RAAD 2025

34th International Conference on Robotics in Alpe-Adria-Danube Region

18 - 20 June, 2025
Belgrade, Serbia

Organized by:
School of Electrical Engineering, University of Belgrade
Faculty of Technical Sciences, University of Novi Sad
Mihajlo Pupin Institute, Belgrade

UNIVERSITY OF BELGRADE
SCHOOL OF ELECTRICAL ENGINEERING

ФАКУЛТЕТ ТЕХНИЧКИХ НАУКА НОВИ САД

institut iMP MIHAJLO PUPIN

	Wednesday, 18th June, 2025		Thursday, 19th June, 2025		Friday, 20th June, 2025	
8:00	**Registration:** Central Hall (08:00-08:45)					
	Opening: Central Hall (08:45-09:00)		**Registration:** Central Hall (08:45-09:00)		**Registration:** Central Hall (08:45-09:00)	
9:00	**Plenary session I: Arash Ajoudani** The AI continuum: From Human Monitoring to Autonomous Robots in Contact-Rich Applications Central Hall (09:00-10:00)		**Plenary session II: Alin Albu-Schäffer** Humanoid Robotics: A Hype or the Next Big Thing in AI? Central Hall (09:00-10:00)		**Plenary session III: Katja Mombaur** From Biology to Embodied AI: Shaping Humanoid Motion Through Optimization and Learning Central Hall (09:00-10:00)	
10:00	**Coffee break** Ground floor exhibition area (10:00-10:30)		**Coffee break** Ground floor exhibition area (10:00-10:30)		**Coffee break and Palace of Science tour** (10:00-10:45)	
11:00	**WS1.1: Cognitive Intelligence in Industrial Robots and Manufacturing I** Room REĆ, 4th floor (10:30-12:00)	**WS1.2: Grasping and Manipulation** Room HORIZONT, 4th floor (10:30-12:00)	**TS1.1 Interoperable AI-Based Robotics for the Factory of the Future I** Room REĆ, 4th floor (10:30-12:00)	**TS1.2 Collaborative Robotics** Room HORIZONT, 4th floor (10:30-12:00)	**FS1.1 Robots and Arts** Room REĆ, 4th floor (10:45-12:30)	**FS1.2 Autonomous Robots** Room HORIZONT, 4th floor (10:45-12:30)
12:00	**Keynote session I: Zoran Obradović** Autonomous navigation for swarms of unmanned aerial vehicles in severe environments Room HORIZONT, 4th floor (12:00-12:30)		**Keynote session II: Strahinja Došen** New trends in the control of bionic limbs Room HORIZONT, 4th floor (12:00-12:30)			
13:00	**Meeting of RAAD ISC** Ceremonial Hal, 1st floor (12:30-14:00)	**Lunch break** Restoraunt, 5th floor (12:30-14:00)	**Lunch break** Restoraunt, 5th floor (12:30-13:30)		**Closing ceremony and lunch** Restoraunt, 5th floor (12:30-14:00)	
14:00	**WS2.1 Cognitive Intelligence in Industrial Robots and Manufacturing II** Room REĆ, 4th floor (14:00-15:45)	**WS2.2 Compliant robot design** Room HORIZONT, 4th floor (14:00-15:45)	**TS2.1 Interoperable AI-Based Robotics for the Factory of the Future II** Room REĆ, 4th floor (13:30-15:00)	**TS2.2 Robot Sensing** Room HORIZONT, 4th floor (13:30-15:00)		
15:00			**Honorable speakers, Session:** "Robotics in the "Fertile Crescent" of RAAD – Past and Future" Moderator: **Uwe Haass** Room HORIZONT, 4th floor (15:00-16:30)			
16:00	**Coffee break** Ground floor exhibition area (15:45-16:30)					
	Sponsor keynote session: Renex Cobots in Action: Vision to See. AI to Judge. Techman and Renex to Deliver. Room HORIZONT, 4th floor (16:30-17:00)		**Coffee break** Ground floor exhibition area (16:30-17:30)			
17:00	**WS3.1 Medical and Assistive Robots** Room REĆ, 4th floor (17:00-18:45)	**WS3.2 Design, Kinematics and Dynamics** Room HORIZONT, 4th floor (17:00-18:45)	**City tour and visit to Museum of Science and Technology** (17:30-20:15)			
19:00	**Break** (18:45-19:30)					
20:00	**Welcome reception:** Beli dvor (White Palace) (19:30-22:00)		**Gala dinner: Restaurant Ambar** (20:15-23:00)			

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Conference site

The Palace of Science (Palata nauke)

Palace of Science – Endowment of Miodrag Kostić is an important and distinguished institution in Belgrade, Serbia. This foundation, established by Miodrag Kostić, a prominent Serbian entrepreneur and philanthropist, is dedicated to the promotion and advancement of science and education in Serbia.

The building, located in the central part of Belgrade, is a modern facility designed to support various scientific and educational activities. It includes state-of-the-art laboratories, lecture halls, and conference rooms, making it a hub for research, innovation, and academic collaboration. The foundation aims to provide resources and support for young scientists, researchers, and students, fostering a culture of excellence and innovation.

The Palace of Science is the largest endowment for education and science in the Balkans since World War II. In the Palace of Science, there will be a unique scientific café where a robot will serve you coffee.

Belgrade

Belgrade, the capital of Serbia, is one of the oldest cities in Europe, with a history dating back over 7,000 years. Situated at the confluence of the River Sava and the Danube, it has been a strategic crossroads for various civilizations, including the Celts, Romans, Byzantines, and Ottomans. The city's blend of Eastern and Western influences creates a unique cultural atmosphere. Belgrade is a hub of innovation and technology, home to numerous universities and research institutions. It's dynamic tech scene fosters collaboration and advancement, making it a fitting host for robotics enthusiasts. The University of Belgrade, one of the oldest and largest universities in the region, plays a significant role in research and development, particularly in engineering and robotics.

Belgrade has a long tradition of robotics, dating back to the 1960s. The city is home to the Zero-Moment Point (ZMP) concept, developed by Milomir Vukobratović at the Mihajlo Pupin Institute. The Institute 'Mihailo Pupin' in Belgrade was also the birthplace of the world's first operating active exoskeleton and the first model of a multifunctional externally powered hand prosthesis, known in the open literature as the 'Belgrade Hand Prosthesis.' This unique artificial hand was designed by Prof. Rajko Tomović and Prof. Milan Rakić from the School of Electrical Engineering, University of Belgrade. This pioneering research, which has had a significant impact, is known as the Belgrade School of Robotics. During the conference, a visit to the Science and Technology Museum exhibit dedicated to the Belgrade School of Robotics is planned.

Official language

The official language of the RAAD 2025 conference will be English. All presentations, including discussions and submissions, have to be made in the official language.

Information for speakers

15 min are allotted for each paper (12 min + 3 min for discussion and changeover to the next speaker).

Registration/information desk

Opened on Wednesday 8:00 until 18:30, Thursday from 8:45 until 17:00 and on Friday from 8:45 until 13:00.

Program at a Glance

O	**Opening**	**Central Hall**	**08:45-09:00**
P1	**Plenary session I**	**Central Hall**	**09:00-10:00**
	Coffee break		**10:00-10:30**
WS1.1	**Cognitive Intelligence in Industrial Robots and Manufacturing I**	**Room REČ**	**10:30-12:00**
WS1.2	**Grasping and Manipulation**	**Room HORIZONT**	**10:30-12:00**
K1	**Keynote session I**	**Room HORIZONT**	**12:00-12:30**
	Lunch break, ISC Meeting		**12:30-14:00**
WS2.1	**Cognitive Intelligence in Industrial Robots and Manufacturing II**	**Room REČ**	**14:00-15:45**
WS2.2	**Compliant robot design**	**Room HORIZONT**	**14:00-15:45**
	Coffee break		**15:45-16:30**
SK	**Sponsor keynote session**	**Room HORIZONT**	**16:30-17:00**
WS3.1	**Medical and Assistive Robo**	**Room REČ**	**17:00-18:45**
WS3.2	**Design, Kinematics and Dynamics**	**Room HORIZONT**	**17:00-18:45**
	Welcome reception		**19:30-22:00**

Thursday, 19th of June, 2025

P2	Plenary session II	Central Hall	09:00-10:00
	Coffee break		10:00-10:30
TS1.1	Interoperable AI-Based Robotics for the Factory of the Future I	Room REČ	10:30-12:00
TS1.2	Collaborative Robotics	Room HORIZONT	10:30-12:00
K2	Keynote session II	Room HORIZONT	12:00-12:30
	Lunch break		12:30-13:30
TS2.1	Interoperable AI-Based Robotics for the Factory of the Future II	Room REČ	13:30-15:00
TS2.2	Robot Sensing	Room HORIZONT	13:30-15:00
	Honorable speakers, Session: Robotics in the "Fertile Crescent" of RAAD – Past and Future	Room HORIZONT	15:00-16:30
	Coffee break		16:30-17:30
	City tour and visit to Museum of Science and Technology		17:30-20:15
	Gala dinner		20:15-23:00

Friday, 20th of June, 2025

P3	Plenary session III	Central Hall	09:00-10:00
	Coffee break and Palace of Science tour		10:00-10:45
FS1.1	Robots and Arts	Room REČ	10:45-12:30
FS1.2	Autonomous Robots	Room HORIZONT	10:45-12:30
	Closing ceremony and Lunch		12:30-14:00

Detailed Technical Program

Wednesday, 18th of June, 2025

Plenary session I: Arash Ajoudani	09:00-10:00
Chair: **Mirko Raković**	**Central Hall**

09:00-10:00	Title: *The AI continuum: From Human Monitoring to Autonomous Robots in Contact-Rich Applications*

WS1.1: Cognitive Intelligence in Industrial Robots and Manufacturing I	10:30-12:00
Chair: **Zoran Miljković**; Co-chair: **Bojan Nemec**	**Room REČ**

	Time	Paper ID	Title and Authors
1	10:30 – 10:45	3	*Towards Using Natural Language to Perform Robotic Tasks*, Bojan Nemec, Mihael Simonič, Boris Kuster, Leon Žlajpah, and Aleš Ude.
2	10:45 – 11:00	17	*Implementing IoT Technology on Mobile Platform: Edge-Cloud Integration and Data Handling*, Jakub Krejčí, Marek Babiuch, Rostislav Wierbica, and Vaclav Krys.
3	11:00 – 11:15	18	*Vision-based Robot System for Object Manipulation*, Bogdan Momčilović, Nikola Slavković, Milica Petrović, and Zoran Miljković.
4	11:15 – 11:30	27	*A General Peg-in-Hole Assembly Policy Based on Domain Randomized Reinforcement Learning*, Xinyu Liu, Aljaz Kramberger, and Leon Bodenhagen.
5	11:30 – 11:45	31	*Concept of a reconfigurable CNC machine with distributed control*, Dusan Nedeljkovic, Zivana Jakovljevic, Lazar Matijasevic, and Miroslav Pajic.
6	11:45 – 12:00	85	*A Cognitive Robotics Approach for Manipulation of Freeform Objects Using CNN-based Perception and Soft Gripping,* Nikola Ivačko, Ivan Ćirić, Dušan Stojiljković, Žarko Ćojbašić, and Dušan Jevtić.

WS1.2: Grasping and Manipulation	10:30-12:00
Chair: **Giuseppe Quaglia**; Co-chair: **Leon Žlajpah**	**Room HORIZONT**

	Time	Paper ID	Title and Authors
1	10:30 – 10:45	6	*RobotBlockSet (RBS) - Path and Trajectory Generation*, Leon Žlajpah and Tadej Petrič.
2	10:45 – 11:00	10	*Robot Path and Trajectory Planning Considering a Spatially Fixed TCP*, Bernhard Rameder, Hubert Gattringer, Andreas Mülller, and Ronald Naderer.

3	11:00 – 11:15	42	*Robot Learning to Catch Objects in Flight using an LSTM Deep Neural Network*, Lazar Milić, Jefimija Borojević, Tanja Berisavljević, Srđan Savić, and Mirko Raković.
4	11:15 – 11:30	43	*Sensor-Based Contact Point Estimation for Extended Robotic Structures*, Jan Šifrer and Tadej Petrič.
5	11:30 – 11:45	36	*LSTM-based hand motion recognition for myoelectric control of a compliant robot gripper*, Gorana Milovanović, Goran Kvaščev, and Kosta Jovanović.
6	11:45 – 12:00	46	*Soft Pneumatic Sensing Chambers for Robotic Grasping*, Simone Duretto, Giovanni Colucci, Andrea Botta, Luigi Tagliavini, Mohammad Jabari, Lorenzo Baglieri, Lorenzo Toccaceli, Francesco Amodio, and Giuseppe Quaglia.

Keynote session I: Zoran Obradović	12:00-12:30
Chair: **Maja Trumić**	**Room HORIZONT**
12:00-12:30	Title: *Autonomous navigation for swarms of unmanned aerial vehicles in severe environments*

WS2.1: Cognitive Intelligence in Industrial Robots and Manufacturing II			14:00-15:45
Chair: **Milica Petrović**; Co-chair: **Žarko Ćojbašić**			**Room REČ**
	Time	Paper ID	Title and Authors
1	14:00 – 14:15	40	*Neural Network-based Visual Servoing of Wheeled Mobile Robot with Fish-eye Camera*, Aleksandar Jokić, Milica Petrović and Zoran Miljković.
2	14:15 – 14:30	57	*Deep Learning for Visual Inspection of Ball Bearings*, Tea Tepavčević, Saša Lazović, and Vladimir M. Petrović
3	14:30 – 14:45	58	*Assessing the Feasibility of Deep Lagrangian Networks for Industrial-Level Control of a Parallel Kinematic Manipulator*, Marcel Lahoud, Daniel Gnad, Gabriele Marchello, Ferdinando Cannella, and Andreas Müller.
4	14:45 – 15:00	68	*Danger of AI in Robotics: A Systematic Analysis of Ethical, Regulatory, and Economic Challenges*, Jacob Otasowie, Alexander Blum, Mohamed El Sayed Ahmed, and Mathias Brandstötter.
5	15:00 – 15:15	74	*Evolutionary Approach to Time-Limited Profit-based Traveling Salesman Problem in Mobile Robotics*, Jelena Ćurčić, Željko Kanović, Milutin Nikolić, and Srđan Savić.
6	15:15 – 15:30	87	*Intelligent Sensor Integration in Robotic Systems for High-Precision Automation in the Automotive Industry*, Pavle Stepanić, Predrag Nikolić, Nedeljko Dučić, Nebojša Mitrović, and Žarko Ćojbašić.
7	15:30 – 15:45	32	*Enhancing Safe Navigation in Industrial Environments via Vision-Language Human-Robot Interaction*, Sepideh Valiollahi, Chen Li, Emil Frydenholm, Jonas Thorhauge-Hansen, San Sami Hanona, Yacine Abdelsadok, Shahab Heshmati-Alamdari, Stefan Nordborg Eriksen, and Preben E. Mogensen.

WS2.2: Compliant robot design				14:00-15:45
Chair: **Tadej Petrič**; Co-chair: **Maja Trumić**				**Room HORIZONT**
	Time	Paper ID	Title and Authors	
1	14:00 – 14:15	61	*Velocity-Level Kinematics of a Continuously Variable Transmission System for pHRI*, Emir Mobedi, and Mehmet İsmet Can Dede.	
2	14:15 – 14:30	92	*Design and Kinematics of Cable-driven Underactuated Manipulators with Variable Stiffness Devices*, Qizhi Meng, Ruijie Tang, Xin-Jun Liu, and Andres Kecskemethy	
3	14:30 – 14:45	59	*Towards Modular Testbed for Tendon-driven Soft Robots*, Miloš Rašić, Cosimo Della Santina, Kosta Jovanović, and Maja Trumić.	
4	14:45 – 15:00	7	*Requirements and design problems for a new LARMbot humanoid from testing a prototype*, Chloé Gabarren, Marco Ceccarelli, and Matteo Russo.	
5	15:00 – 15:15	54	*A Review of Some Mechanical Metamaterials for Building Robotic Devices and Sensors*, Jaroslav Hricko and Stefan Havlik.	
6	15:15 – 15:30	44	*robotblockset_python: Python version of the RobotBlockSet* ⋆, Mihael Simonič, Boris Kuster, Matija Mavsar, Peter Nimac, and Leon Žlajpah.	
7	15:30 – 15:45	45	*Optimal Control for Human Vertical Jump Motion*, David Mesaroš, Maxime Sabbah, Vincent Bonnet, and Filip Bečanović.	

Sponsor keynote session: Renex		16:30-17:00
Chair: **Nikola Knežević**		**Room HORIZONT**
16:30-17:00	Title: *Cobots in Action: Vision to See. AI to Judge. Techman and Renex to Deliver.*	

WS3.1: Medical and Assistive Robots				17:00-18:45
Chair: **Doina Pisla**; Co-chair: **Daniela Tarnita**				**Room REČ**
	Time	Paper ID	Title and Authors	
1	17:00 – 17:15	9	*Virtual modeling, static and dynamic analyses of an orthotic device used for human elbow rehabilitation*, Cristian E. Chihaia, Daniela Tarnita, Ionut Geonea, and Danut N. Tarnita.	
2	17:15 – 17:30	13	*Kinematic modelling and design of a parallel robot for wrist rehabilitation*, Paul Tucan, Alin Horsia, Calin Vaida, Iosif Birlescu, Pisla Adrian, Jose Machado, and Doina Pisla.	
3	17:30 – 17:45	23	*Descriptive Ontology for Home-Based Smart Rehabilitation Environments for Motor and Cognitive Therapy in Patients with Neurological Disorders*, Fabio Zanoletti and Alberto Borboni.	

4	17:45 – 18:00	51	*Functional Design and Kinematic Analysis of a Novel 3RS End-Effector Robot for Wrist Rehabilitation and Assistance,* Andrea Botta, Luigi Tagliavini, Giovanni Colucci, Lorenzo Baglieri, Simone Duretto, Lorenzo Toccaceli, Francesco Amodio, and Giuseppe Quaglia.
5	18:00 – 18:15	63	*Evaluation of facial landmark localization performance in a surgical setting*, Ines Frajtag, Marko Švaco, and Filip Šuligoj.
6	18:15 – 18:30	66	*Development of an Optimal Prototype of an Exoskeleton Robotic System for Locomotor Rehabilitation*, Ionut Geonea, Nicolae Dumitru, and Daniela Tarnita.
7	18:30 – 18:45	86	*An Intelligent Optimized Reduced Model of the Musculoskeletal System for the Head-Neck Joints,* Ismail Raslan, Mohammad A. Jaradat, and Lotfi Romdhane.

WS3.2: Design, Kinematics and Dynamics				17:00-18:45
Chair: **Andreas Müller**; Co-chair: **Giuseppe Carbone**				**Room HORIZONT**
	Time	Paper ID	Title and Authors	
1	17:00 – 17:15	8	*Design Exploration of Planar Continuum Parallel Robots with Constrained Platform Orientation*, Congjian Gao, Quentin Peyron, and Sébastien Briot.	
2	17:15 – 17:30	14	*Dynamic Analysis of a 5-DOF Parallel-Serial Manipulator Using Kane's Method*, Anton Antonov.	
3	17:30 – 17:45	20	*Kinematic structure optimization of a modular planar 3DOF robotic manipulator for a given task*, Rostislav Wierbica, Tomáš Kot, Jakub Krejčí, and Václav Krys.	
4	17:45 – 18:00	34	*Extended URDF: Accounting for parallel mechanism in robot description*, Virgile Batto, Ludovic DeMatteïs, and Nicolas Mansard.	
5	18:00 – 18:15	82	*Kinematic Modeling of the End-Effector of a Plum-Picking Robot using the Rodrigues' Rotation Formula*, Uroš Ilić, Mihailo Lazarević, Ilija Stevanović, and Aleksandar Rodić	
6	18:15 – 18:30	83	*Robotic Gripper Mechanism for Plum Harvesting: Mechanical Design and Actuation*, Ilija Stevanovic, Uroš Ilić, Aleksandar Milenkovic, and Aleksandar Rodić.	
7	18:30 – 18:45	84	*The influence of wrist design on the inverse kinematics of a 6-axis robot, Boštjan* Baras and Marko Munih.	

Thursday, 19th of June, 2025

Plenary session II: Alin Albu Schäffer	09:00-10:00
Chair: **Kosta Jovanović**	Central Hall
09:00-10:00	Title: ***Humanoid Robotics: A Hype or the Next Big Thing in AI?***

TS1.1: Interoperable AI-Based Robotics for the Factory of the Future I	10:30-12:00
Chair: **Achim Wagner**; Co-chair: **Sotiris Makris**	Room REČ

	Time	Paper ID	Title and Authors
1	10:30 – 10:45	11	*A digital twin procedure for the design, simulation, and optimization of machine tending layout*, Francesco Aggogeri and Nicola Pellegrini.
2	10:45 – 11:00	15	*Simulation-Based Evaluation of Adaptive Safety Zones for Human-Robot Interaction Driven by Deep Reinforcement Learning and LSTM*, Mohammad-Ehsan Matour and Alexander Winkler.
3	11:00 – 11:15	38	*Sustainable Transfer Learning for Adaptive Robot Skills*, Khalil Abuibaid, Vinit Hegiste, Nigora Gafur, Achim Wagner, and Martin Ruskwoski.
4	11:15 – 11:30	49	*Digital Twin-Enabled Robotic Automation of Electrolyzer Assemblies for Power-to-X Solutions*, Erik D. Lindby, Henrik G. Petersen and Aljaz Kramberger.
5	11:30 – 11:45	60	*Optimizing Camera Placement in Agile Robotic Cells for Visual Inspection*, Miha Deniša, Timotej Gašpar, Leon Žlajpah, and Aleš Ude.
6	11:45 – 12:00	64	*Isaac Sim Integrated Digital Twin for Feasibility Checks in Skill-Based Engineering*, Hossam Khalil, Aleksandr Sidorenko, Maciej Kolek, Martin Ruskowski, and Achim Wagner.

TS1.2: Collaborative Robotics	10:30-12:00
Chair: **Luka Peternel**; Co-chair: **Aljaž Kramberger**	Room HORIZONT

	Time	Paper ID	Title and Authors
1	10:30 – 10:45	5	*Human-Human Teleoperated Interaction for Sit-to-Stand Assistance with Humanoid Robots*, Tilen Brecelj, Ana Gabriela Kostanjevec, and Tadej Petrič.
2	10:45 – 11:00	24	*Integrated Control Strategy for Nonholonomic Mobile Robots with Anthropomorphic Manipulators*, Tadej Petrič, Tilen Brecelj, and Leon Žlajpah.
3	11:00 – 11:15	25	*Embodiment of AI-Driven Collaborative Awareness with Industrial Service Robots*, Aleksandar Rodić.

4	11:15 – 11:30	26	*Vision Transformer-based Multimodal Fusion of Gesture and Object Classification in Human-Robot Collaboration*, Selma Subašić, Lejla Banjanović-Mehmedović, Haris Subašić, Isak Karabegović, and Ermin Husak.
5	11:30 – 11:45	55	*Human-Robot Assembly of 3D-printed Building Components Combining Motion Planning and Dynamic Movement Primitives*, Arwin Hidding, Tom Lim, Henriette Bier, and Luka Peternel.
6	11:45 – 12:00	56	*Comparative Analysis of Loss Functions for LSTM-Based Motion Prediction*, Matija Mavsar, Andraž Čepič, and Aleš Ude.

Keynote session II: Strahinja Došen	12:00-12:30
Chair: **Filip Bečanović**	**Room HORIZONT**
12:00-12:30	Title: ***New trends in the control of bionic limbs***

TS2.1: Interoperable AI-Based Robotics for the Factory of the Future II		13:30-15:00
Chair: **Sotiris Makris**; Co-chair: **Achim Wagner**		**Room REČ**
	Time	Paper ID	Title and Authors
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1	13:30 – 13:45	73	*Enabling Generic Robot Skill Implementation Using Object Oriented Programming*, Abdullah Farrukh, Achim Wagner, and Martin Ruskowski.
2	13:45 – 14:00	75	*On a versatile production station using cognitive mechatronic devices coordinated by a multi-layer control framework*, Panagiotis Karagiannis, Dionisios Andronas, Christos Giannoulis, George Michalos, and Sotiris Makris
3	14:00 – 14:15	89	*Advancements and Challenges in Emotion Extraction from Speech: A PRISMA-Guided Systematic Review of Machine and Deep Learning Techniques*, Suryakant Tyagi and Sándor Szénási.
4	14:15 – 14:30	90	*A Modular Software Framework for Cost Effective Deployment of Robots in Manufacturing SMEs*, Zaviša Gordić, Francisco Melendez-Fernandez, and Ali Muhammad.
5	14:30 – 14:45	72	*Improving Unfolding Success Rate through Cloth Pose Correction*, Jan Jerićević, Peter Nimac, Domen Tabernik, and Andrej Gams.
6	14:45 – 15:00	35	*A Modular Approach to Motor Control: The CANopenDrivers Library*, Natalija Topalovic, Jorge Playan Garai, Giancarlo D'Ago, and Eloise Matheson.

TS2.2: Robot Sensing				13:30-15:00
Chair: **Marko Munih**; Co-chair: **Panagiotis Koustoumpardis**;			**Room HORIZONT**	
	Time	Paper ID	Paper and Authors	
1	13:30 – 13:45	21	*Improving position estimation of 3D gridboard with ArUco markers in robotic multi-camera systems*, Jan Maslowski, Jakub Chlebek, and Zdenko Bobovsky.	
2	13:45 – 14:00	77	*Generative Grasp Detection and Estimation with Concept Learning-based Safety Criteria*, Al-Harith Farhad, Khalil Abuibaid, Christiane Plociennik, Achim Wagner, and Martin Ruskowski.	
3	14:00 – 14:15	80	*Sensor placement determination of wearable device for a weight manipulation task*, Djordje Urukalo, Jelena Ilić, Marija Radmilović, Franco Munoz Nates, and Pierre Blazevic.	
4	14:15 – 14:30	39	*Initial-pose self-calibration for deployable overconstrained Cable-Driven Parallel Robots*, Filippo Zoffoli, Edoardo Idà, and Marco Carricato .	
5	14:30 – 14:45	48	*Estimating 2D position from magnetic sensor readings using artificial neural network*, Vladimir Sibinović, Mirko Raković, Milutin Nikolic, and Vladimir Mitić.	
6	14:45 – 15:00	62	*Evaluation of the K4PCS global registration algorithm,* Roč Stilinović, Bojan Šekoranja, and Filip Šuligoj.	

Honorable speakers, Session: Robotics in the "Fertile Crescent" of RAAD – Past and Future		15:00-16:30
Moderator: **Uwe Haass**		**Room HORIZONT**
15:00 – 15:03	**Introduction**	
15:03 – 15:21	**Branislav Borovac,** University of Novi Sad **Title:** Professor Vukobratović - personality and work that inspire	
15:21 – 15:39	**Giuseppe Carbone,** University of Calabria **Title:** Italian Distinguished IFToMMist Figures in Mechanism and Machine Science and Their Links with RAAD	
15:39 – 15:57	**Jadran Lenarčič,** Institute Jožef Stefan, Ljubljana Institute Jožef Stefan – Between Research, Development and use of Robots	
15:57 – 16:15	**Imre Rudas and Péter Galambos,** Obuda University, Budapest *A Brief History of Robotics Development Efforts in Hungary*	
16:15 – 16:30	**Discussion with the audience**	

Friday, 20th of June, 2025

Plenary session III: Katja Mombaur		09:00-10:00
Chair: **Aleksandar Rodić**		Central Hall
09:00-10:00	Title: ***From Biology to Embodied AI: Shaping Humanoid Motion Through Optimization and Learning***	

FS1.1: Robots and Arts			10:45-12:30
Chair: **Maria Rita Canina**; Co-chair: **Ali Muhammad**;			Room REČ
	Time	Paper ID	Title and Authors
1	10:45 – 11:00	22	*Deployment of Robots for the Automation in the Composites Industry*, Simon Chris Vinkel, Ali Muhammad
2	11:00 – 11:15	52	*Robotic Arm: Extension of Artistic Actions*, Miljan Stevanovic, Jelena Pejić, and Petar Pejić.
3	11:15 – 11:30	53	*Robotic Fabrication of Spherical Joints for Freeform Structures*, Tamara Miljković, Igor Babić, Marko Jovanović, and Mirko Raković.
4	11:30 – 11:45	65	*Agricultural Robotics for Carbon Emission Reduction: A Synergistic Perspective on Technology, Sustainability, and Art,* Giancarlo Furcieri, Giuseppe Culotta, Davide Gerbino, Antonio Franceschielli, and Adriano Fagiolini.
5	11:45 – 12:00	79	*Comparative Analysis of Timber Joint Fabrication: Precision and Efficiency in Robotic and Augmented Reality-Assisted Methods*, Nikoletta Vitti, Evangelia Ioannou, Styliani Ioakeim, Anastasia Spyrou, and Odysseas Kontovourkis.
6	12:00 – 12:15	81	*Streamlining Drywall Assembly: CAD-Driven Robotic Assembly*, Jovan Bajić, Milica Damnjanović, Nikola Knežević, Saša Jokić, and Kosta Jovanović.
7	12:15 – 12:30	88	*Growing Futures: Mycelium - Robots - Human Ecosystem*, Daniela Amandolese, Zana Bosnic, Eduardo Loreto, and Francisco Kuhar.

	Time	Paper ID	Title and Authors
FS1.2: Autonomous Robots			**10:45-12:30**
Chair: **Karsten Berns**; Co-chair: **Marko Švaco**			**Room HORIZONT**
1	10:45 – 11:00	4	*An unmanned aerial vehicle control model with a miographic interface*, Ya. A. Turovsky, R. A. Tokarev, D. S. Ognev, V. A. Tishchenko, L. A. Rybak, and D. I. Malyshev.
2	11:00 – 11:15	12	*Autonomous UAV Navigation for Search and Rescue Missions Using Computer Vision and Convolutional Neural Networks*, Luka Šiktar, Branimir Ćaran, Bojan Šekoranja, and Marko Švaco.
3	11:15 – 11:30	19	*Telescopic Landing System for Drones: A Solution for Uneven Terrain Operations*, Giovanni Di Leo, Benedetto Perrone, Antonio Mancuso, Antonio Agrelli, Lorenzo Montuori, Stefano Branca, Simone Leone, and Giuseppe Carbone.
4	11:30 – 11:45	33	*Cooperative Control of Rope-Tethered Quadcopters for Grasping and Transporting Objects*, Aris Morsink Paloumpas, and Panagiotis Koustoumpardis.
5	11:45 – 12:00	47	*Towards Real-World Deployment of Reinforcement Learning for Autonomous Bus Navigation in Pedestrian Zones*, Abdalla Ahmed Roshdi Mohamed and Karsten Berns.
6	12:00 – 12:15	71	*Optimizing Multi-Robot Autonomous Crop Collection*, Sumbal Malik, Nikola Ruzic, Majid Khonji, Kosta Jovanovic, Jorge Dias, Nikola Knezevic, and Lakmal Seneviratne.
7	12:15 – 12:30	69	*CODEL: Collaborative Multi-Robot Parcel Delivery for Last-Mile Logistics*, Sumbal Malik, Majid Khonji, Khaled Elbassioni, and Jorge Dias.