:15	José Pedro Carvalho and António Pedro Aguiar	A Reinforcement Learning Based Online Coverage Path Planning Algorithm
	12:15	12:30	Gonçalo Leão, Filipe Almeida, Emanuel Trigo, Henrique Ferreira, Armando Sousa and Luís Paulo Reis	Using Deep Reinforcement Learning for Navigation in Simulated Hallways
	12:30	12:45	Simon Hadwiger, Vladimir Lavrik, Li Xin Liao and Tobias Meisen	Simulation-to-Reality Transfer of a Two-Stage Deep Reinforcement Learning Controller for Autonomous Load Carrier Approaching
Lunch	12:45	14:15		
	14:15	14:30	Ines Rito Lima and José Santos-Victor	A data acquisition system to capture extreme human driving behaviour
	14:30	14:45	Ana Rita Caldeira Pagaimo and Plinio Moreno	Exploring tactile sensing to perform the power grasp of a human-robot handshake

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Session 7: Sensors	14:45	15:00	Arezki Abderrahim Chellal, João Neto Braun, José Lima, José Gonçalves and Paulo Costa	Modelling of an Lithium-Ion Battery for Enhanced Power Management in Robotics Domain
	15:00	15:15	João G. Martins, Marcelo R. Petry and António Paulo Moreira	Assessment of the influence of magnetic perturbations and dynamic motions in a commercial AHRS
	15:15	15:30	José Lima, Andre Pinto, Francisco Ribeiro, Milena Pinto, Ana Pereira, Vítor Hugo Pinto and Paulo Costa	Data Fusion Using Ultra Wideband Time-of-Flight Positioning for Mobile Robot Applications
	15:30	15:45	Fábio Vieira, Pedro Teodoro and Pedro Mendes Jorge	Real-time GPS indoor for USV tracking using Lookup Table
Coffee break	15:45	16:00		
Session 8: Robotic Platforms and Competitions	16:00	16:15	Luan Klein, João Braun, Felipe Martins, João Mendes, Vítor Pinto, Andre Schneider, Heinrich Wörtche, Paulo Costa and José Lima	Using Machine Learning Approaches to Localization in an Embedded System on RobotAtFactory 4.0 Competition: A Case Study
	16:15	16:30	Vítor Tinoco, Manuel Silva, Filipe Santos, Sandro Magalhães and Raul Morais	Design and Control Architecture of a Triple 3 DoF SCARA Manipulator for Tomato Harvesting
	16:30	16:45	Antonello Pastore, Stefan May, Christian Wendt and Markus Fenn	Hierarchical Multi-Robot Fleet Architecture with a Kinematics-adaptive Drive System
	16:45	17:00	Vítor Hugo Pinto, Francisco Ribeiro, Thadeu Brito, Ana Isabel Pereira, Jose Lima and Paulo Costa	FLOOR - Forklift Laser Omnidirectional Robot
	17:00	17:15	Closing ceremony	