



13th International Conference on Advanced Manufacturing Technologies (ICAMaT 2024)
November 21st, 2024, Bucharest, Romania



ICAMaT 2024

**13th International Conference on Advanced
Manufacturing Technologies**

Conference Program

**November 21st, 2024
Bucharest, Romania**



Organizer

Manufacturing Engineering (TCM) Department
Faculty of Industrial Engineering and Robotics (IIR),
National University of Science and Technology
POLITEHNICA Bucharest



JOINT CONFERENCES' PROGRAM



- 13th International Conference on Advanced Manufacturing Technologies – ICAMaT 2024
- 23rd International Conference of Nonconventional Technologies - ICNcT 2024
- 8th International Conference on Progress on Polymers and Composites Products and Manufacturing Technologies (POLCOM)
- 1st International Conference on Advanced Autonomous Systems ICAAS 2024



TCM 70 & JOINT CONFERENCES & CONSORTIUM OF MECHANICAL AND INDUSTRIAL ENGINEERING FACULTIES PROGRAM

Thursday, November 21st, 2024

Time (RO)	Activities
08.30 – 09.00	Participants registration – POLITEHNICA Bucharest Central Library, 4 th floor
09.00 – 11.00	<p>Opening ceremony of TCM 70 and joint conferences ICAMaT, ICNcT, POLCOM and ICAAS - POLITEHNICA Bucharest Central Library, 4th floor, Room A.4.1.</p> <p><i>Welcome speeches of participants from all conferences and TCM 70 event:</i></p> <ul style="list-style-type: none">• Mihnea COSTOIU, Rector of the National University of Science and Technology POLITEHNICA Bucharest, Romania• Prof. PhD Eng. Anton HADĂR, vice-President of POLITEHNICA Bucharest Senate• Prof. PhD Eng.Ec. Cristian DOICIN, Dean of the Faculty of Industrial Engineering and Robotics, POLITEHNICA Bucharest, Romania• Prof. PhD Eng. Nicolae IONESCU, Head of Manufacturing Engineering Department, Coordinator of ICAMaT Conference, POLITEHNICA Bucharest, Romania• Prof. PhD Eng. Tiberiu DOBRESCU, Head of Robots and Production Systems Department - POLITEHNICA Bucharest, President of National Authority for Qualification (ANC), Romania• Prof. PhD Eng. Oana CHIVU, Head of Quality Engineering and Industrial Technologies, POLITEHNICA Bucharest, Romania• Prof. PhD Eng. Cătălin AMZA, Director of Industrial Engineering and Robotics Doctoral School, POLITEHNICA Bucharest, Romania• Assoc. Prof. PhD Eng. Liviu UNGUREANU, Head of Mechanisms and Robots Theory, POLITEHNICA Bucharest, Coordinator of ICAAS Conference, Romania• Prof. PhD Eng. Daniel VLĂSCLEANU, Head of Strength of Materials Department, POLITEHNICA Bucharest, Romania• Prof. PhD Eng. Daniel GHICULESCU – Coordinator of ICNcT Conference, ARTN Bucharest President, POLITEHNICA Bucharest, Romania• Prof. PhD Eng. Constantin OPRAN, ASPAPLAST President, Coordinator of POLCOM Conference, POLITEHNICA Bucharest, Romania• Prof. PhD Eng. Giuseppe LAMANA, Coordinator of POLCOM Conference, Università degli Studi della Campania Luigi Vanvitelli, Italy• Lecturer PhD. Eng. Manuela DIJMĂRESCU - Coordinator of ICAMaT Conference, POLITEHNICA Bucharest, Romania• Ing. Gheorghe CAZAN, President of the Manufacturing Engineering Sectoral Committee, Romania• Prof. PhD Eng. Corneliu NEAGU - POLITEHNICA Bucharest• Prof. PhD Eng. Constantin STĂNCESCU, POLITEHNICA Bucharest, Romania• Prof. PhD Eng. Aurel VLASE, POLITEHNICA Bucharest, Romania• Prof. PhD Eng. Constantin MILITARU, POLITEHNICA Bucharest, Romania• Prof. PhD Eng. Pavel TOPALĂ, Alecu Russo University, Bălți, Republic of Moldova• Prof. PhD Eng. Mariana BORCHA, Chernivtsi (Cernăuți) National University, Ukraine



Plenary session I – POLITEHNICA Bucharest Central Library, 4th floor, Room A.4.1.

Chairmen: Prof. PhD Eng. Ec. **Cristian DOICIN**, Prof. PhD Eng. **Constantin OPRAN**

Time (RO)	Presentations
10.00 – 10.20	<i>Investigation of color on plastic product failure or snap-fits which kill</i> , Paul A. TRES , ETS, Inc., Bloomfield Hills, Michigan, USA
10.20 – 10.40	<i>Leveraging Virtual Twin and Model-Based Systems Engineering to Elevate Engineering to the Next Level</i> , Sasa GAJIC and Andrea ESPOSITO , Dassault Systèmes Deutschland GmbH
10.40 – 11.00	<i>Information system for neural network analysis of X-ray and electron diffraction images of materials with defect structure</i> , Igor Fodchuk , Mariana Borchia , Sergiy Balovsyak , Chernivtsi National University, Ukraine
11.00 – 11.30	Coffee break, POLITEHNICA Bucharest, Central Library, 4 th floor

Plenary session II - POLITEHNICA Bucharest Central Library, 4th floor, Room A.4.1.

Chairmen: Prof. PhD Eng. **Daniel Liviu GHICULESCU**, Prof. PhD Eng. **Nicolae IONESCU**,
Assoc. Prof. PhD Eng. **Liviu UNGUREANU**

Time (RO)	Presentations
11.30 – 11.40	<ul style="list-style-type: none">Prof. PhD Eng. Daniel GHICULESCU – Coordinator of ICNcT Conference, ARTN Bucharest President, POLITEHNICA BucharestProf. PhD Eng. Dumitru MNERIE, POLITEHNICA Timișoara University, ARTN PresidentProf. PhD Eng. Mihai Aurel TITU, Chief Editor of Nonconventional Review, President of ARTA Sibiu
11.40 – 12.00	<i>Investigating Red Blood Cell micro/nano-mechanics</i> , Dan COJOC , National Research Council of Italy Materials Foundry, University of Trieste
12.00 – 12.15	<i>Challenges in Adapting R&D Teams to Fast-Changing Ecosystems on the Path to Industry 5.0</i> , Ronny HOPF , Head of PMA Development House, Siemens AG, Germany
12.15 – 12.35	<i>Control equipment used in the automobile industry, production equipment in the aeronautical field and associated manufacturing technologies</i> , Răzvan FULGEANU , Silviu ION and Bogdan FULGEANU , Allio Group, Romania
12.35 – 12.55	<i>CENIT: The expert in digital solutions for academia and industry</i> , Valentin ILIE and Alina-Daniela MIHALCEA , CENIT S.R.L.
12.55 – 13.15	<i>Complex physical phenomenology of EDM with technological applications</i> , Pavel TOPALĂ , Alecu Russo University, Bălți, Republic of Moldova
13.15 – 13.30	<i>EEG-Based Mobile Robot Control Using Deep Learning and ROS Integration</i> , Bianca GHINOIU , Victor VLĂDĂREANU , Ana-Maria TRAVEDIU , Luige VLĂDĂREANU , Abigail POP , Yongfei FENG , Andreea ZAMFIRESCU , IMSAR, Bucharest, Romania
13.30 – 15.00	Lunch, POLITEHNICA Bucharest, Central Library, 3 rd floor
15.00 – 18.00	Paper sections according to the conference programme
19.00 – 23.00	Gala Dinner (POTCOAVA restaurant)



Conference Section

Flexible and Intelligent Manufacturing and Control Systems

ICAMaT 2024 - Online Paper Presentations - November 21st, 2024

ROOM CO 011 -- 15.00 – 18.00

Section chairs: Prof. PhD Eng. Laurențiu SLĂTINEANU, Prof. PhD Eng. Marian GHEORGHE

- 1 Dragoș ILIESCU
Research on the Charpy Impact Test of Metallic Materials at Different Temperatures and Ductile to Brittle Transition Temperature
- 2 Mihaela NICOLAU
Considerations About Design Optimization Methods Used in Advanced Manufacturing Technologies
- 3 Roxana HOBJĂLĂ, Ioan SURUGIU, Adelina HRIȚUC, Răzvan Nicolae MITITELU, Laurențiu SLĂTINEANU
Functional Requirements for an Abrasive Erosion Test Equipment
- 4 Igor KLEIMAN, Nicolae IONESCU, Ovidiu BLĂJINĂ
Augmented Reality Enabled Knowledge Mesh
- 5 Igor KLEIMAN, Marian GHEORGHE, Eduard Laurențiu NIȚU
Augmented Reality for Knowledge Discovery Through Feature Detection and Semantic Similarity
- 6 Ronny HOPF, Marian GHEORGHE, Cătălin GHEORGHIȚĂ
The Impact of Team Factors on Risk and Decision-Making Processes in the Phases of the Industrial Product Life Cycle
- 7 Laurențiu SLĂTINEANU, Oana DODUN, Adelina HRIȚUC, Gheorghe NAGÎȚ, Margareta COTEĂȚĂ, Andrei-Marius MIHALACHE, Mădălin CATANĂ
Study on Sustainable Development of Technical Creativity
- 8 Kyriaki AIDINLI, Prodromos MINAOGLOU, Panagiotis KYRATSIS, Nikolaos EFKOLIDIS
Computational Furniture Design Case Studies
- 9 Ionuț-Alin DUMITRACHE, Daniel Silviu MANOLACHE, Sergiu NANU
Study on Geometric Advanced Control of Actual Machined Product Features