NTNU

Norwegian University of Science and Technology

Romanian - Norwegian Strategic Cooperation in Maritime Higher Education for enhancement human capital and knowledge base in field of marine intelligent technologies

M1. Workshop on "Cooperation and partnerships between education and labour market on marine intelligent technologies"

NTNU

MARINTECH

NTNU in Ålesund

27.09.2022

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Schedule

Time	Content
12:15 – 12:30	Guoyuan Li: Project introduction
12:30 – 13:10	Guoyuan Li: introduce NTNU IHB intelligent system lab researches
13:10 – 13:50	Qin Liang: DNV AS R&D + Q&A
13:50 – 14:30	Motoyasu Kanazawa: PhD research topic (ship motion prediction)
14:30 – 14:35	Summary & closure

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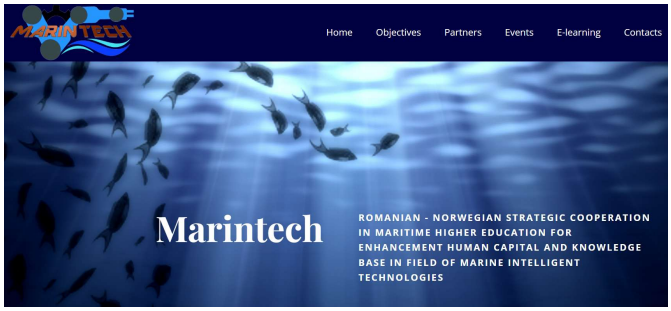
Project information

- Project start date: Sep 2021
- Project end date: Aug 2023
- Applicant institution: Academia Navală „ Mircea cel Bătrân” Constanța
- Partner: Norges teknisk-naturvitenskapelige universitet / NTNU Ålesund
- Total budget: 162.393,00 EUR



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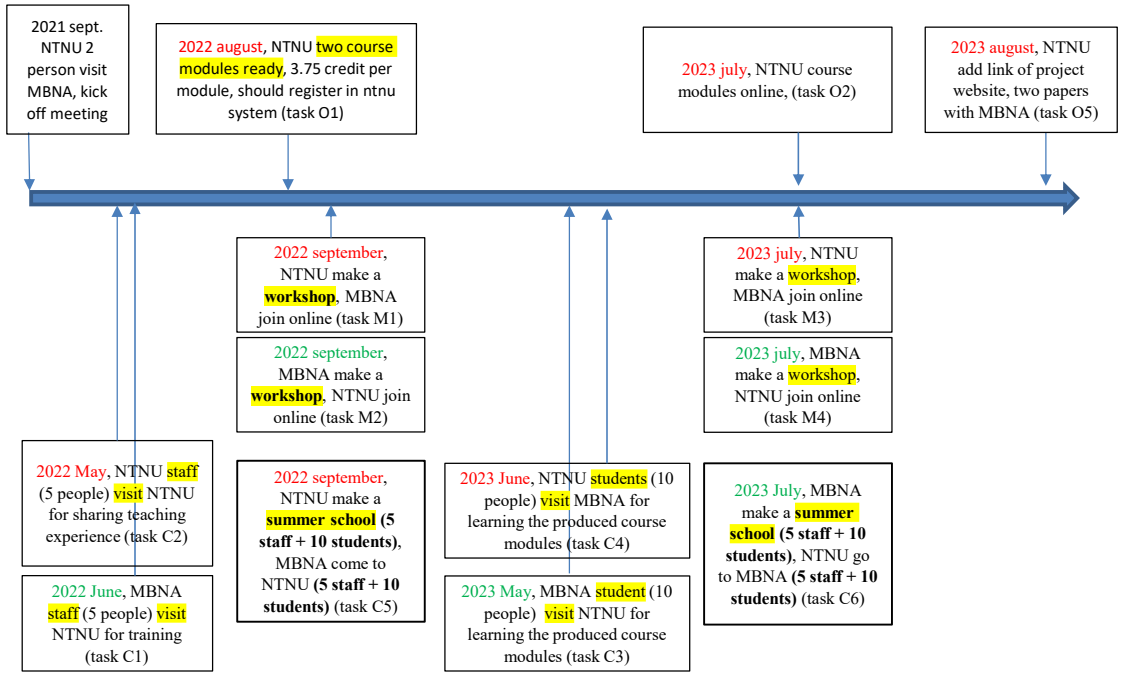

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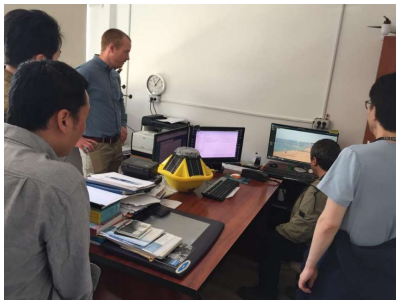
Visits to MBNA



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Visits to NTNU

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Project status

- Course preparation
  - Practical applications in marine robotics
  - Co-simulation introduction
  - Co-simulation case studies on Gunnerus ship

1. Digital twin concept and applications
   - 1.1 Digital twin concept and function
   - 1.2 Digital-twin systems in NTNU alesund
2. Fundamental of digital-twin system
   - 2.1 The fundamental of digital-twin system
   - 2.2 Co-simulation platform "Vico" in NTNU
3. Co-simulation for RV Gunnerus ship
   - 3.1 Co-simulation using Vico
   - 3.2 Co-simulation for RV Gunnerus
4. Ship motion prediction in Vico
   - 4.1 Ship motion prediction introduction
   - 4.2 Ship motion prediction using Vico
5. Summary
   - Summary & Questionnaire

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Project status

- Course preparation
  - Machine learning applications in maritime industry
  - Neural networks
  - Deep learning
  - Reinfocement learning
  - Machine learning case studies for ship control

1. AI introduction
   - 1. AI introduction
2. Neural networks introduction
   - 2. Neural networks introduction
3. Neural network in Scikit-learn
   - 3. Neural network in Scikit-learn
4. Neuron network for ship control
   - 4. Neuron network for ship control

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Project status

- Course preparation
  - Applications of intelligent technologies in **bathymetry** and **oceanography**

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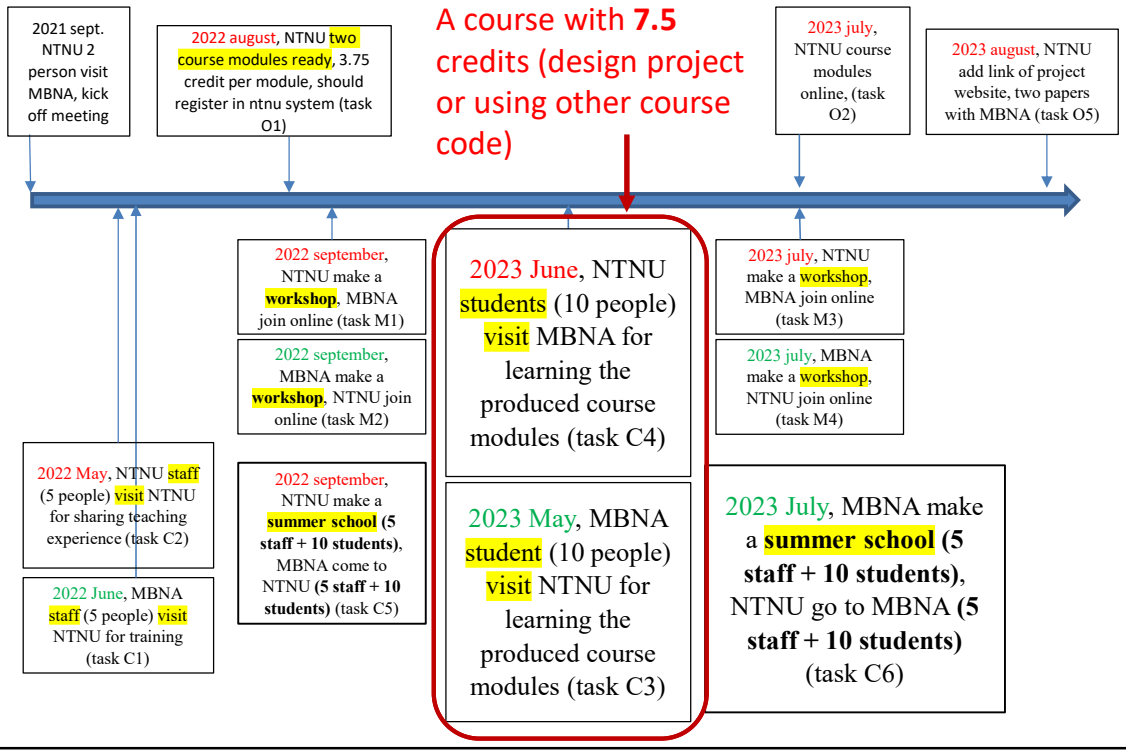

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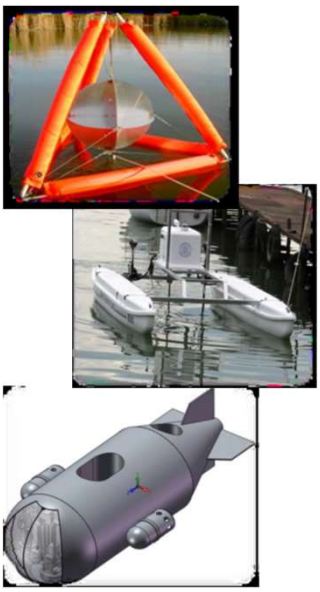
Visits to MBNA, at Constanta, Romania



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Visits to MBNA, at Constanta, Romania

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