

# SCIENTIFIC CONFERENCE OF DOCTORAL SCHOOLS

Doctoral School of Mechanical and Industrial  
Engineering

## PROGRAMME

2024

SCDS-UDJG 2024  
The 12<sup>th</sup> Edition, GALAȚI,  
6<sup>th</sup>-7<sup>th</sup> of June 2024

## THURSDAY – 6<sup>th</sup> of June 2024

### SECTION 1 (online)

#### ADVANCED RESEARCH IN MECHANICAL AND INDUSTRIAL ENGINEERING

#### ORAL PRESENTATIONS

##### **Chairs: Elena Scutelnicu, Liliana-Celia Rusu**

<b>OP. 1.1</b> <b>(10<sup>00</sup>-10<sup>20</sup>)</b>	<u>Mohamed Maktabi</u> , Eugen-Victor-Cristian Rusu	Constant wind analyses on eight floating wind turbines
<b>OP. 1.2</b> <b>(10<sup>20</sup>-10<sup>40</sup>)</b>	<u>Dumitru-Silviu Perijoc</u> , Leonard Domnișoru	Global structural response of inland vessels under grounding loading scenarios
<b>OP. 1.3</b> <b>(10<sup>40</sup>-11<sup>00</sup>)</b>	<u>Andreea Mândru</u> , Liliana-Celia Rusu, Florin-Dimitrie Păcuraru	Scale Effects on Ship Hydrodynamics in Calm Water and Regular Head Wave Conditions
<b>OP. 1.4</b> <b>(11<sup>00</sup>-11<sup>20</sup>)</b>	<u>Răzvan Sebastian Crăciun</u> , Virgil Gabriel Teodor	Numerical Representation of Objects – Representation of 3D Bodies

#### POSTER SESSION

##### **Chairs: Gabriel Frumușanu, Leonard Domnișoru**

<b>PP.1.1</b> <b>(11<sup>20</sup>-11<sup>30</sup>)</b>	<u>Maria Gherghisan</u> , Costel-Iulian Mocanu	Studies on the Replacement of Traditional Materials Used in the Construction of Sports Boats and Yachts up to 70 Meters with Al-Fabric-Al Type Materials
<b>PP.1.2</b> <b>(11<sup>30</sup>-11<sup>40</sup>)</b>	<u>Adriana-Mădălina Turcanu</u> (Constantinescu), Felicia Stan, Cătălin Fetecău	Analysis of the Mechanical Properties of the Ceramic-based Restorative Materials using Instrumented Indentation Technique
<b>PP.1.3</b> <b>(11<sup>40</sup>-11<sup>50</sup>)</b>	<u>Cristian Tilea</u> , Felicia Stan, Ionuț Laurențiu Sandu, Cătălin Fetecău	Considerations on the 3D printing of organic structures
<b>PP.1.4</b> <b>(11<sup>50</sup>-12<sup>00</sup>)</b>	<u>Adriana (Silion) Patilea</u> , Liliana-Celia Rusu	A more comprehensive picture of Renewable energies in the Black Sea nowadays
<b>PP.1.5</b> <b>(12<sup>00</sup>-12<sup>10</sup>)</b>	<u>Andreea Liliana Lazăr</u> , Adrian Cîrciumaru	The influence of Y <sub>2</sub> O <sub>3</sub> nanoparticles on the polymeric membrane properties
<b>PP.1.6</b> <b>(12<sup>10</sup>-12<sup>20</sup>)</b>	<u>George-Gabriel Cotoc</u> , Liliana-Celia Rusu, Florin-Dimitrie Pacuraru	Investigating Roll Parameters for a 3D-Printed Ship Model
<b>PP.1.7</b> <b>(12<sup>20</sup>-12<sup>30</sup>)</b>	<u>Marin Romeo</u> , Cristian Munteniță, Valentin Amorțilă	Assessment of repairing method of degraded wind turbine blades
<b>PP.1.8</b> <b>(12<sup>30</sup>-12<sup>40</sup>)</b>	<u>George Bălășoiu</u> , Valentin Amorțilă, Costel Humelnicu	Artificial neural network based method for the optimization of brake materials
<b>PP.1.9</b> <b>(12<sup>40</sup>-12<sup>50</sup>)</b>	<u>Marin Romeo</u> , Cristian Munteniță, Costel Humelnicu	Investigation on impact degradation of wind turbine blades
<b>PP.1.10</b> <b>(12<sup>50</sup>-13<sup>00</sup>)</b>	<u>Valerian Novac</u> , Eugen-Victor-Cristian Rusu, Carmen-Marilena Gasparotti	Using a genetic algorithm to enhance the safety of the Black Sea naval operations
<b>PP.1.11</b> <b>(13<sup>00</sup>-13<sup>10</sup>)</b>	<u>Alexandru Viorel Vasiliu</u> , Christian Popescu, Cătălin Pîrvu	UHMWPE in Ballistic Protection
<b>PP.1.12</b> <b>(13<sup>10</sup>-13<sup>20</sup>)</b>	<u>Dinu Gîrnet</u> , Alexandru Viorel Vasiliu, Gabriel Murariu, Romana Drasovean,	A Survey of Some Water Characteristics for Prut River
<b>PP.1.13</b> <b>(13<sup>20</sup>-13<sup>30</sup>)</b>	George-Ghiocel Ojoc, Lorena Deleanu <u>Ioana-Gabriela Chiracu</u> , George-Ghiocel Ojoc, Lorena Deleanu	Modeling the three-point bending test for a stratified composite

## THURSDAY – 6<sup>th</sup> of June 2024

### SECTION 2

#### ADVANCED INVESTIGATION METHODS IN ENVIRONMENT AND BIOHEALTH

##### ORAL PRESENTATIONS

Chair: Luminita Moraru

IP. 2.1 (10 <sup>00</sup> -10 <sup>15</sup> )	<u>Simona Moldovanu</u> , Luminita Moraru	Classification methods for data, metadata, and images
OP. 2.1 (10 <sup>15</sup> -10 <sup>30</sup> )	<u>Ciorba Petru</u> , Zubcov Elena	Arsenic in the living environment and ecosystems of the Prut River
OP. 2.2 (10 <sup>30</sup> -10 <sup>45</sup> )	<u>Dragoș Balaican</u> , Iulian Nichersu, Oliver Livanov, Matei Simionova, Adrian Burada, Cătălina Iticescu, Luminița Moraru, Puiu-Lucian Georgescu	Impact of the Interaction of climate change, anthropogenic modification and the Jevons rebound effect and paradox on water multi-connectivities in inland watercourses and its effects on carbon storage
OP. 2.3 (10 <sup>45</sup> -11 <sup>00</sup> )	<u>Cristinel Gabriel Rusu</u> , Simona Moldovanu, Luminița Moraru	Artificial intelligence in lung cancer diagnosis: A comprehensive review
OP. 2.4 (11 <sup>00</sup> -11 <sup>15</sup> )	<u>Cristina Paraschiv (Nedelcu)</u> , Steluța Gosav, Cătălina Mercedes Burlacu, Mirela Praisler	Assessing the chemical potential of certain flavones based on DFT theory and molecular docking
OP. 2.5 (11 <sup>15</sup> -11 <sup>30</sup> )	<u>Lucian Sergiu Trifan</u> , Simona Moldovanu	Testing classification performance of deep learning models: A comparative study based on image edges
OP. 2.6 (11 <sup>30</sup> -11 <sup>45</sup> )	<u>Cristina Ioana Casapu</u> , Simona Moldovanu	Classification of microorganism using convolutional neural network and H2O AutoML
OP. 2.7 (11 <sup>45</sup> -12 <sup>00</sup> )	<u>Iulia-Nela Anghelache Nastase</u> , Simona Moldovanu, Luminia Moraru	A new approach for extracting image features using octave band analysis

##### POSTER SESSION

## FRIDAY – 7<sup>th</sup> of June 2024

### SECTION 2

#### ADVANCED INVESTIGATION METHODS IN ENVIRONMENT AND BIOHEALTH

Chair: Simona Moldovanu

PP.2.1 (9 <sup>00</sup> -9 <sup>10</sup> )	<u>Stefanut Ciochină</u>	The use of interpolation polynomials in the approximation of functions: comparative study
PP.2.2 (9 <sup>10</sup> -9 <sup>20</sup> )	<u>Aurelia Ababii</u> , Liuba Corețchi, Antoaneta Ene	Quantification of health risk associated with radon exposure
PP.2.3 (9 <sup>20</sup> -9 <sup>30</sup> )	<u>Marcel Daniel Popa</u> , Ira-Adeline Simionov, Stefan Petrea, George Adrian Ifrim, Puiu-Lucian Georgescu, Cătălina Iticescu	The chemical profile of urban waste water from the city of Galați, in order to use it as growth medium for microalgae
PP.2.4 (9 <sup>30</sup> -9 <sup>40</sup> )	<u>Cristian Mugurel Iorga</u> , Maria Cătălina Țopa, Georgiana Ghisman, Alina Ceoromila (Cantaragiu), Mihaela Marilena Stancu	Vegetal layer restoration of contaminated sites from petroleum industry using sewage sludge
PP.2.5 (9 <sup>40</sup> -9 <sup>50</sup> )	<u>Valentina Andreea Calmuc</u> , Madalina Călmuc, Maxim Arseni, Cătălina Iticescu, Puiu-Lucian Georgescu	Detection of pharmaceuticals in fish species from the Danube River

<b>PP.2.6</b> <b>(9<sup>50</sup>-10<sup>00</sup>)</b>	<u>Madalina Calmuc</u> , Valentina Andreea Calmuc, Maxim Arseni, Adrian Roșu, Puiu-Lucian Georgescu, Catalina Iticescu	Assessment of the microplastics presence in the Lower Danube River water and sediment
<b>PP.2.7</b> <b>(10<sup>00</sup>-10<sup>10</sup>)</b>	<u>Orhan Ibram</u> , Cristina Despina, Adrian Burada, Iasemin Suliman, Mihaela-Iuliana Tudor, Maria-Cătălina Țopă, Cătălina Iticescu, Lucian Puiu Georgescu	Assessment of aquatic ecosystems in urban and reconstructed zones of the Danube Delta biosphere reserve using physico-chemical parameters and benthic macroinvertebrates
<b>PP.2.8</b> <b>(10<sup>10</sup>-10<sup>20</sup>)</b>	<u>Viorel Călinescu</u> , Cătălina Maria Țopă, Lucian Puiu Georgescu, Cătălina Iticescu	Optimization of routes based on artificial intelligence as an integrated part of the waste management system in Galati county
<b>PP.2.9</b> <b>(10<sup>20</sup>-10<sup>30</sup>)</b>	<u>Cristina (Paraschiv) Nedelcu</u> , Steluța Gosav, Mirela Praisler	Characterization of flavonoids: an explorative review

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