

Plenary Session Excellence Awards

- 1. Development of an In-House Integrated Platform for Real-Time Naval Mine Detection and Threat Forecasting in Support of NATO SeaShield 25 Operations via UAV-USV Collaboration** – stud. Iustin Moroşan and stud. Gabriel Iosif, Scientific Advisors Lecturer Elena Graţuela Robe, PhD, SR II Oana Marcu, PhD, Prof. Vasile Dobref, PhD, Romanian Naval Academy;
- 2. Analysis of the Stages of Voyage Planning in ECDIS**– stud. Raluca – Gina Popa, Scientific Advisor Lecturer Livia Rauca PhD, Romanian Naval Academy;
- 3. The Impact of Weather Phenomena on the Human Psyche** – stud. Cosmina Stăicuţ, stud. Mihai Crăciun, Lecturer Mihaela Guranda, “Henri Coanda” Air Force Academy, Brasov;
- 4. The virtual simulation of the Training Ship Mircea through 3D modelling** – stud. Robert Andrei Pasarica, Scientific Advisors SR III Alexandru Pintilie, PhD and Lecturer Elena Graţuela Robe, PhD, Romanian Naval Academy.

CADET-NAV 2025 Awards by Sections

1. Navigation and Transport

Excellence Award: (ID 319) Electromagnetic Propulsion System for Trains

Authors: stud. Ştefan-Dragoş CERCEL, stud. Paul-Leonard DOGARU, stud. Cosmin-Constantin RUSU

Scientific Advisors: Mihai POPESCU, Ciprian Ion RIZESCU

Institution: National University of Science and Technology Politehnica Bucharest

1st Prize: (ID 263) Navigation Application Using Coastal Navigation Methods

Author: stud. Mihaela-Maria BAUER

Scientific Advisor: Prof. Ion CHIORCEA, PhD

Institution: Romanian Naval Academy “Mircea cel Batran”

2nd Prize: (ID 310) Maritime Bottlenecks and Global Trade Vulnerabilities: Analyzing the Ever Given Incident and Historical Straits Blockages

Authors: stud. David-Florin RADU, Vlad-Daniel BOC

Scientific Advisor: Major Superior Instructor Gabriela NICOARĂ, PhD

Institution: "Carol I" National Defense University

3rd Prize: (ID 132) Computer-Assisted Study of Ship Geometry

Authors: stud. Alexandru-Ștefan BEREĂ

Scientific Advisor: Assoc. Prof. Dr. Eng. Mihaela-Greti MANEA

Institution: Romanian Naval Academy "Mircea cel Batran"

2. Engineering and Management

Excellence Award: (ID 308) Enhancing Naval Operational Readiness Through Intelligent Spare Parts Inventory Systems

Authors: stud. Ioana-Octaviana MĂNĂILĂ, stud. Maria IVĂNESCU

Scientific Advisor: Professor Eng, Gheorghe Samoilescu, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

1st Prize: (ID 84) Augmented Reality and Virtual Reality Software for General Military Training

Authors: stud. Bogdan TODICĂ, stud. Larisa LUPȘĂ

Scientific Advisor: Col. Laurian GHERMAN

Institution: "Henri Coandă" Air Force Academy

2nd Prize: (ID 113) Speak Little, Gain Much

Authors: stud. Claudiu-Iulian GHEORGHE, stud. Laura IORDAN

Scientific Advisor: Prof. Grecu Gheorghe, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

3rd Prize: (ID 321) "Unemployment: An Economic and Social Challenge"

Authors: stud. Ana-Maria ONOFREI, stud. Larisa UNGUREANU

Scientific Advisor: Assoc. prof. eng. Gheorghe GRECU, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

3. Military Sciences and Information

Excellence Award: (ID 86) The Ethics of Power and The Power of Ethical Leadership and Strategic Use of AI in Modern Warfare

Authors: stud. Daria-Maria BOCOCI, stud. Adrian-Daniel PALCO

Scientific Advisor: Col. Andrei IGNAT

Institution: "Alexandru Ioan Cuza" Police Academy Bucharest

1st Prize: (ID 218) Commanding the Skies: Sixth-Generation Fighters and the Future of Air Dominance

Authors: stud. Irina-Ioana ANGHEL, stud. David TĂMAȘ

Scientific Advisor: Assoc. prof. Ionică CÎRCIU, PhD

Institution: "Henri Coandă" Air Forces Academy

2nd Prize: (ID 458) Leadership in Times of Crisis: A Comparative Analysis of Authoritarian Versus Democratic Styles

Authors: stud. Bianca ALEXE, stud. Laura TĂTAR

Scientific Advisor: Col. Assoc. Prof. Alexandru BABOȘ, PhD

Institution: "Nicolae Balcescu" Land Forces Academy

3rd Prize: (ID 2) Case Study on the Adaptation of Civilian Drones for Artillery Reconnaissance

Author: stud. Claudia MAHU

Scientific Advisor: col. (r) Eugeniu MARIȚ

Institution: Military Academy "Alexandru cel Bun",

4. Electrical Engineering

Excellence Award: (ID 10) Development of a custom digital transceiver for UAV communication

Author: stud Teodor-Mihail GIURGICĂ

Scientific Advisor: Assoc. prof. Annamaria SÂRBU, PhD

Institution: Land Forces Academy "Nicolae Balcescu"

1st Prize: (ID 464) Safety Improvements of Standard Industrial Robots for Close-Proximity Operations

Authors: stud Andrei Valeriu COȘA

Scientific Advisor: Assoc. prof. Carlos-Mihai PASCAL, PhD

Institution: "Gheorghe Asachi" Technical University of Iași

2nd Prize: (ID 329) Next-Generation Modulation: Evaluating OTFS as a Replacement for OFDM

Author: stud Cornelia GALBEN

Scientific Advisor: Maj Assoc. Prof. Annamaria SÂRBU, PhD

Institution: "Nicolae Balcescu" Land Forces Academy

3rd Prize: (ID 59) The Role of Maintenance and Optimization of the Maintenance System

Author: stud Ionuț BALAN

Scientific Advisor: Prof. Gheorghe SAMOILESCU, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

5. Weapons and Communications

Excellence Award: (ID 236) Drone Hijack: Exploiting RF Vulnerabilities Through Adaptive Frequency Jamming

Authors: stud. Bogdan DOBROTA, stud. Robert-Sebastian POPA

Scientific Advisors: LCDR Assoc. prof. Ovidiu CRISTEA, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

1st Prize: (ID 294) Unmanned Naval Vehicles: Typology and Tactics

Authors: stud. Alexandru TARLAPAN, stud. Igor ZAVALSKI

Institution: Military Academy "Alexandru cel Bun"

2nd Prize: (ID 306) Communication - the key to finding the truth

Author: stud. Eduard-Gabriel BUGA

Scientific Advisor: Lecturer Irina BAKHAYA, PhD

Institution: "Al. I Cuza" Police Academy

3rd Prize: (ID 29) Telemedicine in Combat Zones: Advances in Military Healthcare

Author: stud. Iliyana YORDANOVA

Scientific Advisor: Major Konstantin DIMITROV

Institution: "Nikola Vaptsarov" Naval Academy

6. Mechanical Engineering

Excellence Award: (ID 420) Study of Synchronous and Asynchronous Magnetic Couplings in the Naval Transmission Line

Author: stud. Antonio-Gabriel SCURTU

Scientific Advisors: Lecturer eng. Vlad MOCANU, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

1st Prize: (ID 212) Virtual Simulation of the Mircea School Ship Through 3D Modeling

Author: stud. Robert Andrei PĂȘĂRICĂ

Scientific Advisors: SR3 eng. Alexandru PINTILIE, PhD, Lecturer eng. Elena ROBE, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

2nd Prize: (ID 190) 3D Modeling and CNC Machining Path Generation for A Mechanical Part. Case Study

Authors: stud. Madalin-George ANA, stud. Mircea-Georgian APOSTOL, stud. Malin-Iulian CRISU

Scientific Advisor: Eng. Doru COSOFREȚ, PhD

Institution: Romanian naval Academy "Mircea cel Batran"

3rd Prize: (ID 16) Predictive Maintenance Techniques to Reduce Fuel Consumption and Increase Efficiency in Military Operations

Authors: stud. Cristian-Valentin MURGOCI, stud. Cornelia-Maria SĂRARU

Scientific Advisor: Lieutenant Colonel Assoc. Prof. Daniela-Elena HRAB

Institution: National Defense University "Carol I" Bucharest

7. Fundamental Sciences

Excellence Award: (ID 380) Comparative Analysis of Combat Dynamics Using the Lanchester Warfare Model

Authors: stud. Valentin-Marian SĂNDULESCU

Scientific Advisor: Lecturer Bogdan MUNTEANU, PhD

Institution: "Henri Coanda" Air Force Academy

1st Prize: (ID 286) The Role of Marine Chemistry in the Development of Alternative Energy Sources

Authors: stud. Antonia Laura RISTEA, stud. Dora Adia MIHU

Scientific Advisor: Lecturer eng. Cristina- Andreea TUDOR, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

2nd Prize: (ID 295) The Role of Mathematics in Filmmaking

Authors: stud. Raluca COTORCEA, stud. Laura IORDAN

Scientific Advisor: Lecturer Eleonora RĂPEANU, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

3rd Prize: (ID 118) Hammer Juggling, Rotational Instability, and Eigenvalues

Author: stud. Iuliana HANGIU

Scientific Advisor: Assoc. prof. Anda OLTEANU, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

8. Foreign Languages

Excellence Award: (ID 283) Language Policy in the EU: Between National Identity and Integration

Authors: stud. Robert-Cristian BASARABA, stud. Mario-Alin ANTONOVICI

Scientific Advisor: Assoc. prof. Mimi-Carmina COJOCARU, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

1st Prize: (ID 484) The Power of Belief: Placebo and Nocebo in Military Environments

Authors: stud. Alecsandra Florina MAN-LUP

Scientific Advisor: Assoc. prof. Mimi-Carmina COJOCARU, PhD

Institution: "Alexandru Ioan Cuza" Police Academy

2nd Prize: (ID 160) The Role of Artificial Intelligence in Modern Learning

Authors: stud. **Denisa-Ștefania ROȘU**, stud. **Cătălin Ionuț BREZOI**

Scientific Advisor: Lecturer Mariana BOERU, PhD

Romanian Naval Academy "Mircea cel Batran"

3rd Prize: (ID 26) Paws on the Frontline

Authors: stud. **Gabriel BACTER**, stud. **Dumitru Eduard MIHALACHE**

Scientific Advisor: Assoc. Prof. Brandusa-Oana NICULESCU, PhD

Institution: "Nicolae Balcescu" Land Forces Academy