# Thursday, October 15th 2026

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| **08:30-09:00** | UPT Library, main entrance | Registration of participants |

## MTM & ROBOTICS 2026 Joint Conference Opening Ceremony

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| **09:00-09:30** | Multi-purpose room |

## Plenary Conferences

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| **09:30-11:30** | Multi-purpose room |
| | *Plenary Conference 1* |
| | *Plenary Conference 2* |
| | *Plenary Conference 3* |

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| **11:30-13:30** | CP2 Politehnica restaurant | Lunch |

## Parallel technical sessions

### *Mechanism and Machine Design*

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|---|---|---|
| **13:30-15:30** | Multi-purpose room | Chairperson: *Marco Ceccarelli* |

| | Title | Authors |
|---|---|---|
| | CAD Design and Biomechanical Analysis of an Active Back Support Exoskeleton for Industrial Workers | *Azamat Mussabayev, Nursultan Zhetenbayev, Marco Ceccarelli* |
| | Inverse Kinematic Analysis of Two Seven-Bar Linkages Considered for the Design of a Medical Disinfection Robot with Folding Mechanism | *Elida-Gabriela Tulcan, Carmen Sticlaru, Alexandru Oarcea, Elena Elisa Florescu, Erwin-Christian Lovasz* |
| | Conceptual and Mechanical Design of an Integrated Feeding–Washing–Shredding Mechanism for Household Waste Processing Equipment | *Răzvan-Paul Rus, Silviu Dan Mândru, Alexandru Pozdîrcă* |
| | Experimental Validation of a Slider-Crank Spring Balanced Mechanism for Wheelchair | *Ioan Emil Popescu, Erwin-Christian Lovasz, Marco Ceccarelli, Adelin Vasile Filimon, Cristian Pop, Alexandru Oarcea* |
| | On the Geometric Synthesis of a Slider-Crank Linkage for Wind Turbine Blade Pitching | *Mircea Neagoe, Radu Săulescu* |

## *Mobile Robotics*

**13:30-15:30** Multimedia 1 room — Chairperson: *Maria Garrosa Solana*

| Title | Authors |
|---|---|
| Stability Criterion for Hexapod Leg Control | *Mircea Ivănescu, Mircea Niţulescu, Decebal Popescu* |
| Low-Cost Hexapod Robot for Assistive Navigation of Visually Impaired Individuals | *Maria Garrosa Solana, Miguel Bueno Carrión, Marco Ceccarelli* |
| Design of a Wheel-Leg Mechanism for Hybrid Locomotion in Quadruped Robots | *Antonio Ioan Banabic, Mihai Olimpiu Tătar* |
| Simulation Testing in the ROS Environment of UAVs Group Application for Monitoring Territories | *Larisa Rybak, Vladislav Cherkasov, Pavel Podlesny, Narendra Kumar Dhar* |
| Experimental Comparison of Navigation Accuracy Using SLAM and GNSS-RTK | *Sara Rua-Tirado, Fernando Gómez-Bravo* |
| Comparative Analysis of Classical, Fuzzy-Hybrid, and Deep Reinforcement Learning Controllers for Autonomous Line-Following Robots | *Bassem A. E. Mohamed, Mohamed Ahmed Abdelkader Mohamed Elbahiy, Ghadeer Ismael, Cristian Emil Moldovan* |

## *Service Robotics*

**13:30-15:30** Study group 4 room — Chairperson: *Med Amine Laribi*

| Title | Authors |
|---|---|
| Complex Robotic System for the Management of Abandoned Military Components | *Ionel Staretu, Dan Cojocaru, Angela Repanovici* |
| Implementation of a tire pressure monitoring system based on wireless sensor networks for an autonomous ground agricultural robot | *George Ipate, Edmond Maican, Sorin Stefan Biris, Adam Ekielski, Adrian Iosif, Melania Cismaru, Radu Nicolae Soare* |
| A Macro-mini collaborative robot intended for complex parts inspection | *Abdelbadia Chaker, Seifeddine Sellemi, Said Zeghoul, Med Amine Laribi* |
| CFD Based Comparative Analysis of Aerodynamic Performance for Modified Airbus A300 Wing Configurations | *Daniela Delia Alic, Eliza Csomos, Aleksandar. Miltenović, Milan Banic, Dragan Marinkovic* |
| Analysis of Cutting Forces and Robot Posture during Robotic Milling Processes for Polymer Materials | *Cosmin Preda, Radu-Eugen Breaz, Robert-Marian Bleotu* |

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| | Design and Experimental Analysis of a BLDC Motor-Driven Active Ankle Prosthesis Based on Human Gait Motion Transfer | *Sayat Akhmejanov, Cristian Copilusi, Nursultan Zhetenbayev, Gani Sergazin, Kassymbek Ozhikenov* |

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| **16:00-17:00** | Travel to Buzias | |
| **17:00-20:00** | Thesaurus Wine Cellar Buzias | Gala Dinner with award ceremony |

## Friday, October 16th 2026

### Parallel technical sessions

#### *Robotic Applications*

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|---|---|---|
| **09:00-11:40** | Multi-purpose room | Chairperson: *Călin-Octavian Micloşină* |
| | Title | Authors |
| | Reactive Grasping with the Shadow Dexterous Hand via Tactile Feedback | *Riccardo Calamai, Davide Colasanto, Mirco Vangi, Matilde Gelli, Alessandro Ridolfi, Nicola Secciani* |
| | Kinematic Executability for a Compact 3-SPS Steering-Propulsion Module | *Angelos Iliakis, George Nikolakopoulos, Panagiotis Koustoumpardis* |
| | Complexity Dimensions in Automated Disassembly: A Framework for End-of-Arm Tooling Requirements | *Markus Schmitz, Daniel Gossen, Florian Menz, Stefan-Octavian Bezrucav,* |
| | Experimental Comparison of AA3003 and Clad AA3003 Sheets in Robotic Incremental Forming: Forces, Surface Quality and Geometrical Accuracy | *Robert-Marian Bleotu, Sever-Gabriel Racz, Valentin Oleksik, Cosmin Preda* |
| | A Review on Condition Monitoring Parameters for Industrial Robots | *Călin-Octavian Micloşină, Vasile Cojocaru, Cristian Paul Chioncel, Elisabeta Spunei, Raul-Rusalin Turiac* |

#### *Mechanical Transmissions*

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|---|---|---|
| **09:00-11:40** | Multimedia 1 room | Chairperson: *Carmen Sticlaru* |
| | Title | Authors |
| | Experimental Setup for the Determination of the Friction Coefficient | *Dariana-Ana-Maria Meche, Carmen Sticlaru* |
| | Gear Microgeometry Optimization for NVH Reduction of Automotive Transmission Systems Using LTCA and Forced Response Analysis | *Samnang Sann, Elias Tomeh* |

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| | Backlash and Contact-State Analysis of a Small-Tooth-Difference Planetary Involute Reducer with Pin–Hole Output Coupling | *Ovidiu - Vasile Crivoi, Ioan Doroftei, Cristina - Magda Cazacu, Constantin Puşcaşu* |
| | Control-Oriented Elastodynamic Modeling and Racking-Aware Compensation of an H-Bot Pick-and-Place Manipulator with a Ball-Screw-Driven Vertical Axis | *Constantin Puşcaşu, Ioan Doroftei* |
| | A Multicriteria Methodology for Transmission Ratio Allocation in Multi-Stage Gear Reducers Considering Geometrical, Strength and Durability Constraints | *Dorel Buncianu, Dan Teodor Mărgineanu* |

***Biomechanical Applications***

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| **09:00-11:40** | Study group 4 room | Chairperson: *Hidetsugu Terada* |
| | Title | Authors |
| | Coordinate Transformation Techniques for a 2-DoF Ankle-Foot Prosthesis: A Kinematic Approach | *Zhanar Bigaliyeva, Sayat Akhmejanov, Nursultan Zhetenbayev, Aidos Sultan, Ozhikenov Kassymbek, Yerkebulan Nurgizat, Gani Sergazin* |
| | Development of a Wearable Assistive Robot Capable of Upper Body Torsional Motion for Nursing Care | *Hidetsugu Terada, Koji Makino, Xiao Sun, Takuto Matsuda* |
| | Analysis of Magnetic fields to generate a Lumbar Exoskeleton position | *Ramsés Hernández Cerero, Christopher Rene Torres San Miguel, Marco Cecarrelli* |
| | Comparative Kinematic Analysis of Four Lower-Limb Exoskeleton Mechanisms for Human Gait Rehabilitation | *Ionuţ Daniel Geonea, Nicolae Dumitru, Andrei Corzanu, Daniela Tarniţă* |
| | Systematic Analysis on the State of the Art of Myoelectric Prostheses | *Elida-Gabriela Tulcan, Elena Elisa Florescu, Erwin-Christian Lovasz* |

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| **11:40-13:30** | CP2 Politehnica restaurant | Lunch |

## Parallel technical sessions

***Mechanism and Machine Design***

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| **13:30-15:10** | Multi-purpose room | Chairperson: *Ioan Doroftei* |
| | Title | Authors |
| | Symbolic Dimensional Synthesis of a 2-DOF Ankle Rehabilitation Mechanism | *Ioan Doroftei, Vitalie Coada, Cristina-Magda Cazacu* |

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| | Kinematics-Based Numerical Dimensional Optimization of a 2-DOF Ankle Rehabilitation Mechanism | *Ioan Doroftei, Vitalie Coada, Cristina-Magda Cazacu* |
| | Comparative Workspace and Singularity Analysis of a 2-DOF Ankle Rehabilitation Mechanism with CAD and Optimized Geometries | *Ioan Doroftei, Vitalie Coada, Cristina-Magda Cazacu* |
| | Analysis of a Planar Prosthetic-Finger Underactuated Mechanism—Part I: Position, Velocity, and Acceleration | *Radu - Octavian Sandu, Ioan Doroftei* |
| | Analysis of a Planar Prosthetic-Finger Underactuated Mechanism—Part II: Geometric-Existence Conditions and Stagewise Singularity | *Radu - Octavian Sandu, Ioan Doroftei* |

## *Robotic Applications*

**13:30-15:10** Multimedia 1 room — Chairperson: *Chiara Nezzi*

| | Title | Authors |
|---|---|---|
| | Development of an Octopus-Inspired Robotic End-Effector Using 3D Printing, Cable Actuation, and Arduino-Based Control | *Raul-Florin Toma, Carmen Sticlaru, Elida-Gabriela Tulcan* |
| | From Digital Models to Energy Digital Twins: a study involving Delta-type robots | *Chiara Nezzi, Andrea Giusti, Alessandro Gasparetto, Renato Vidoni* |
| | ARIS_4DOF_RoboticArm | *Ladislau-Ioan Pota, Carmen Sticlaru, Elida-Gabriela Tulcan* |
| | Kinematic performance analysis of the generalized prismatic actuated Delta parallel robot | *Karla-Elisabeth Lovasz, Alexandru Oarcea, Mihai-Alexandru Covuliuc* |

## *Biomedical Applications*

**13:30-15:10** Study group 4 room — Chairperson: *Doina Pisla*

| | Title | Authors |
|---|---|---|
| | Development of a robot for personalized hand rehabilitation | *Ionuţ-Marian Zima , Pierre Mougenot , Călin Vaida, Bogdan Gherman, Paul Tucan, Alexandru-Vasile Puşca, Marius Miclăuş, Andrei Căprariu, Stefan Vegh, Dragoş Sebeni, Doina Pîsla* |
| | Design and Biomechanical Analysis of a 3D-Printed Prosthetic Foot with a Flexible Toe Segment and Articulated Ankle Joint | *Turar Seitkassymov, Yerkebulan Nurgizat, Nursultan Zhetenbayev, Ozhikenov Kassymbek, Dauren Bizhanov* |

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| | 3-DOF Neck Mechanism for Humanoid Robots: Structural Design and Position Analysis | *Marko Penčić, Maja Čavić, Dragana Oros, Dijana Čavić* |
| | Wrist Exoskeleton actuated by a Parallel Manipulator with 2-RTU-U Structure | *Narcis-Graţian Crăciun, Karla-Elisabeth Lovasz* |
| | Global Assembly-Branch Structure and Reachable Loci of a Planar Prosthetic-Finger Mechanism | *Radu - Octavian Sandu, Ioan Doroftei* |

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| **15:10-15:30** | Venue site | Coffee break |

**MTM & ROBOTICS 2026 Joint Conference Closing Ceremony**

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| **15:30-16:30** | Multi-purpose room |

**ARoTMM General Assembly**

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| **16:30-18:00** | Multi-purpose room |

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| **18:00-22:00** | Lake House Restaurant<br>Chisoda | Dinner |

**EN: Politehnica University of Timișoara Library**
**RO: Biblioteca Universității Politehnica Timișoara**



**ON MAP:**

Universitatea Politehnica Timișoara