



UNIVERSITY OF CRAIOVA

Faculty of Mechanics
Department of Engineering and Management
of Technological Systems

7th International Conference **ADVANCES** IN **ENGINEERING &** **MANAGEMENT**



ADEM 2023 Conference Program



**ADVANCES
IN
ENGINEERING & MANAGEMENT
ADEM 2023**

Organised by:

**UNIVERSITY of CRAIOVA
Faculty of Mechanics
Department of Engineering and Management of Technological Systems**

Scientific Committee ADEM 2023

Ascenso Pires, Inês	University of Lisbon, Pt
Bâlc, Nicu	Technical University of Cluj Napoca, Ro
Bîzdoacă, Nicu	University of Craiova, Ro
Berceanu, Dorel	University of Craiova, Ro
Boşneagu, Romeo	"Mircea cel Bătrân" Naval Academy, Ro
Cantoni, Franca	Catholic University of the Sacred Heart, It
Centea, Dan	McMaster University, Ca
David, Andrej	University of Zilina, Sk
Doicin, Cristian	Politehnica University of Bucharest, Ro
Duldner Borca, Bianca	University of Applied Sciences Upper Austria, At
Dumitru, Ilie	University of Craiova, Ro
Dumitru, Nicolae	University of Craiova, Ro
Minea, Marius	Politehnica University of Bucharest, Ro
Nicolae, Florin	"Mircea cel Bătrân" Naval Academy, Ro
Paraschiv, Gigel	Politehnica University of Bucharest, Ro
Perry Gouveia, Bárbara	University of Lisbon, Pt
Selişteanu, Dan	University of Craiova, Ro
Spînu, Cezar	University of Craiova, Ro
Scutelnicu, Elena	University „Dunărea de Jos” of Galaţi, Ro
Tarniţă, Daniela	University of Craiova, Ro

Program of ADEM 2023

WELCOME COCKTAIL
October 26, 2023 20.00 CONTINENTAL HOTELS



October 26, 2023

10⁰⁰ – 10³⁰	Opening Ceremony
	Gabriel BENGAI , Chairman of ADEM 2023 International Conference Cezar Ionut SPÎNU , Rector of the University of Craiova Ilie DUMITRU , Dean of the Faculty of Mechanics City Hall Representative Prefecture of the Mehedinți County Representative
10³⁰ – 13⁰⁰	Keynote Speakers
10³⁰ – 11⁰⁰	Paolo BISOGNI , Università Cattolica del Sacro Cuore, Milan, Italy Studying the resilience of Supply Chains and Hospitals: connecting two worlds
11⁰⁰ – 11³⁰	Janos DOBRANSZKY , Budapest University of Technology and Economics, Hungary Trends in advanced materials engineering and technology
11³⁰ – 12⁰⁰	Coffee break
12⁰⁰ – 12³⁰	Meeuwis van WIRDUM , Maritime Academy Harlingen, the Netherlands Future proof innovation in IWT. A holistic approach
12³⁰ – 13⁰⁰	Giuseppe CASALINO , Università Politecnico di Bari, Italy Metal Wire Additive Manufacturing: A Comparison between Arc Laser and Laser/Arc Heat Sources
13⁰⁰ – 13³⁰	Jan SMALLEGANGE , Stichting STC-Group, Rotterdam, the Netherlands Standards for competence for operating on-board systems for automation of inland navigation vessels
13³⁰ – 14⁰⁰	Damjan KLOBČAR , University of Ljubljana, Slovenia A review of recent advances and future trends in Wire Arc Additive Manufacturing
14⁰⁰ – 15⁰⁰	LUNCH
15⁰⁰ – 18⁰⁰	CONTINENTAL HOTELS



ORAL PRESENTATIONS

October 26, 2023 Starting at 15.30

T1. Advanced Materials and Technologies

Chairman: Sorin-Vasile SAVU, University of Craiova

Co-chairman: Iulian ȘTEFAN, University of Craiova

15 ³⁰ -15 ⁴⁵	PRELIMINARY RESEARCHES OF THE INFLUENCE OF DEFORMATIONS AND RESIDUAL STRESSES DURING WELDING IN THE INLAND WATERWAY SHIPBUILDING	Angelo Andrei MIDAN, Sorin Vasile SAVU
15 ⁴⁵ -16 ⁰⁰	THE INFLUENCE OF RELATIVE POSITION OF COPPER PLATES IN MICROWAVE FIELD IN TEMPERATURE DISTRIBUTION FOR SOLDERING	Cristian Daniel GHELINGHER, Angelo Andrei MIDAN, Robert Cristian MARIN, Sorin Vasile SAVU
16 ⁰⁰ -16 ¹⁵	TEMPERATURE IN TURNING PROCESS OF PURE TITANIUM AND Ti6Al4V, TITANIUM ALLOY	Dumitru PANDURU, Emil Nicușor PATRU, Marin BICĂ, Nicolae CRĂCIUNOIU
16 ¹⁵ -16 ³⁰	RESULTS REGARDING THE TEMPERATURE IN MILLING PROCESS OF ALUMINUM ALLOYS AND STAINLESS STEEL	Emil Nicușor PATRU, Dumitru PANDURU, Marin BICĂ, Nicolae CRĂCIUNOIU
16 ³⁰ -16 ⁴⁵	CONTRIBUTIONS REGARDING THE ENERGY EFFICIENCY OF PUBLIC BUILDINGS THROUGH THERMAL INSULATION	Eugenia TRĂȘCĂ, Marin BICĂ
16 ⁴⁵ -17 ⁰⁰	DIGITAL MANUFACTURING VS TRADITIONAL MANUFACTURING	Gabriel BENGĂ, Mihai URSU
17 ⁰⁰ – 17 ³⁰	Coffee break	
17 ³⁰ -17 ⁴⁵	SPECIFIC DENTAL ASPECTS ON THE FRICTION COUPLES AT THE TOOTH LEVEL IN THE LAB ENVIRONMENT	Gabriela SIMA, Veronica MERCUT, Sanda Mihaela POPESCU, Horia Octavian MANOLEA, Oana GINGU, Alina Cristina TEISANU, Claudiu NICOLICESCU, Marius Leonard CIUREZU GHERGHE, Ionela BUCȘE
17 ⁴⁵ -18 ⁰⁰	INFLUENCE OF THE COMPACTION PRESSURE ON THE TiB ₂ SAMPLE INTEGRITY	Iulian ȘTEFAN, Gabriel Constantin BENGĂ, Sorin Vasile SAVU, Ionel Dănuț SAVU
18 ⁰⁰ -18 ¹⁵	PRELIMINARY RESEARCH ON THE THERMAL FIELD IN CONCRETE FOR MICROWAVE HEATING APPLICATION	Iulian ȘTEFAN, Gabriel Constantin BENGĂ, Sorin Vasile SAVU, Angelo Andrei MIDAN
18 ¹⁵ -18 ³⁰	MICROSTRUCTURAL AND MECHANICAL PROPERTIES OF GCS STEELS AFTER HOT ROLLING PROCESS	Marius Cătălin CRIVEANU, Bebe-Adrian OLEI, Claudiu NICOLICESCU
18 ³⁰ -18 ⁴⁵	HOT-AIR – RESISTANCE HYBRID PRINTING HEAD	Remus SOCOL, Ionel Dănuț SAVU
18 ⁴⁵ -19 ⁰⁰	CRITICAL VIBRATIONS FOR TURBINE ELEMENTS	Traian ȚUNESCU, Iulian ȘTEFAN, Ionel Dănuț SAVU



T2. Sustainable Transport and Environment

Chairman: Bebe-Adrian OLEI University of Craiova

Co-chairman: Marius Cătălin CRIVEANU, University of Craiova

15 ³⁰ -15 ⁴⁵	ANALYSIS OF THE EFFICIENCY OF NAVIGATION SIMULATORS IN THE EDUCATIONAL PROCESS	Bebe-Adrian OLEI, Ionel BALOȘIN, Angelo Andrei MIDAN
15 ⁴⁵ -16 ⁰⁰	DYNAMIC BEHAVIOUR ANALYSIS OF A SUSPENSION SYSTEM FROM A ROAD VEHICLE	Cristian COPILUȘI, Ionuț GEONEA, Alexandru MARGINE
16 ⁰⁰ -16 ¹⁵	EFFICIENCY ANALYSIS OF PHOTOVOLTAIC SYSTEMS INSTALLED ACROSS THE SOUTH WEST AND WEST REGIONS OF ROMANIA	Daniela COMAN
16 ¹⁵ -16 ³⁰	MECHANISMS FOR ACCESS TO A MULTI-STOREY CAR PARK	Edward RĂȘCHITOR, Carmen Elisabeta RADU
16 ³⁰ -16 ⁴⁵	STUDY ON ATMOSPHERIC POLLUTION AND AIR QUALITY IN DROBETA TURNU SEVERIN	Ionela-Gabriela BUCȘE, Mariana CIOBANU, Marius CRIVEANU
16 ⁴⁵ -17 ⁰⁰	STUDY ON THE INFLUENCE OF CLIMATE PARAMETERS ON ENVIRONMENTAL POLLUTION IN DROBETA TURNU SEVERIN	Ionela-Gabriela BUCȘE, Mariana CIOBANU, Gabriela DEMIAN
17⁰⁰ – 17³⁰	Coffee break	
17 ³⁰ -17 ⁴⁵	CONSIDERATIONS REGARDING THE NAVIGATION EVENTS PRODUCED ON THE ROMANIAN SECTOR OF THE DANUBE	Ionel BALOȘIN, Bebe Adrian OLEI, Sorin Vasile SAVU, Andrei Angelo MIDAN
17 ⁴⁵ -18 ⁰⁰	CONSIDERATIONS REGARDING THE SOURCES OF POLLUTION AND THEIR EFFECTS ON THE ROMANIAN SECTOR OF THE DANUBE	Ionel BALOȘIN, Constantin FLORESCU, Marius CRIVEANU, Iulian ȘTEFAN
18 ⁰⁰ -18 ¹⁵	DEVELOPING AND USING SOME INDICES FOR STUDYING THE EVOLUTION OF SURFACE WATER QUALITY	Luminița GRECU, Gabriela DEMIAN, Mihai DEMIAN
18 ¹⁵ -18 ³⁰	SELECTION OF MATERIALS FOR NOISE CONTROL IN BUILDINGS USING A MULTICRITERIA DECISION METHOD	Gabriela DEMIAN, Luminița GRECU, Mihai DEMIAN
18 ³⁰ -18 ⁴⁵	SELECTION OF HEAT-INSULATING MATERIALS FOR THE THERMAL REHABILITATION OF A BUILDING	Mihai DEMIAN, Gabriela DEMIAN, Luminița GRECU
18 ⁴⁵ -19 ⁰⁰	INTEGRATION OF ROBOTS IN THE DIGITAL AND GREEN FABRICATION IN WELDING PROCESSES	Mihaela Cecilia FLORESCU, Ionel Dănuț SAVU, Damjan KLOBČAR, Ines PIRES, Robert FLORESCU
19 ⁰⁰ -19 ¹⁵	STUDY ON SOUND INSULATION AND ACOUSTIC CORRECTION IN A BUILDING	Mariana CIOBANU, Ionela BUCȘE, Marius CRIVEANU
19 ¹⁵ -19 ³⁰	NEW CATALYST SYSTEM ACTIVATED WITH MICROWAVE FOR NOX REDUCTION	Robert Cristian MARIN, Cristian Daniel GHELSINGHER, Angelo Andrei MIDAN, Sorin Vasile SAVU



T3. Management and Logistics

Chairman: Ionel Dănuț SAVU, University of Craiova

Co-chairman: Mihaela Cecilia FLORESCU, University of Craiova

15 ³⁰ -15 ⁴⁵	AUTOMATION OF HANDLING SYSTEMS IN THE TERMINALS OF THE WORLD CONTAINER PORTS	Andrej DÁVID, Andrea MATERNOVÁ, Stefano RICCI
15 ⁴⁵ -16 ⁰⁰	ERGONOMICS IN THE AUTOMOTIVE SECTOR	Anamaria FEIER, Felicia BANCIU, Inês PIRES, Damjan KLOBČAR, Arianne-Maria SAVU
16 ¹⁵ -16 ³⁰	STUDY ON THE SUSTAINABLE DEVELOPMENT OF GOODS TRANSPORTATION IN EUROPE	Mariana CIOBANU, Ionela BUCȘE, Olimpia GHERMEC
16 ³⁰ -16 ⁴⁵	QUALITATIVE AND QUANTITATIVE ANALYSIS OF A JUNCTION BASED ON DIFFERENT SIGNAL PLANS FOR DIFFERENT RUSH HOUR PHASES	Daciana-Nicoleta GENCĂRĂU, Lucian MATEI, Ilie DUMITRU, Laurențiu RACILĂ
16 ⁴⁵ -17 ⁰⁰	CIRCULAR ECONOMY - TOOL FOR SUSTAINABLE INTEGRATION OF FUTURE ENGINEERS IN INDUSTRIAL ACTIVITY	Olimpia GHERMEC, Cristian GHERMEC, Mariana CIOBANU, Ionela BUCȘE
17 ⁰⁰ – 17 ³⁰	Coffee break	
17 ³⁰ -17 ⁴⁵	OPTIMIZING A ROUTE OF PUBLIC PASSENGER TRANSPORTATION IN THE AREA DROBETA TURNU SEVERIN MUNICIPALITY	Augustin CONSTANTINESCU, Mario TROTEA, Ionut-Daniel GEONEA

GALA DINNER October 26, 2023 20.00 LINZ Restaurant

09.30-10.00	Improved workforce to set transition from manufacturing to digital green fabrication - DIGIGREEN	Mihaela Cecilia FLORESCU
10.00-10.30	Digital training tools in steel structure integrity – ALLIES	Marius Cătălin CRIVEANU
10.30-11.00	Academic network for green and innovative Europe - ANGIE	Ionel Dănuț SAVU
11.00-11.30	1 System 4 Inland Waterway Transport: upskilling pathways – 1S4IWT	Bebe Adrian OLEI
11.30-12.00	Logistics Master Degree to set specialists for Supply Chain Management and Logistics – LOGMASTER	Gabriel Constantin BENGHA
12 ⁰⁰ – 12 ³⁰	Coffee break	
12 ³⁰	Technical visit on the Iron Gates Dam Museum	
14 ⁰⁰	Cruise on the Danube Gorges	

CLOSING CEREMONY October 27, 2023