

Wednesday 12.04.2023

08:00	Registration	
09:00	Welcome Notes by Organizers (JKU, LCM, GMAR)	
09:20	Progress in humanoid whole-body control and locomotion: From stable walking to dynamic running with elastic actuators (TU Wien, German Aerospace Center DLR)	Keynote: Christian Ott
10:10	Poster Pitches (2 minutes)	
	Differentiable Forward Kinematics for TensorFlow 2	L. Mölschl, J. Hollenstein, J. Piater
	On the Applicability of Docker Containers and systemd Services for Search and Rescue Applications	G. Novotny, S. Schwaiger, L. Muster, M. Aburaia, W. Wöber
	Acceleration and Deceleration Behavior Monitoring and Runtime-Verification for Mobile Manipulators	N. Korb-Buzzi, M. Rathmair
	Traversability Detection Algorithm for Outdoor Mobile Robots	B. Von Gimborn, G. Novotny
	Investigation of kinematic properties of a serial kinematic with angular swivel joints	P. Trivisonne, K. Stuja, M. Aburaia
	Decision Support Model for Implementing a Human-Robot Collaboration	R. Sandor, C. Fischer, C. Schmidbauer, S. Schlund
	Low-Cost Multispectral Camera Array with Image Registration	M. Stohanzl, W. Kubinger
10:30	Coffee Break	
10:50	Autonomous In-hand Object Modeling from a Mobile Manipulator	P. Feigl, J.-B. Weibel, M. Vincze
11:10	From Simulation to Prototype to Series Implementation – a Workflow in Industrial Practice (Spotlight Presentation: Engel Austria GmbH)	M. Oberherber, F. Pucher, M. Pruckner, M. Kalkhofer
11:25	Deep Learning based Object Classification on mm-Wave Radar Data	A. Weissmann, M. Rathmair, M. Hofbaur
11:45	New Application Opportunities with Integrated High Accuracy Robotics (Spotlight Presentation: KEBA AG)	M. Garstenauer, C. Mittermayer
12:00	Neural Network Feedforward Control for Pneumatic Hexapod Excavator Simulator	S. Gadringer, C. Mayr, H. Gattringer, A. Müller
12:30	Lunch at KHG Mensa	
13:45	Integrated Simulation Workflow for Complex Automated System Design	S. Dumberger, D. Zouhar, U. Mitterhuber, R. Edlinger, R. Froschauer, A. Nüchter
14:05	An Approach for continuous Verification of Formal System Requirements in Robot-based Machinery	M. Rathmair, T. Haspl, M. Hofbaur
14:25	On the Combination of Computer-Vision and Advanced Planning for Reactive Applications in Industrial Robotics (Spotlight Presentation: Convergent Information Technologies GmbH)	C. Eberst
14:40	Time Optimal Trajectory Planning for a Rigid Formation of Nonholonomic Heavy Duty Platforms	S. Schmidt, H. Gattringer, A. Müller
15:00	Outlook ARW 2024	
15:05	Coffee Break	
15:20	Lab Tour at Science Park	Science Park I: Robotics Lab (MT016), LCM Lab (MT014)
16:30	ToFSim: Real-time ToF Camera Simulation for Robotic Applications	H. Gietler, B. Ubezio, H. Zangl
16:50	Evaluating the Performance of a Modified Skin Temperature Sensor for Lower Limb Prostheses: An Experimental Comparison	A. Devroy, G. Fritz, M. Brandstötter
17:10	Relative Object Navigation for Autonomous Underwater inspection in confined environment (Spotlight Presentation: subdron GmbH)	A. Carrera Vinas, T. Vonach
17:25	An Event-Based Approach to Autonomous Navigation	R. Hoheneder, A. Buchegger, H. Didari, M. Eder, K. Mautner-Lassnig, C. Mühlbacher, G. Steinbauer-Wagner
18:00	SOMNIUM Observation Deck	
19:00	Conference Dinner KEPLER HALL with Best Paper Awards	

Thursday 13.04.2023

08:30	Cognitive Robots: from Partly Completed Machines to Actually Useful Devices (Neura Robotics GmbH)	Keynote: Jörn Malzahn
09:15	A toolchain definition to solve a vehicle routing problem for a time-efficient testing on a proving ground	R. Fina, H. Gattringer, A. Müller, T. Schlömicher, H. Scharke
09:35	Lessons Learned as Digital Innovation Hub in DIH² with cascading calls and FIWARE (Spotlight Presentation: Linz Center of Mechatronics GmbH)	D. Reischl
09:50	Coffee Break	
10:10	EDGESOIL: LOW-COST SOIL SENSOR AND EDGE AI FUSION IN AGRICULTURAL ROBOTICS	R. Kasemi, M. Vincze, L. Lammer
10:30	An Approach to Numerical Inverse Kinematics of Serial Manipulators using Levenberg-Marquardt Optimization	R. Stadlhuber, F. Behnke, M. Aburaia
10:50	Counting Milliseconds (Spotlight Presentation: STIWA Group)	S. Wesenauer, P. Staufer
11:05	An Immersive Game Projection Setup for Studies on Collaboration with a Real Robot	B. Reiterer, M. Brandstötter, M. Mara, D. Rammer, R. Haring, M. Heiml, K. Meyer, T. Hoffmann, M. Weyrer, M. Hofbauer
11:25	Lunchtime Snacks	
12:10	The Robotics Safety & Security Stakeholder Cycle (RobSS Stakeholder Cycle): A Model for Responsible, Safe and Secure Robotic Systems Engineering	N. Duller, C. Glasauer, T. M. Nazir, J. Wachter
12:30	State Estimation for Keypoint-Tracking of Quadrotor-UAVs	R. Stadlhuber, W. Wöber
12:50	Plannable autonomy and cooperative navigation (Spotlight Presentation: DS Automotion GmbH)	L. Schwarz, A. Richtsfeld
13:05	A Universal Person Follower Interface for Mobile Robot Systems	J. Oberpertinger, M. Eder, G. Steinbauer-Wagner
13:25	Closing Ceremony	