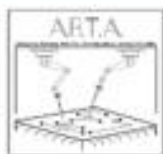


INTERNATIONAL CONFERENCE OF NONCONVENTIONAL TECHNOLOGIES

ICNcT – 24th Edition

ICNcT-XXIV



Timisoara, 22 – 24 October 2025

PROGRAM

<http://www.artn.ro/conference2025/>



22th – 24th October 2025
Timișoara, Romania

ICNcT XXIV - 2025

Organized by:

- POLITEHNICA UNIVERSITY TIMIȘOARA
- LUCIAN BLAGA UNIVERSITY OF SIBIU
- ROMANIAN ASSOCIATION FOR NONCONVENTIONAL TECHNOLOGIES
- ROMANIAN ASSOCIATION FOR ALTERNATIVE TECHNOLOGIES SIBIU

Under the aegis of:

- MINISTRY OF EDUCATION AND RESEARCH
- ACADEMY OF ROMANIAN SCIENTISTS
- ACADEMY FOR TECHNICAL SCIENCES OF ROMANIA

In collaboration with:

- IOAN SLAVICI University of Timisoara
- AUREL VLAICU University of Arad,
- National R&D Institute for Welding and Material Testing – ISIM Timisoara
- University of Nyíregyháza, Hungary
- Higher Education Technical School of Professional Studies in Novi Sad, Serbia
- General Association of Engineers in Romania (A.G.I.R.) - Timis Branch
- Romanian Association of Building Services Engineers – AIIR, Timis Branch

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Vice-President of Romanian Association for Nonconventional Technologies – ARTN, Romania

President of Romanian Association for Alternative Technologies Sibiu – A.R.T.A. Sibiu, Romania



WEDNESDAY, October 22, 2025

19,00-20,00	REGISTRATION OF PARTICIPANTS UPT, Faculty of Mechanics, Mihai Viteazul Street 1, Room M003
19,30-20,30	General Assembly ARTN „ <i>Aurel NANU</i> ” Amphitheater, Faculty of Mechanics, Room M005
20,00-22,00	<i>Welcome cocktail</i> offered to ICNcT 2025 participants UPT, Faculty of Mechanics, Mihai Viteazul Street 1, Room M003

THURSDAY October 23, 2025

Location, room: UPT, Faculty of Mechanics, Mihai Viteazul Street 1, Room M003

08:00 – 09:00 **REGISTRATION OF PARTICIPANTS**

09:00 – 09:30 **OPENING CEREMONY**

- Opening word: **Profesor Dumitru MNERIE – President ARTN**
Profesor Aurel Mihail ȚÎȚU – President A.R.T.A. Sibiu
- *Greetings from representative guests*

09:30 – 11.00 PLENARY SESSION 1.

Chairs: Aurel Mihail ȚÎȚU, Dumitru MNERIE, Mihai DRAGOMIR

Location, room: UPT, Mechanical Engineering Faculty, (1 Mihai Viteazul str.)

1st floor, M104 Amphitheater

09.30 - 09.45	NONCONVENTIONAL TECHNOLOGIES AT A BALANCE SHEET MOMENT: OPPORTUNITIES AND POSSIBILITIES FOR THE FUTURE <i>Dumitru MNERIE, Aurel Mihail ȚÎȚU</i>
09.45 - 10.00	EVOLUTION AND TRENDS IN MANUFACTURING <i>George DRĂGHICI</i>
10.00 - 10.15	SUPERMATHEMATICS BETWEEN CONVENTIONAL AND NONCONVENTIONAL <i>Mircea Eugen ȘELARIU</i>
10.15 – 10.30	PRACTICAL ASPECTS REGARDING SOME NONCONVENTIONAL RADIOLOGICAL TECHNOLOGIES USED IN NEUROSURGERY IN THE CONTEXT OF RESPECTING INTELLECTUAL PROPERTY PROTECTION <i>Dan Theodor ANDRONIC, Constantin OPREAN, Viorel BUCUR, Aurel Mihail ȚÎȚU</i>
10.30 - 10.45	STUDY ON PSYCHOSOCIAL RISKS IDENTIFIED AT WORKPLACES SPECIFIC TO THE USE OF UNCONVENTIONAL TECHNOLOGIES <i>Ileana MOGOȘANU, Dumitru MNERIE</i>
10.45 - 11.00	SURFACE PROCESSING METHODS FOR PARTS MADE FROM CONDUCTIVE MATERIALS USING PULSED ELECTRIC DISCHARGES (Book launch) <i>Pavel TOPALĂ, Nicolae IONESCU, Dumitru MNERIE</i>
11.00 – 11.30	COFFEE BREAK UPT, Faculty of Mechanics, Mihai Viteazul Street 1, Room M003
11.30 – 14.00	PLENARY SESSION 2. Chairs: Constantin OPREAN, Titus SLAVICI, Laurențiu SLĂTINEANU Location, room: UPT, Mechanical Engineering Faculty, (1 Mihai Viteazul str.) <i>1st floor, M104 Amphitheater</i>



11.30 – 11.45	USING THE IDEAS DIAGRAM METHOD TO DESIGN ABRASIVE WEAR TESTING EQUIPMENT <i>Ștefan JURESCI, Margareta COTEĂȚĂ, Ioan SURUGIU, Felicia BANCIU, Roxana HOBJĂLĂ, Laurențiu SLĂTINEANU</i>
11.45 – 12.00	RESEARCH CONCERNING MATERIAL REMOVAL AT SINGLE PULSE LASER <i>Daniel GHICULESCU, Andrei RUSU, Cornel ENCIU, Alexandra BARASCU, Alina CHIFELEA, and Irina GRIGORE</i>
12.00 – 12.15	NONCONVENTIONAL ENTITIES FOR TECHNOLOGY TRANSFER <i>Titus SLAVICI, Alexandra ȘUTA, Simina MARIS, Doina DARVASI, Adriana SECOSAN, Mircea UNTARU</i>
12.15 – 12.30	VIBRATION AND CONDICION MONITORING OF THE ROTATING MACHINES <i>Ranko ANTUNOVIĆ, Branko SAVIĆ, Nenad JANJIĆ, Tihi NINOSLAVA</i>
12.30 – 12.45	ARTIFICIAL INTELLIGENCE IN JIG AND FIXTURE DESIGN: GENERATIVE APPROACHES AND OPTIMIZATION FOR MECHANICAL PROCESSING <i>George BELGIU, Eugen Mircea ȘELARIU</i>
12.45 – 13.00	DETERMINATION OF THE SHRINKAGE AND DENSITY OF THE FINAL PRODUCT AFTER CONVENTIONAL AND NONCONVENTIONAL DRYING <i>Tamás ANTAL, László SIKOLYA and Zoltán KOVÁCS</i>
13.00 – 13.15	VACUUM COOLING OF BAKERY PRODUCTS: PARAMETERS AND FEATURES IN CONTINUOUS PRODUCTION <i>Oleksandr KOZAK, Volodymyr TELYCHKUN</i>
13.15 – 13.30	OHS RISK ASSESMENT IN THE EDM PROCESS <i>Diana ILEA, Mihai DRAGOMIR, Denisa SZABO and Aurel Mihail ȚÎȚU</i>
13.30 – 13.45	USING ARTIFICIAL INTELLIGENCE TO DESIGN TECHNOLOGY FOR ELECTRICAL DISCHARGE MACHINING <i>Vlada ȚISARI, Margareta COTEĂȚĂ, Oana DODUN, Gheorghe NAGÎȚ, Andrei Marius MIHALACHE</i>
13.45 – 14.00	EXPERIMENTAL ANALYSIS AND OPTIMIZATION OF EDM PROCESS PARAMETERS THROUGH MODELING OF MATERIAL REMOVAL AND ELECTRODE WEAR BEHAVIOR <i>Adelina-Alina HAN, Dinu-Valentin GUBENCU, Liliana-Georgeta TULCAN</i>
14.00 – 15.00	LUNCH (Room M003)
15.00 – 17.00	SECTION 1 ORAL SESSION 1 Chairs: Constantin OPREAN, Viorel BUCUR Location, room: UPT, Mechanical Engineering Faculty, (1 Mihai Viteazul str.) 1st floor, N301 „Aurel Carol NANU” Amphitheater
15.00 – 15.15	PRINTING WITH THE METAL X PRINTER IN THE UNIVERSITY ENVIRONMENT <i>Lavinia Ioana CULDA, Elena Stela WISZNOVSKY</i>
15.15 – 15.30	DESCRIPTION AND OPTIMIZATION OF AN SMD PRODUCTION LINE: PROCESSES, THERMAL CONTROL AND AUTOMATED INSPECTION <i>Elena Stela WISZNOVSKY, Lavinia Ioana CULDA</i>
15.30 – 15.45	MULTI-CRITERIA ANALYSIS OF FFF MANUFACTURING PROCESS FOR PRISMATIC COMPONENTS WITH CYLINDRICAL HOLL <i>Mircea Dorin VASILESCU, Tiberiu Aurel VASILESCU</i>



15.45-16.00	ECONOMIC AND TECHNOLOGICAL CONSIDERATIONS REGARDING THE PRODUCTION OF INJECTION MOLD COMPONENTS BY 3D RESIN PRINTING <i>Mircea Dorin VASILESCU, Maria Monica BORLENU, Tiberiu Aurel VASILESCU</i>
16.00 – 16.10	MANAGERIAL PERSPECTIVES ON BUILDING MAINTENANCE THROUGH THE INTEGRATION OF NONCONVENTIONAL TECHNOLOGIES AND INNOVATIVE SOLUTIONS <i>Robert-Constantin RACHINA, Lucian Ioan TARNU and Aurel Mihail ȚÎȚU</i>
16.10 – 16.20	CONVENTIONAL TECHNOLOGIES VERSUS NONCONVENTIONAL TECHNOLOGIES: ECONOMIC, ENVIRONMENTAL AND SOCIAL CRITERIA <i>Radu-Marian BUJDOIU, Augustin SEMENESCU and Aurel Mihail ȚÎȚU</i>
16.20 – 16.30	CURRENT STATE OF SUPERCAPACITOR DEVELOPMENT AND ITS IMPLICATIONS FOR QUALITY MANAGEMENT <i>Cristina-Mihaela STANCIU, Dragos Florin MARCU, Bogdan FLOREA and Aurel Mihail ȚÎȚU</i>
16.30 – 16.40	OPTIMIZATION OF NONCONVENTIONAL CNC MACHINING PROCESSES THROUGH IMPLEMENTATION OF COLLABORATIVE ROBOTS AND VALIDATION THROUGH PROCESS AUDITS <i>Ioan Danut IUONAS, Oana Roxana CHIVU and Aurel Mihail ȚÎȚU</i>
16.40 – 16.50	ADVANCED STRATEGIES FOR RISK ASSESSMENT IN PROJECT MANAGEMENT APPLIED IN THE FIELD OF NONCONVENTIONAL TECHNOLOGIES <i>Nicoleta-Madalina STAN, Camelia Cristina DRAGOMIR-PANZARU and Aurel Mihail ȚÎȚU</i>
16.50 – 17.00	LEVERAGING NONCONVENTIONAL TECHNOLOGIES AND INNOVATIVE SOLUTIONS FOR PROCESS OPTIMIZATION IN KNOWLEDGE-BASED ORGANIZATIONS <i>Sorin-Constantin NACU Maria POPA and Aurel Mihail ȚÎȚU</i>
17.00 – 17.20	COFFEE BREAK UPT, Faculty of Mechanics, Mihai Viteazul Street 1, Room M003
17.20 – 18.30	SECTION 1 ORAL SESSION 2 Chairs: Mihai DRAGOMIR, Aurel Mihail ȚÎȚU Location, room: UPT, Mechanical Engineering Faculty, (1 Mihai Viteazul str.) 1st floor, N301 „Aurel Carol NANU” Amphitheater
17.20 – 17.30	OPTIMIZING THE SCAR PROCESS THROUGH UNCONVENTIONAL METHODS: APPLYING VIBRODIAGNOSTICS AND GENETIC ALGORITHMS FOR QUALITY IMPROVEMENT IN THE AUTOMOTIVE CHAIN <i>Claudiu-Alexandru COVACI, Mihai DRAGOMIR, Diana DRAGOMIR and Aurel Mihail ȚÎȚU</i>
17.30 – 17.40	OPERATIONALIZING ETHICAL AND REGULATORY STANDARDS THROUGH INTEGRATION OF ISO/IEC 42001 ON ARTIFICIAL INTELLIGENCE IN RISK-AWARE AUTONOMOUS NONCONVENTIONAL TECHNOLOGIES <i>Claudiu Florin IUONAS, Dan NITOI and Aurel Mihail ȚÎȚU</i>
17.40 – 17.50	DRIVING CHANGE: A COMPARATIVE STUDY OF FOSSIL FUEL AND NONCONVENTIONAL ENERGY SOURCES IN HEAVY-DUTY VEHICLES



	<i>Alexandra-Florina IAMANDII, Catalin DARABA, Dinu DARABA and Aurel Mihail ȚÎȚU</i>
17.50 – 18.00	FESABILITY STUDY OF POLYMER-BASED BENDING DEVICES MANUFACTURED VIA MATERIAL EXTRUSION ADDITIVE MANUFACTURING FOR SMALL-BATCH PRODUCTION AND PROTOTYPING <i>Cristian GIOLU, Cătălin Gheorghe AMZA</i>
18.00 – 18.10	CONTRIBUTIONS TO THE MODELING AND SIMULATION OF A BIPED WALKING ROBOT <i>Daniel-Mircea POPESCU, Liviu-Marian UNGUREANU, Cătălin Gheorghe AMZA</i>
15.00 – 17.00	SECTION 2 ORAL SESSION 1 Chairs: Daniel GHICULESCU, Margareta COTEATĂ, Gabriela MNERIE Location, room: UPT, Faculty of Mechanics, Mihai Viteazul Street 1, Room M005
15.00 – 15.15	THE ROLE OF PUBLIC RELATIONS MANAGEMENT IN THE DEVELOPMENT OF NONCONVENTIONAL RESOURCES AND TECHNOLOGIES <i>Claudiu PÎRNĂU, Liviu-Daniel GHICULESCU, Cornel-Cristian ENCIU</i>
15.15 – 15.30	MODIFICATION OF THE MICROGEOMETRY OF METALLIC PART SURFACES BY APPLYING PULSED ELECTRICAL DISCHARGES <i>Dorin GUZGAN, Pavel TOPALĂ</i>
15.30 – 15.45	EVALUATION OF THE LASER CUTTING PROCESS IN INDUSTRIAL CONDITIONS <i>Remus BOBOESCU</i>
15.45-16.00	ELEMENTARY THERMAL MODELS APPLIED IN LASER BEAM PROCESSING <i>Remus BOBOESCU</i>
16.00 – 16.10	ANALYSIS OF THE MATERIAL REMOVAL IN HYBRID ELECTROCHEMICAL- ULTRASONIC MACHINING OF A 12% Cr STAINLESS STEEL <i>Cornel-Cristian ENCIU, Liviu-Daniel GHICULESCU</i>
16.10 – 16.20	SUBMERGED FRICTION STIR PROCESSING OF EN AW 7075 ALUMINUM ALLOY <i>Lia-Nicoleta BOȚILĂ, Ion-Aurel PERIANU, Iuliana DUMA, Gabriela-Victoria MNERIE</i>
16.20 – 16.30	ASPECTS REGARDING FRICTION STIR PROCESSING IN TWO WORKING MEDIUMS OF EN AC 5083 CAST ALUMINUM ALLOY” <i>Lia-Nicoleta BOȚILĂ, Ion-Aurel PERIANU, Iuliana DUMA, Gabriela-Victoria MNERIE</i>
16.30 – 16.40	RESEARCH CONCERNING CONTOUR LASER CUTTING OF SOME METALS <i>Andrei RUSU, Alexandru BUNEA, Daniel GHICULESCU, Stefan CHIVU, Andrei DIACONU, Stefan CIOBANU</i>
16.40 – 16.50	THE ISSUE OF POWDER DOSING IN ADVANCED TECHNOLOGICAL APPLICATIONS <i>Eugeniu UNGUREANU, Pavel TOPALĂ</i>
16.50 – 17.00	NONCONVENTIONAL TECHNOLOGICAL APPROACHES TO THE MANUFACTURE AND REPAIR OF SOME COMPLEX AUTOMOTIVE COMPONENTS MADE BY STAINLESS STEEL <i>Voicu SAFTA, Gabriela Victoria MNERIE, Dumitru MNERIE</i>



17.00 – 17.20	COFFEE BREAK UPT, Faculty of Mechanics, Mihai Viteazul Street 1, Room M003
17.20 – 18.30	SECTION 2. ORAL SESSION 2 Chairs: Pavel TOPALĂ, Liliana TULCAN, Location, room: UPT, Faculty of Mechanics, Mihai Viteazul Street 1, Room M005
17.20 – 17.30	STATISTICAL ANALYSIS OF THE SHEAR SECTION OF WATERJET CUT COMPOSITE MATERIALS <i>Alin NANI, Aurel PERIANU, Liviu MARȘAVINA</i>
17.30 – 17.40	NONCONVENTIONAL AND ADDITIVE MANUFACTURING APPROACHES FOR FLAT RIBBON COMPONENTS IN QUICK RESPONSE PRODUCTION <i>Emilia DOBRIN, Gabriela-Victoria MNERIE</i>
17.40 – 17.50	PERSPECTIVES ON THE USE OF ADDITIVELY MANUFACTURED HIGH-ENTROPY ALLOYS FOR COMPONENTS SUBJECTED TO WEAR AND VIBRATION <i>Gabriela-Victoria MNERIE, Nicușor-Alin SÎRBU</i>
17.50 – 18.00	LASER DED TECHNOLOGY: MATERIALS, PARAMETERS AND APPLICATIONS – A REVIEW OF RECENT LITERATURE <i>Caius ȘTANĂȘEL, Traian BUIDOȘ, Iulian ȘTĂNĂȘEL</i>
18.00 – 18.10	ON SOME ASPECTS OF THE EVOLUTION OF NONCONVENTIONAL TECHNOLOGIES IN THE LAST DECADE <i>Dumitru MNERIE, Aurel Mihail ȚÎȚU and Gabriela Victoria MNERIE</i>
18.10 – 18.20	RESEARCH CONCERNING LASER WELDING OF STAINLESS STEEL AISI 304 <i>Daniel GHICULESCU, Andrei RUSU, Eduard Sarbatoare, Dragos SIMION, Adrian TOAIE</i>
19.30 – 23.30	GALA Dinner (CAPRICE Restaurant)
FRIDAY DAY, October 24, 2025	
9.00 – 12.00	Room N301
„ <i>Aurel Carol NANU</i> ” - Special session of technical-scientific communications in the field of nonconventional technologies, allocated to students	
12.00 - 12.30	Closing Ceremony of the ICNcT 2025
12.30 - 17.00	Visiting TIMISOARA (Touristic program)

*For online connection:

- **Plenary session and Section 2:** <https://upt-ro.zoom.us/j/2756220134?pwd=b3ZDMnZTUkdGa3U2SGlNV2hsSjlHQQT09&omn=95116360712>

- **Section 1 and for special session „Aurel Carol NANU”:** <https://upt-ro.zoom.us/j/93046814493?pwd=FVDkzv9WHMRccmo3oHIPS8PpSDr1XC.1>

Good luck to all participants!



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