

"Dunărea de Jos" University of Galați

Scientific Conference of Doctoral Schools

Perspectives and challenges in doctoral Research
14th Edition of SCDS-UDJG
11th and 12th of June 2026

Doctoral School of
Mechanical and
Industrial Engineering
PROGRAMME



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CONFERENCE PROGRAMME

THURSDAY – June 11, 2026

08:00-10:00	Invited plenary lectures
09:00-11:00	Participants registration
10:00-13:00	Invited lectures Oral presentations in concurrent sections
13:00-14:00	Lunch (building D - 1 st floor)
14:00-16:00	Oral presentations in concurrent sections
16:00-16:30	Coffee break (building D - 1 st floor)
16:00-19:00	Oral presentations in concurrent sections

FRIDAY – June 12, 2026

09:00-10:30	Oral presentations in concurrent sections
10:30-11:00	Coffee break (building D - 1 st floor)
11:00-13:00	Posters session
11:00-13:00	Workshop
13:00-14:00	Awarding ceremony. Closing ceremony
14:00-15:00	Lunch (building D - 1 st floor)

SECTION 1: ADVANCED RESEARCH IN MECHANICAL AND INDUSTRIAL ENGINEERING,
Building B, Room B26, 111 Domnească Street

THURSDAY – June 11, 2026

ORAL PRESENTATIONS (10⁰⁰ - 12¹⁵)

CHAIR: Elena Scutelnicu, Liliana Rusu, "Dunărea de Jos" University of Galați

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| OP. 1.1
(10 ⁰⁰ -10 ¹⁵) | <u>Mohamed Maktabi</u> , Eugen Rusu | Turbulent Wind Analyses of Eight Floating Wind Turbines |
| OP. 1.2
(10 ¹⁵ -10 ³⁰) | <u>Marius Manolache</u> , Gabriel Andrei,
<u>Alexandra Manolache</u> | Analysis of Wake Effects and Yaw Misalignment in Wind Farm Performance Optimization |
| OP. 1.3
(10 ³⁰ -10 ⁴⁵) | <u>Victor Popa</u> , Ana-Maria Chiroșcă,
Eugen Rusu | The Strategic Role of the Danube River and the Port of Constanța in Sustainable Development and the Energy Transition |
| OP. 1.4
(10 ⁴⁵ -11 ⁰⁰) | <u>Alexandra Bujor</u> , Ana-Maria Chiroșcă,
Eugen Rusu | Innovative Floating Structures in Europe: Hydrodynamic Performance, Energy Solutions, and Sustainable Design |
| OP. 1.5
(11 ⁰⁰ -11 ¹⁵) | <u>Adriana-Alina Mihalcea</u> , Liliana-Celia Rusu | The Impact of Climate Change on Maritime Transport and Maritime Security |
| OP. 1.6
(11 ¹⁵ -11 ³⁰) | <u>Adriana Silion</u> , Liliana-Celia Rusu | A Multi-Site, Long-Term Evaluation of Offshore Wind Turbines in the Western Black Sea Basin |
| OP. 1.7
(11 ³⁰ -11 ⁴⁵) | <u>Cristina Paraschiv</u> , Cătălina-Mercedes Burlacu, Maria Stan, Adelina Ion | Physics-Informed Machine Learning for Bearing Health Monitoring in Rotating Industrial Machinery Using Public Experimental Datasets |
| OP. 1.8
(11 ⁴⁵ -12 ⁰⁰) | Cătălina-Mercedes Burlacu, Maria Stan, Adelina Ion, <u>Cristina Paraschiv</u> | Artificial Intelligence-Based Modelling and Optimization of Milling Processes for Tool Condition Monitoring and Manufacturing Efficiency |
| OP. 1.9
(12 ⁰⁰ -12 ¹⁵) | <u>Mihai-Cătălin Radu</u> , Gabriel Andrei | Analysis of Gear Defects using Image Processing Methods |
| OP. 1.10
(12 ¹⁵ -12 ³⁰) | <u>Florin Barbu</u> , Eugen-Victor-Cristian Rusu | A Practical Engineering Approach for Deploying Shipboard Wind Energy Systems in Support of Low-Emission Danube Navigation |

13:00-14.00 **Concluding remarks**
Lunch (building D - 1st floor)

SECTION 1: ADVANCED RESEARCH IN MECHANICAL AND INDUSTRIAL ENGINEERING,
Online

THURSDAY – June 11, 2026

ORAL OR POSTERS PRESENTATIONS (14⁰⁰-18²⁰)

CHAIR: Leonard Domnişoru, Gabriel Frumuşanu, "Dunărea de Jos" University of Galaţi

PP.1.1 (14 ⁰⁰ -14 ¹⁰)	<u>Ionuţ Dumitriu</u> , Ion V. Ion	Recent Development in CO ₂ Refrigeration Technologies
PP.1.2 (14 ¹⁰ -14 ²⁰)	<u>Alecsa Cristina Stoica</u> , Carmen Gasparotti, Liliana-Celia Rusu	Offshore Platform Adaptation to Climate Change Through Technological Optimization and Advanced Monitoring: Literature Review
PP.1.3 (14 ²⁰ -14 ³⁰)	Mario Constandache, Claudiu-Marin Martin, <u>Ioana Gabriela Chiracu</u> , George Pelin, Lorena Deleanu	Tensile Behavior of Biaxial ($\pm 45^\circ$) Non-Crimp Glass Fiber Composites: Influence of Test Rate and Laminate Thickness
PP.1.4 (14 ³⁰ -14 ⁴⁰)	<u>Dragos Alexandru Saragea</u> , Ion V. Ion	Methanol as a Sustainable Alternative to HFO in Marine Boilers
PP.1.5 (14 ⁴⁰ -14 ⁵⁰)	<u>Roberto-Adrian Dobri</u> , Florin Onea	Geospatial Assessment of Offshore Wind Energy Potential in Romania's Exclusive Economic Zone
PP.1.6 (14 ⁵⁰ -15 ⁰⁰)	<u>Valerian Novac</u> , Eugen-Victor-Cristian Rusu, Ionuţ-Cristian Scurtu, Maria Gherghişan	A Maze Routing Algorithm for Safe and Sustainable Black Sea Voyages
PP.1.7 (15 ⁰⁰ -15 ¹⁰)	<u>George-Florin Pricope</u> , Ion V. Ion	Perspectives on the Integration of Hydrogen into the Combined Blowing Processes of the LD Converter
PP.1.8 (15 ¹⁰ -15 ²⁰)	<u>Elena Vascenco (Reuţchi)</u> , Vasile Bria, Marina Bunea, Daniela-Ioana Tudose, Cristina Oprea (Gavrilo), Adrian Cîrciumaru	Hydration Effect on the Mechanical Properties of Flour-Modified Epoxy
PP.1.9 (15 ²⁰ -15 ³⁰)	<u>Alexandru Zlatov</u> , Vasile Bria, Marina Bunea, Cătălin-Gabriel Borcia, Nicolai Filipenco, Adrian Cîrciumaru	Analysis of Mechanical Properties of Epoxy Resin Modified with Organic Agents
PP.1.10 (15 ³⁰ -15 ⁴⁰)	<u>Cristina Oprea (Gavrilo)</u> , Vasile Bria, Marina Bunea, Lavinia-Mădălina Petanec, Elena Vascenco (Reuţchi), Adrian Cîrciumaru	nTiO ₂ - Epoxy Composites
PP.1.11 (15 ⁴⁰ -15 ⁵⁰)	<u>Cătălin-Marian Zaharia</u> , Elena Mereuţă, Mihai Gingăraşu	Experimental Investigation of Stress States in Road Infrastructure Using Electrical Resistance Strain Gauge Techniques
PP.1.12 (15 ⁵⁰ -16 ⁰⁰)	<u>Alexandru-Viorel Vasiliu</u> , Christian Popescu, Dan Călinescu, Mario Constandache, George-Ghiocel Ojoc, Lorena Deleanu	Ballistic Damage Mechanisms in Ultra-High-Molecular-Weight Polyethylene Endumax Plates: Comparative Tests on 65- and 165-Layer Laminates
PP.1.13 (16 ⁰⁰ -16 ¹⁰)	<u>Nicolai Filipenco</u> , Vasile Bria, Gelu Gurguiatu, Cristian Ghera, Alexandru Zlatov, Adrian Cîrciumaru	Mechanical Properties of Nonlinear Active Electrical Resistive Materials for Overvoltage Protection
PP.1.14 (16 ¹⁰ -16 ²⁰)	<u>Maria Gherghişan</u> , Costel-Iulian Mocanu, Valerian Novac	Comparative Numerical Analysis of Laminated Composite and Hybrid Metal-Composite Plates for Small Craft Applications

PP.1.15 (16 ²⁰ -16 ³⁰)	<u>Lavinia Cretu</u> , Liliana-Celia Rusu	Global Marine Energy Under Climate Change. A Review with Focus on the Black Sea
PP.1.16 (16 ³⁰ -16 ⁴⁰)	<u>Marian-Victor Cocris</u> , Costel-Iulian Mocanu	Assessment of the Benefits of Floating Docks Repositioning in "NAVROM" Shipyard
PP.1.17 (16 ⁴⁰ -16 ⁵⁰)	<u>Gabriel Mocanu</u> , Ion V. Ion, Robert Chivu, Michael Frățița	Energy Conservation in Municipal Bus Systems: A Review
PP.1.18 (16 ⁵⁰ -17 ⁰⁰)	<u>Paul-Adrian Pascu</u> , Laurenția Andrei, Florin Păcuraru	Flow Rate Analysis of Noncircular Gear Pumps Based on Centroides Generated by the Gielis Superformula
PP.1.19 (17 ⁰⁰ -17 ¹⁰)	<u>Mihăiță Năstase</u> , Felicia Stan, Cătălin Fetecău	Preliminary Study on the Electrical Behavior of 3D Printed PLA-based Composites
PP.1.20 (17 ¹⁰ -17 ²⁰)	<u>Sergiu Coceaș</u>	Recent Advances in Rheological Modelling of Granular Materials Stabilized with Enzymes, Nanomaterials, and Eco-Friendly Binders
PP.1.21 (17 ²⁰ -17 ³⁰)	<u>Adrian Cojan</u> , Lorena Deleanu, Cătălin Pîrvu	Redesigning Industrial Dollies for Automated Logistics: Vibration Control, Compact Routes and AGV Compatibility
PP.1.22 (17 ³⁰ -17 ⁴⁰)	<u>Dinu Gîrneț</u> , Nina Lazăr, Valentina-Andreea Calmuc, Gabriel Murariu, Lorena Deleanu	Preliminary Distribution of Chemical Elements in Suspended Particles Retained on Filters from Prut River Water Sampled in the Cahul Location
PP.1.23 (17 ⁴⁰ -17 ⁵⁰)	<u>Ioana-Gabriela Chiracu</u> , Mario Constandache, Claudiu-Marin Martin, George-Cătălin Cristea, George-Ghiocel Ojoc, Lorena Deleanu	Impact Tests on Composites made of Non-crimp Glass Fiber Prepregs with Coremat Xi3 Middle Layer
PP.1.24 (17 ⁵⁰ -18 ⁰⁰)	<u>Adriana-Mădălina Țurcanu (Constantinescu)</u> , Felicia Stan, Cătălin Fetecău	A Comparative Analysis of Mechanical Properties of Two Dental Composite Materials Using the Nanoindentation Technique
PP.1.25 (18 ⁰⁰ -18 ¹⁰)	<u>Florin Barbu</u> , Eugen-Victor-Cristian Rusu	Experimental Assessment of a Small Wind Turbine Installed on a Danube River Dredger for Auxiliary Power Generation
PP.1.26 (18 ¹⁰ -18 ²⁰)	<u>Miron Mihai-Marius</u> , Florin Păcuraru	State of the Art in Ship Hydrodynamics in Shallow Water: A Review of Numerical and Experimental Approaches

Concluding remarks