



Program

The 9th International Scientific and Technical Conference NATCON

„Naval technologies for defence and security”

April 20-22, 2021

Day 1, Tuesday, April 20, 2021	
PLENARY SESSION	
10:00-10:10	Ceremonial opening of the Conference – kadm. prof. dr hab. Tomasz Szubrycht (AMW), Marcin Wiśniewski (OBR CTM S.A.), Andrzej Bojanowski (MTG S.A.)
10:15-10:30	Commanding a team of strike ships in the national context, the Miecznik Coastal Defense Ship - the national and allied dimension – kmdr Grzegorz MUCHA (Navy Inspectorate)
10:35-10:50	New capabilities of the Polish Navy facing dynamically changing environment in the Area of Responsibility – wiceadmiral Krzysztof Jaworski (COM-DKM)
10:50-11:00	break
11:00-12:00	Debate: The Miecznik (swordish) programme, an initiative brought about as a consequence of the Strategic Concept for Maritime Security RP strategy iż a unique opportunity for a modern, innovative deterrent weapons az well as the Polish shipyard industry and research institutes – Editor-in-chief of the New Military Technique – Mariusz Cielma, participants: MON, BBN, IMW, COM-DKM, IU, AMW, RSB, PGZ, CTM
12:00-12:10	break
SESSION 1 - NAVAL COMBAT SYSTEMS	
12:10-12:30	Autonomous Maritime Systems - naval warfare applications – kmdr dr inż. Rafał Miętkiewicz (AMW)
12:35-12:55	SCOT - a software platform for command systems dedicated for new build Polish Navy ships – Jarosław Tuskowski (OBR CTM S.A.)
13:00-13:20	Navigation Systems Support for major naval combatant systems – Kevin Overmoyer, Filip Papierz (Enamor Sp. z o.o.)
13:25-13:45	Leonardo Naval Capabilities – Marco Lupo (Leonardo)
13:45-14:15	break
SESSION 2 - MARITIME SECURITY SYSTEM	
14:15-14:35	What should be the directions of development of maritime critical infrastructure protection systems – dr inż. Przemysław Pozański, dr inż. Rafał Namiotko (OBR CTM S.A.)
14:40-15:00	Management systems as an element of security – Dariusz Hejmej, (PRS S.A.)
15:05-15:25	Defence industry as an operational capabilities provider – Mirosław Ogrodniczuk (PGZ SW)
15:25-15:35	break



SESSION 3 - NAVAL COMBAT SYSTEMS	
15:35-15:55	Unmanned aerial platforms in the NATO Ground Surveillance System – dr hab. Stanisław Zarychta (AMW)
16:00-16:20	Analysis of the possibility of destroying hypersonic objects threatening objects of strategic importance and satellites on LEO using an aircraft / rocket system – dr inż. Paweł Dobrzyński, dr inż. Bogdan Machowski, prof. dr hab. inż. Aleksander Olejnik
16:25-16:45	Automatic Detection Of Moving Underwater Objects – Jakub Pagórski, dr hab. inż. Jerzy Garus, prof. AMW (AMW)
16:50-17:10	Analysis of the possibility of using the WICHER anti-aircraft missile on ships of the CZAPLA and MIECZNIK class and in the defense of the Polish coast – dr inż. Paweł Dobrzyński, dr inż. Bogdan Machowski, Roman Musiał
17:10-17:15	CLOSING OF THE FIRST DAY OF THE CONFERENCE
19:00-21:30	Integration evening for BME fair and Conference participants SALMON EVENING

Day 2, Wednesday, April 21, 2021	
SESSION 4 - NAVAL COMBAT SYSTEMS	
09:00-09:20	Leonardo Manned Helicopters: AW159 / AW101 – Louis Wilson-Chalon (Leonardo Helicopters)
09:25-09:45	The concept of a complex naval reconnaissance and strike system with self-defense modules of extended range – dr inż. Paweł Dobrzyński, Paweł Kalisz, dr inż. Bogdan Machowski
09:50-10:10	The capabilities, systems and equipment of Babcock International's Arrowhead 140 general purpose frigate – Jonathan Walton (Babcock International)
10:15:10-35	Medium Caliber Naval Gun System SEA SNAKE – Olaf Mittelstädt (RHEINMETALL WAFFE MUNITION GmbH)
10:40-11:00	Physical scale modelling of degaussing system on vessels with ferromagnetic hull – Kamil Itrych, Marta Czarnowska, Franciszek Szarkowski (OBR CTM S.A.)
11:00-11:10	break
11:10-12:10	Debate: Support for the Polish industry in providing the Navy with a new coastal defense vessel – programme „Miecznik” Moderator: Editor of „Polska Zbrojna” – Krzysztof Wilewski
12:10-12:20	break
SESSION 5 - CYBERSECURITY ON SEA AND NEW TECHNOLOGIES	
12:20-12:40	Cybersecurity of seaports – dr hab. Jerzy Kosiński (AMW)
12:45-13:05	Maritime cybersecurity analysis – Robert Janczewski (AMW)
13:10-13:30	Stream processing for big maritime data – dr inż. Krzysztof Węcel, dr inż. Milena Stróżyna, Marcin Szmydt, prof. dr hab. inż. Witold Abramowicz (UE w Poznaniu)



13:35-13:55	Intermediate GNSS spoofing and a method of its early detection – dr inż. Jarosław Magiera (Politechnika Gdańska)
14:00-14:20	Challenges related to cybersecurity of maritime infrastructure facilities – Jakub Syta (AMW)
14:20-14:30	break
SESSION 6 - MARITIME SECURITY SYSTEM	
14:30-14:50	Design of a towed submersible electromagnetic sweep – Paweł Gdaniec, Paweł Krygier (OBR CTM S.A.)
14:55-15:15	Multi-Influence Signature: Modern Signal Processing Techniques to increase the Detectability and Classification of Ships – F. Javier Rodrigo-Saura (SAES Electronica Submarina)
15:20-15:40	Higher Redundancy Distribution System for Vessels Needing to Maintain Position – Simon Riddle (Wartsila Marine Solutions / Navy)
15:40-15:50	break
SESSION 7 - MARITIME SECURITY SYSTEM	
15:50-16:10	Application of Augmented Reality technology in the maritime domain on the example of the OCEAN 2020 project – Marta Zapart, Anna Bartnik (OBR CTM S.A.)
16:15-16:35	Smuggling drugs and psychotropic substances in containerized shipments to European Union seaports on the example of cocaine – Mariusz Majewski (Pomorska Izba Celno - Skarbowa w Gdyni)
15:40-17:00	Hazardous substance detection in water environments using neutron beams: the SABAT Project – dr Michał Silarski (UJ)
17:00-17:05	CLOSING OF THE SECOND DAY OF THE CONFERENCE

Day 3, Thursday, April 22, 2021	
SESSION 8 - MARITIME SECURITY SYSTEM	
09:00-09:20	Polish Navy - as a tool of state policy – dr Łukasz Wszyński (AMW)
09:25-09:45	Danish, Finnish and Norwegian shipbuilding programmes experience with the domestic industry participation – dr hab. Grzegorz Rdzanek, prof. UJK (UJK)
09:50-10:10	From a corvette to a frigate – Janusz Kapuściński (BTT Systems)
10:15-10:35	Use of the seaport in Ustka in the aspect of technical modernization of naval forces – kmdr dr Bohdan Pac (Polskie Lobby Przemysłowe)
10:40-11:10	Discussion with participation prof. ucz. dr hab. Paweł Soroka – Polish Industrial Lobby Maciej Janiak – Chairman of the Shipbuilding Council
11:10-11:20	break
SESSION 9 - NAVAL COMBAT SYSTEMS	
11:20-11:40	Unmanned Helicopter System: AWHero rotary UAS – Louis Wilson-Chalon (Leonardo Helicopters)
11:45-12:05	Application of Naval Technology – Tomasz Zakrzewski (Raytheo Polska sp. z o.o.)
12:10-12:30	Relationship between basic physiochemical properties of seawater and magnitude of underwater electric field – Michał Narożny (OBR CTM S.A.)



12:30-13:00	break
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SESSION 10 - APPLICATION OF NAVAL TECHNOLOGY/CYBERSECURITY	
13:00-13:20	The RKP-8100 radio set in the Wisła, Narew and Pilica programs – Paweł Domaros, Adam Dobkowski, Marcin Rymon Lipiński (OBR CTM S.A.)
13:25-13:45	The LOOK container system – Katarzyna Burnat, Wiktor Bartłomiejczyk (Zakłady Mechaniczne „TARNÓW” S.A.)
13:50-14:10	Innovation tools and methods of social engineering in hacker attacks and cyberbullying – nadkom. Konrad Kordalewski, kpr. Rez. Jakub Kurzawa (WSPol)
14:15-14:35	The use of AI for psychological assessment in the recruitment of candidates for service in the Navy – Barbara Gipsiak (WSPol)
14:35-14:40	CLOSING OF THE CONFERENCE