




Nikola Vaptsarov Naval Academy - Varna



**RESEARCH AND
EDUCATIONAL SUPPORT
OF THE DEVELOPMENT OF
THE MARITIME INDUSTRY**

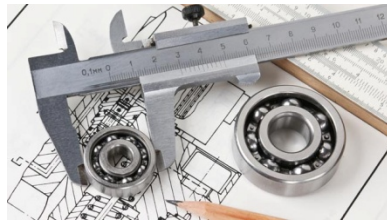
Captain (N) Professor D Sc Boyan
Mednikarov

CDR Nikola Stoyanov, Ph D



Topics:

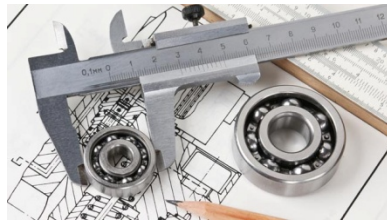
- Main areas for research;
- Goal of research;
- Main tasks;
- Perspective research;
- Applied science research and development activities;





Topics:

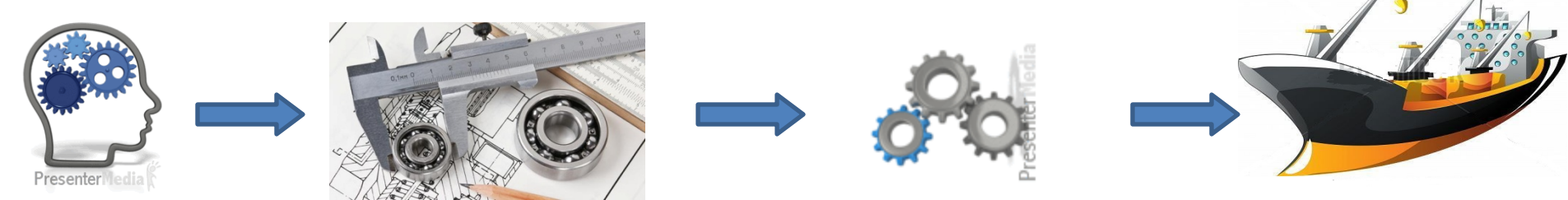
- Development of infrastructure for research, testing and experiments;
- Demonstration Of Technology And Perspective Concepts.





Main areas for research:

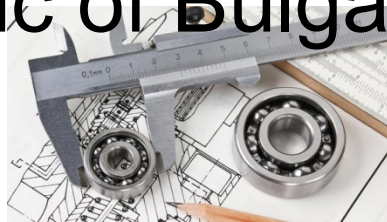
- Naval sciences, armaments and technical equipment;
- Maritime security and safety;
- Navigation;
- Marine technology;
- Maritime education and qualification activities.





Main goal:

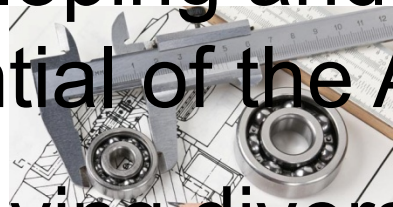
the effective utilization of the potential of the academic personnel of the Naval Academy, its doctoral degree students, graduate students and military cadets for intensifying and expanding the research at the Academy in support of its educational goals and the academic support to the Navy, the shipping and the maritime industry of the Republic of Bulgaria.





Main tasks:

- Integrating the educational process and the research activities in a unified process of education and research;
- Implementing R&D priorities in compliance with the policy and the priorities of the Ministry of Defence, NATO and Bulgaria's maritime sector;
- Developing and renewing the scientific potential of the Academy;



• Achieving diversification of the sources of



PERSPECTIVE RESEARCH:

- Concepts and perspective program for R&D at the Naval Academy for the benefit of the maritime industry and the Navy for the 2008 – 2015 period.
- Concept for the protection of the maritime sovereignty of Bulgaria – the project is on a national level and it was completed mainly with the active participation of specialists from the Academy.





APPLIED SCIENCE RESEARCH AND

DEVELOPMENT ACTIVITIES:

- An integrated system of surveillance and monitoring the environment for the purposes of the security of elements from the critical maritime infrastructure;
- Developing high technology infrastructure for integrated research of the sea bottom;
- Adaptive sensor network for underwater surveillance





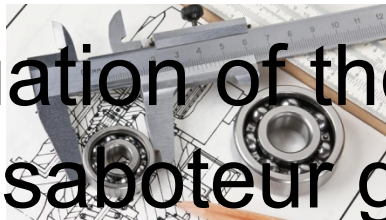
APPLIED SCIENCE RESEARCH AND

DEVELOPMENT ACTIVITIES:

- Developing high technology structure for virtual and physical modeling for scientific experimentation for the maritime industry;
- Analysis of the navigational risk for the marine facilities for the unloading of tankers with regard to the project for the development of the Burgas – Alexandroupoli pipeline;



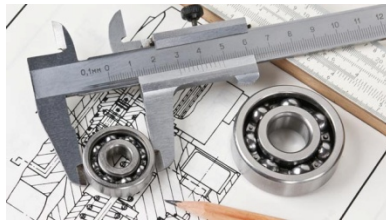
Evaluation of the effectiveness of anti-diver saboteur grenades;





APPLIED SCIENCE RESEARCH AND DEVELOPMENT ACTIVITIES:

- Studying the effect of a wind farm on the operation of a Meteor 306 SA radar for meteorological support.





DEVELOPMENT OF INFRASTRUCTURE FOR

RESEARCH, TESTING AND EXPERIMENTS

- Establishment of Center for Transfer of Marine Technology;
- Development of the Research Laboratory of Hydro acoustics;
- Reconstruction and Development Laboratory on aerodynamic research;
- Laboratory for computer simulation of the state of the ship in emergency conditions;

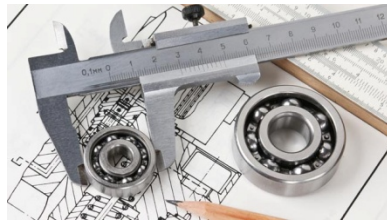




DEVELOPMENT OF INFRASTRUCTURE FOR

RESEARCH, TESTING AND EXPERIMENTS

- Information and Advisory Centre for Protection of Industrial Property - "IP-Point";
- Comprehensive regional scientific marine research infrastructure named Distributed Infrastructure for Sustainable Development and Management of Risk Marine Research;





Modules:

- Research Center for Maritime Safety and Security;
- Center for the study survivability of the ship and crew behavior in extreme situations;
- Laboratory for complex experimental research on ships and marine structures;

• Marine research boat.

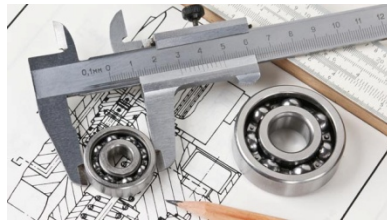




DEMONSTRATION OF TECHNOLOGY AND

TECHNOLOGY AND

- ~~HEMUS 2004, 2006, 2008, 2010, 2012~~
PERSPECTIVE CONCEPTS:
and the related international research





Thank you for your attention

