

Plenary Session Excellence Awards

1. stud. Alexandru HURMUZ - **An Analysis of SSD Radar Systems**, Scientific Advisor: Lecturer Dumitru CORDUNEANU, Romanian Naval Academy
2. stud. Traian-Marian IONEL, stud. Liviu-Constantin CĂPĂȚĂNĂ - **Cognitive Processes in Joint Military Cooperation**, Scientific Advisor: Lecturer Mihaela GURANDA, ” Henri Coandă” Air Force Academy
3. stud. Mircea-Georgian APOSTOL, stud. Robert BOCA, stud. Lucian-Cosmin CHIȚU - **Development of a Computational Model for Pressure Loss Estimation in Hydraulic Systems**, Scientific Advisor: Lecturer Doru COȘOFREȚ, Romanian Naval Academy

CADET-NAV 2026 Awards by Sections

1. Navigation and Transport

Excellence Award: (ID 514) Automated Ship Mooring System: A Conceptual Study

Authors: **stud. Andrei Constantin TUDOSE, stud. Ștefania Claudia OSANU**

Scientific Advisor: Lecturer Eng. Costel UNGUREANU, PhD

Institution: “Dunărea de Jos” University of Galati

1st Prize: (ID 400) Military Naval Navigation in GPS-Denied Environments: Techniques and Solutions

Author: **stud. Maria-Miruna CODREANU**

Scientific Advisor: Ionuț CIORARU

Institution: ” Carol I” National Defense University

2nd Prize: (ID 79) The role of Air Force and Air Traffic Control in Search and Rescue missions in the Black Sea

Author: **stud. Petruț Gabriel VĂSI**

Scientific Advisor: Captain Commander Marius TUTUNEA

Institution: "Henri Coandă" Air Force Academy of Brașov

3rd Prize: (ID 152) Improving Maritime Safety and Surveillance Through the Integration of AIS and Intelligent Monitoring Systems

Authors: **stud. Emmyly PAVEL, stud. Ariteea Maria ALBU, stud. Raul-George FLOSTOIU**

Scientific Advisor: Professor Assist. Alina-Elena ONETȚ, PhD

Institution: „Nicolae Bălcescu” Land Forces Academy, Sibiu

Special Award:

(ID 165) Navigation System Interference and GNSS Disruptions: Implications for Navigational Practices

Author: **stud. Andreea MARIN**

Scientific Advisor: Prof. Assist. Eng. Livia RAUCA, PhD

Institution: Romanian Naval Academy ”Mircea cel Bătrân”

2. Engineering and Management

Excellence Award: (ID 46) Performance Analysis of LTE Systems with Artificial Intelligence-Assisted Interpretation

Author: **stud. Anisia-Teodora FUGARU**

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

Institution: ”Nicolae Bălcescu” Land Forces Academy, Sibiu

1st Prize: (ID 406) Industrial Risk Assessment at the Petromidia Refinery through Aloha Modeling in the Context of Maritime Impact

Authors: **stud. Andrei-Cătălin CARAGEA, stud. Mihaela POPA**

Scientific Advisor: Assoc. Prof. Eng. Ion ANGHEL, PhD

Institution: “Transilvania” University of Braşov

2nd Prize: (ID 335) Trade Blockades in the Strait of Hormuz and their Economic Consequences

Author: **stud. Alexandra-Daniela CHENAC**

Scientific Advisor: Assoc. Prof. Gheorghe GRECU, PhD

Institution: Romanian Naval Academy ”Mircea cel Bătrân”

3rd Prize: (ID 147) The Impact of Electronic Commerce on Consumer Behavior

Author: **stud. Teodora-Carina DAVIDOV**

Scientific Advisor: Assoc. Prof. Eng. Gheorghe GRECU, PhD

Institution: Romanian Naval Academy ”Mircea cel Bătrân”

Special Award:

1. (ID 112) Renewable Energy Systems for Maritime Vessels Technologies and Integration in Ship Electrical Systems

Author: **stud. Ionuț-Ovidiu LUPU**

Scientific Advisor: Lt. Jg. Eng. Emanuil-Petru OVADIUC, PhD student

Institution: "Alexandru Ioan Cuza", Police Academy
2. (ID 167) The Indoor Environment and Air Quality
Authors: **stud. Alexia-Maria ZAHARIEA, stud. Bianca-Elena MIHĂILĂ**
Scientific Advisor: Assoc. Prof. Eng. Rita AVRAM, PhD
Institution: Romanian Naval Academy "Mircea cel Bătrân"

3. Military Sciences and Information

Excellence Award: (ID 18) Artificial Intelligence in Contemporary Warfare
– Aspects of Morality and Leadership

Author: **stud. Daria-Maria BOCOICI**

Scientific Advisor: Col. Andrei IGNAT

Institution: "Alexandru Ioan Cuza" Police Academy, Bucharest

1st Prize: (ID 49) When Survival Learned to Think: The Evolution of Intelligence from Antiquity to the Modern Era

Authors: **stud. A N., stud. B. S.**

Scientific Advisor: Prof. Assist. A. S., PhD

Institution: "**Mihai Viteazul**" National Intelligence Academy

2nd Prize: (ID 425) Development of an Integrated Architecture for Navigation, Control, and Multimodal Perception for Autonomous ISR Missions on an Experimental USV Platform

Authors: **stud. Matteo Constantin DAMASCHIN, stud. George-Petruț SANDU, stud. Nicolae SIMA**

Scientific Advisors: Lecturer Eng. Elena-Grațîela ROBE-VOINEA, PhD, Scientific Researcher Eng Oana MARCU, PhD

Institution: Romanian Naval Academy "Mircea cel Bătrân"

3rd Prize: (ID 494) The Case Study of AIWAT - how AI Systems Can Practically Support the Staff of Military Units

Authors: **stud. Korneliusz SAMOL, stud. Michalina MOSZYŃSKA**

Institution: Military University of Technology, gen. Sylwestra Kaliskiego

Special Award:

(ID 109) Biomimicry in Military Tech

Author: **stud. Desislava MUSINSKA**

Scientific Advisor: Associate Professor Veselka RADEVA

Institution: "Nikola Vaptsarov" Naval Academy, Bulgaria

4. Electrical Engineering

Excellence Award: (ID 107) Autonomus Mechatronic System: Solar Tracker and Smart Security Barrier

Authors: **stud. Crinu Marian BUSIOC, stud. Ioana Ana-Maria CONTOR**

Scientific Advisor: Lecturer Eng. Laura Mihaela LELUȚIU, PhD

Institution: Transilvania University of Brasov

1st Prize: (ID 442) Design and Implementation of a Fully Autonomous Mini Quadcopter with Vision-Based Object Tracking.

Authors: **stud Darius GAVRILOAE, stud. Ciprian MĂRGINEANU**

Scientific Advisor: Prof. Gheorghe SAMOILESCU, PhD

Institution: Romanian Naval Academy "Mircea cel Bătrân"

2nd Prize: (ID 42) Real-Time Electromagnetic Spectrum Monitoring using YOLO Architectures for Radio Signal Classification

Author: **stud Ștefan PAPA**

Scientific Advisors: cpt. Mirela ȘORECĂU, cpt. Emil ȘORECĂU

Institution: "Nicolae Bălcescu" Land Forces Academy

3rd Prize: (ID 80) Soil Moisture Measurement System

Authors: **stud David-Marian ANTON, stud. Pavel Daniel VLASCEANU**

Scientific Advisor: Assoc. Prof. Eng. G. BUCUR, PhD

Institution: University of Oil and Gas of Ploiești

Special Award:

1. (ID 177) Smarter Temperature Control

Author: **stud Laurențiu Constantin PISĂU**

Scientific Advisor: Lecturer Eng. Laura Mihaela LELUTIU, PhD

Institution: Transilvania University of Brașov

2. (ID 234) The Silent Listener: Optical Audio Reconstruction via Photodiode and MATLAB-Based Filtering

Author: **stud Robert CIOBU**

Scientific Advisor: Annamaria SÂRBU, PhD

Institution: "Nicolae Bălcescu" Land Forces Academy

3. (ID 407) Impact of AI-Driven Real-Time Optimization of Multi-Source Renewable Energy Systems: Solar, Wind, and Wave Energy Harvesting

Authors: **stud. Dragoș-Constantin TOMA, stud. Stelian ALEXANDRU, stud. Cristo CARACOTA**

Scientific Advisor: Lecturer Eduard DRAGOMIR, PhD

Institution: Romanian Naval Academy "Mircea cel Bătrân"

5. Weapons and Communications

Excellence Award: (ID 505) V-M.O.X. Guided Bomb

Authors: **stud. Brian-Adrian ANDREA, stud. Ștefan BOTEZAN, stud. Ingrid-Maria BUNESCU, stud. Ștefan Andrei DULEA**

Scientific Advisor: Laviniu BOJOR

Institution: "Nicolae Bălcescu" Land Forces Academy

1st Prize: (ID 10) Impact of Information Latency on Guidance Performance in Hit-to-Kill Weapon Systems

Authors: **stud. Andreea-Cătălina ILIE, stud. Andreea-Alexandra VLAD**

Scientific Advisor: Lt. Col. Marian-Cristian ENE, Senior Instructor

Institution: "Henri Coandă" Air Force Academy of Brașov

2nd Prize: (ID 457) Advanced Fiber-Optic Data Links for UUV Operations: Secure Transmission and Tactical Intelligence, Surveillance, and Reconnaissance.

Author: **stud. Mihail Alexandru DIGĂ**

Scientific Advisor: Lieutenant Eng. Emanuil OVADIUC, PhD student

Institution: "Alexandru Ioan Cuza" Police Academy

3rd Prize: (ID 50) Greek Naval Warfare: Weapons, Communication, and Tactics in the Greco-Persian and Peloponnesian Wars

Authors: **stud. A.C., stud. A. D.**

Scientific Advisor: Assoc. Prof. C. T., PhD

Institution: "**Mihai Viteazul**" **National Intelligence Academy**

6. Mechanical Engineering

Excellence Award:

(ID 31) Compressed Air Installation on Board an LNG Carrier Vessel

Author: **stud. Bogdan-Nicușor AFTINICI**

Scientific Advisor: Assoc. Prof. Eng. Florin POSTOLACHE, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

(ID 60) Design and Operation of the Propulsion System on an LNG CARRIER

Author: **stud. Bogdan-Andrei DINȚICĂ**

Scientific Advisor: Assoc. Prof. Eng. Florin POSTOLACHE, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

(ID 72) Design and Operation of the Steam Generating Plant on an LNG Carrier

Author: **stud. Viorel CHIHAIA**

Scientific Advisor: Assoc. Prof. Eng. Florin POSTOLACHE, PhD

Institution: Romanian Naval Academy "Mircea cel Batran"

1st Prize: (ID 516) Design and 3D printing of a two-stage gearbox and shaft line in accordance with DNV rules

Authors: **stud. Marian TĂNASE, stud. Robert ILIESCU, stud. Adelina ȘTEFAN, stud. Henrietta HAJDU, stud. Vlad NEGRAU, stud. Margareta ROȘCA**

Scientific Advisors: Lecturer Alina MODIGA, PhD, Prof. Assist. Paul PASCU, PhD Candidate

Institution: "Dunărea de Jos" University of Galati

2nd Prize: (ID 166) Systems for Detecting, Locating and Extinguishing Fire Outbreaks are Being Developed. The Aim is to Make Them Compatible with Unmanned Aerial Vehicles.

Authors: **stud. Paulina STACHNIO, stud. Paula BIEN, stud. Michal KOZUCHOWSKI, stud. Karolina PIELA, stud. Jakub MICHALSKI**

Scientific Advisor: DSc Barbara NASILOWSKA

Institution: Military University of Technology, gen. S. Kaliskiego Warsaw, Poland

3rd Prize: (ID 510) Aerodynamic Analysis of the Aero-naut Triple Neo Speed Model

Author: **stud. Ionuț-Riccardo VASILE**

Scientific Advisor: Assoc. Prof. Vasile PRISACARIU, PhD

Institution: "Henri Coandă" Air Force Academy, Brașov

7. Fundamental Sciences

Excellence Award: (ID 195) Development of a New Sorption Coating for SPME Methods used in the Analysis of Toxic and Hazardous Compounds.

Authors: **stud. Dawid CIS, stud. Bogumila PRZYBYLA**

Scientific Advisor: Doc. Eng. Barbara NASILOWSKA

Institution: Biophotonics Student Research Group, Institute of Optoelectronics, Military University of Technology, gen. S. Kaliskiego 2, 00-908 Warsaw, Poland

1st Prize: (ID 243) On the Comparative Study of Combat Scenarios for the Morse-Kimball Mathematical Model

Author: **stud. Mihai-Cristian CRUCERU**

Scientific Advisor: Lecturer Bogdan MUNTEANU, PhD

Institution: "Henri Coandă" Air Force Academy

2nd Prize: (ID 200) New Methods for Determining Harmful Compounds in Explosives the SERS Method

Authors: **stud. Alexia-Maria ZAHARIEA, stud. Bianca-Elena MIHĂILĂ**

Scientific Advisor: Lecturer Eng. Chim. Cristina-Andreea TUDOR

Institution: Romanian Naval Academy "Mircea cel Bătrân"

3rd Prize: (ID 473) Comparison of Numerical Integration Methods

Author: **stud. Bogdana MOISE**

Scientific Advisor: Assoc. Prof. Eleonora RAPEANU, PhD

Institution: Romanian Naval Academy "Mircea cel Bătrân"

Special Award:

1. (ID 235) Uranium

Authors: **stud. Andrada Ștefania CRĂCIUN, stud. Rareș Ioan BRÎNZEĂ**

Scientific Advisors: Lecturer Adrian-Ioan STOIAN; Lecturer Alina ONEȚ

Institution: "Nicolae Bălcescu" Land Forces Academy, Sibiu

2. (ID 276) A Group of Pythagorean Triples Using the Inradius

Authors: **stud. Isabella Andreea ȘTEFAN, stud. Stefano AFLOAREI, stud. Cosmina Elena CONSTANTIN**

Scientific Advisor: Assoc. Prof. Anda OLTEANU, PhD

Institution: Romanian Naval Academy "Mircea cel Bătrân"

3. (ID 372) The Connection Between Fibonacci Spiral and the Banach Fixed Point Theorem

Author: **stud. Andreea MARIN**

Scientific Advisor: Professor habil. Dan LASCU, PhD

Institution: Romanian Naval Academy "Mircea cel Bătrân"

8. Foreign Languages

Excellence Award: (ID 222) Memorable Languages and their Specific Use

Authors: **stud. Ioana-Mădălina SCÎRTOCEA, stud. Ianys-Cătălin POPESCU**

Scientific Advisor: Assist. Prof. Alina Elena ONEȚ, PhD

Institution: Nicolae Bălcescu" Land Forces Academy

1st Prize: (ID 334) Navigation and Cetaceans, Vaquita – The Most Endangered Porpoise in The World

Authors: **stud. Ayan-Arun IDRIS, stud. Andreea MARIN**

Scientific Advisor: Lecturer Camelia ALIBEC, PhD

Institution: Romanian Naval Academy "Mircea cel Bătrân"

2nd Prize: (ID 38) Australia: From Prison Colony to Modern Nation

Author: **stud. Adi ROȘU**

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

Institution: "Nicolae Balcescu" Land Forces Academy of Sibiu

3rd Prize: (ID 68) Military Teasing and Humor in Language

Authors: **stud. Elena-Beatrice MACHIDON, stud. Denis-Mario LUPAȘCU**

Scientific Advisor: Lecturer Tania MORARU, PhD

Institution: "Henri Coandă" Air Force Academy, Brașov