

**Tuesday, June 13th, 2023**

08:00 REGISTRATION & WELCOME

PLENARY ROOM

09:00 **OPENING PLENARY SESSION**  
Louis LE PORTZ, 3AF President  
Emmanuel DELORME, MBDA - Yannick DEVOUASSOUX, ArianeGroup - Luc DINI, Thales Group, Conference Co-Chairs

PLENARY SESSIONS

GOVERNMENTS VIEWS 1 - Moderator : Luc DINI

09:30 General (Armament) Bertrand LE MEUR, French Ministry for Armed Forces, FR

09:50 Radoslava STEFANOVA, Head, Integrated Air and Missile Defence Section, NATO

10:10 William R. SHOBERT, Deputy Director for Emerging Security Challenges, US State Dept., USA

10:30 COFFEE BREAK

GOVERNMENTS VIEWS 2 - Moderator : Yannick DEVOUASSOUX

11:00 Brigadier General Volker SAMANNS, Ground Based Forces, German Airforce, GE

11:20 Colonel (Res.) Moshe PATEL, Director of Israel Missile Defense Organization, MOD, IL

11:40 Anthony WRAIGHT, Missile Defence Center, UK

GOVERNMENTS VIEWS 3 - Moderator : Emmanuel DELORME

12:00 Colonel Andrea TRUPPO, Attaché and Italian National Armament Director Representative to EU and EDA PoC, IT

12:20 Frédéric LAMARQUE, General Delegation for Armaments, FR

12:40 NETWORKING LUNCH

INDUSTRIALS VIEWS 1 - Moderator : Emily Rose HICKEY

14:30 Dr. Philippe ROUDIER, MBDA, FR

14:50 Jean-Philippe HARDANGE, VP Strategy, Integrated Airspace Protection Systems, Thales Land and Air Systems (Thales-LAS)

15:10 Yannick DEVOUASSOUX, Bid and Program Director ArianeGroup, FR

15:30 COFFEE BREAK

INDUSTRIALS VIEWS 2 - Moderator : Emily Rose HICKEY

16:00 Lars KROGH VAMMEN, Director of Business Development, WEIBEL, DK

16:20 Brigadier General (Res.) Eytan ESHEL, VP for R&D, Israel Aerospace Industries, IL

16:40 Philippe LE CLÉACH, Vice President Systems of Systems and Collaborative Combat, Naval Group, FR

17:00 **End of Sessions**

19:30 **GALA DINNER : PALACIO DA BOLSA**

## Wednesday, June 14th, 2023

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	SESSION 1 Chairperson : E. DELORME, MBDA, FR	SESSION 2 Chairperson : Y. DEVOUASSOUX, ArianeGroup, FR	SESSION 3 Chairperson : D. ZETZMANN, IABG, DE	SESSION 4 Chairperson : L. DINI, Thales Air Systems, FR
	International & European Policy and Cooperation (including NATO, BMD, NATO IAMD, EU and others)	Modelling and simulation - 1	Interceptors & Weapons Systems and Technologies - 1	Sensor systems & Sensor networks, including Space - 1
08:30	21 Lessons learned from the NATO BMD Programme regarding Multi Domain Operations  Laurent SMITH, NATO Communications and Information Agency	80 Analysis of Future Defense Architecture and Military Capability through Modelling and Simulation : the example of Ballistic Missile Defense  Guillaume LEMIERE, French MoD	97 Eurosam contribution in naval systems  Eric DELEPOULLE, Eurosam	15 On the Spectrum between Protein Folding and Radar Systems – Confronting Hypersonic Missile challenges  Haim AVIRAM, ELTA
08:50	125 Modular GBAD in NATO  Claudio PONZI, MBDA Italy	132 Simulation, a strong enabler for assessing & optimizing defense architectures into a multi domain (Space, Air, Land & Sea) context  Fatima IERVOLINO-KAJOUT, Hugo PAUGAM, ArianeGroup	63 ASTER, the European sovereign IAMD Capability  Pierre ROTY, MBDA FRANCE	101 Impact of the complex European Terrain on future VSHORAD & C-UAS Radar system designs for the maneuvering forces  André HANEWINKEL, Hensoldt Sensors GmbH
09:10	113 The implications of an EU Space Strategy for Security and Defence on European Space Governance  Giulia PAVESI, KU Leuven	73 Deterministic air defence simulation systems: Simulation Analysis Laboratory  Gokhan BIRCAN, Roketsan Inc.	145 Concept Study of a 5 inch Gun Launched Air & Missile Defence Interceptor  Wouter HALSWIJK, TNO	94 The Naval Cooperative Surveillance Capability  Aline NAVETTI-CAMPILLO, DGA - Antoine BOUQUET, Naval Group
09:30	66 From a Strategic Perspective: Aerial Defense in the Middle East - New Opportunities  Gil DOLOV, Israel Defense Force	26 Using Semi-empirical models for threat typing during Interception  Elie LEVY, Linkcom Telecom		52 Leonardo Labs advancements in the application of AI to the processing of radar signals and data  Pasquale FERRARA, Leonardo Spa
INTERSESSION (10')				
	SESSION 5 Chairperson : R. LEIBOVICH, RAFAEL, IL	SESSION 6 Chairperson : S. INSALACO, Leidos, US	SESSION 7 Chairperson : C. PONZI, MBDA Italy	SESSION 8 Chairperson : L. KROGH VAMMEN, Weibel, DK
	Defence Architectures & Integration of Air and Missile Defence - 1	Modelling and simulation - 2	Interceptors & Weapons Systems and Technologies - 2	Sensor systems & Sensor networks, including Space - 2
10:00	10 System of Systems IAMD Architectures  Michael HAMER, Parsons	65 An Overview of Digital Engineering (DE) and How it is Applied to Integrated Air and Missile Defense (IAMD)  Stephen THOMAS, Parsons	104 Eurosam and SAMP/T NG : key assets for a European Air Defence Industrial Base  Philippe CHOPIN, Eurosam	49 Ground Fire, an evolutionary new Multi Function Radar  Nico DE BRUIJN, Thales
10:20	11 Smart Launcher – Providing the future today  Eili BEHAR, IAI	41 New challenging approach in training methods  Avraham NAVOT, Elbit Systems	55 Sea Viper – An appropriate response to the emerging threats  Stew KILBY, MBDA	144 European demonstration of Plot Level Data and Exchange Fusion (PLDEF)  Martien JOOSTEN, Thales Netherlands
10:40	118 Modifying Operations Of Aegis Ashore in Europe  Roy BALACONIS, Balaconis Consulting	134 Avoiding traps of shortcut learning when using deep learning techniques in military intelligence and missile early warning  Igor GIRARD-CARRABIN, ArianeGroup	67 A discussion regarding the importance of an ENDO-EXO defense layer in view of the emerging threat  Leopold WENGER, IAI	37 Advanced Multi-Mission Tactical Radars - Game-changing building blocks  Guy AVITSUR, DRS RADA TECHNOLOGIES
11:00	COFFEE BREAK			

## Wednesday, June 14th, 2023

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	SESSION 9 Chairperson : A. HERMETZ, WALES, IL	SESSION 10 Chairperson : S. INSALACO, Leidos, US	SESSION 11 Chairperson : S. THOMAS, Parsons, US	SESSION 12 Chairperson : L. KROGH VAMMEN, Weibel, DK
	Defence Architectures & Integration of Air and Missile Defence - 2	Modelling and simulation - 3	Interceptors & Weapons Systems and Technologies - 3	Sensor systems & Sensor networks, including Space - 3
11:20	82 RAFAEL's Open Architecture Concept in an Evolving Air Defense Arena  Gal. Shachar SHOHAT, Rafael	86 Missile Trajectory Optimization Considerations  Ephraim BASHAN, EZB	20 Requirements for Intercepting a Hypersonic Threat by the Lower Tier  Ofri BECKER, WALES, Ltd.	43 Future Sensor System Network and SoS (System of Systems) Engineering for IAMD  Vincent ARNOULD, HENSOLDT Sensors GmbH
11:40	35 The Russia-Ukraine IAMD Conflict Laboratory: Lessons for the future IAMD operational environment  Todd SCHMIDT, PH.D., U.S. Army	81 Data visualization for complex and multi-layered analysis  Yoav COHEN, IAI	152 Thales thoughts on countering Hypersonic Operational Threat  Nico DE BRUIJN, Thales LAS France, France	47 Very Long Range Radar (TLP): Overview and Experimentation for Early Warning  Ronan MOULINET, THALES LAS FRANCE
12:00	9 Determination of Jammer Allocation for Air Defense Systems  Yarkin SARGIN, Aselsan Inc.	70 Performance Analysis of a Close In Weapon System Against Multiple Threats Using Partially Observable Markov Decision Processes.  Tom VANCAEYZEELE, Belgian Royal Military Academy	78 Intercepting hypersonic threat : facts and way-ahead  Emmanuel DELORME, MBDA France	98 SMART-L MM, Diagnostics (Built-In Test)  Gilles PREMEL-CABIC, THALES NERDERLAND BV
12:20	136 Countering Advanced Threats with Advanced Integration  Matthew FULCHINO, Raytheon	111 Challenges in expanding Defended Area Analyses from Ballistic Missiles to Hypersonic Threats  Daniel PAUKNER, IABG mbH	51 User Friendly Gripstock Design for a MANPAD  Tuba KAYA, Roketsan Inc.	122 Classifying UAS with FMCW Doppler technology  Jose NAVARRO, Weibel Norway AS
12:40	NETWORKING LUNCH			
	PLENARY ROOM			
14:00	<b>PLENARY SESSION - KEYNOTE SPEECH</b> Lt. Gen. Henry "Trey" OBERING			
	INTERSESSION (10')			

## Wednesday, June 14th, 2023

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	<b>SESSION 13</b> Chairperson : Y. DEVOUASSOUX, ArianeGroup, FR	<b>SESSION 14</b> Chairperson : E. LEVY, Linkcom Telecom Ltd, II	<b>SESSION 15</b> Chairperson : C. PONZI, MBDA Italy	<b>SESSION 16</b> Chairperson : S. LAMMENS, Thales, NL
	Defence Architectures & Integration of Air and Missile Defence - 3	Modelling and simulation - 4	Interceptors & Weapons Systems and Technologies - 4	Sensor systems & Sensor networks, including Space - 4
14:40	17 Hypersonic Weapons – The View of Terminal Defenses Dror COHEN, WALES, Ltd.	53 Study and optimization of hypersonic intakes for airflows in chemical and thermodynamic equilibrium applied to hypersonic missiles propulsion Laurine HILLION, Hybrid Propulsion for Space	74 Trajectory Optimization of an Air Defense Missile System with Model Predictive Control Rüştü Berk GEZER, Roketsan Inc.	107 Improved tracking accuracy through multi-platform triangulation of radars Doppler information for engagement Frederic LIVERNET, DGA - Antoine BOUQUET, Naval Group
15:00	117 Next Generation Air And Missile Defense System Architecture - Providing Solutions For All Missions Dincer OZCAN, ASELSAN	19 Scramjet Vehicle Optimal Trajectories Joseph BEN-ASHER, WALES, Ltd.	68 Adaptive Attitude Controller Design for a High-altitude Interceptor with Divert and Attitude Thrusters under Input Constraint Yongwoo LEE, Agency for Defense Development	130 Increasing survivability by augmenting active radar with passive sensors Michael RUPPEL, Hensoldt Sensors
15:20	148 Weapons Systems networking Luc DINI, Thales, Metin BUGRU, NATO	75 Aerodynamic loads of thermo-chemical nonequilibrium hypersonic flow around a generic HGV Dominik JAMES, Universität der Bundeswehr München	99 SAMP/T NG System right choices to contribute to European & Allies Defense Alain DEUDON, Eurosam	138 The Space Domain Awareness mission of the SMART-L MM Erwin VAN DER POEL, Thales Nederland B.V.
15:40	133 Space based Intelligence for Ballistic Missiles Defence Younik THOMAS, ArianeGroup	112 Aerodynamic-Shadow Improved Aerodynamics Computations of Hypersonic Vehicles Jannis BONIN, IABG	120 IRIS-T SLM/X - Medium-Extended Range Air Defence tailored to Your Mission Arne NOLTE, Diehl Defence	
16:00	COFFEE BREAK			
	<b>SESSION 17</b> Chairperson : T. DRUCE, LMCO, US	<b>SESSION 18</b> Chairperson : L. DINI, Thales Air Systems, FR	<b>SESSION 19</b> Chairperson : S. THOMAS, Parsons, US	<b>SESSION 20</b> Chairperson : S. LAMMENS, Thales, NL
	Defence Architectures & Integration of Air and Missile Defence - 4	Modelling and simulation - 5	Interceptors & Weapons Systems and Technologies - 5	Sensor systems & Sensor networks, including Space - 5
16:30	18 Debris – The Great Unifier Ayala GUR, WALES, Ltd.	96 A Numerical Simulation of Radar-Plasma-Signatures of the RAM C-II Re-entry Flight Experiment René PETERVARI, Fraunhofer FHR	45 Numerical and experimental study on the solid propellant ignition at high-altitude condition Doo-Hee HAN, Agency for Defense Development	128 IR Signature Model for Space-Based Observation of Hypersonic Glide Vehicles Sebastian STABROTH, Airbus Defence and Space GmbH
16:50	123 Reflections on a Territorial Missile Defence Architecture for Europe Georg BAHMEIER, AMDC GmbH	58 SALTO – Space Early Warning simulator for analysis and operations Stephane URIEN, Airbus DS	64 Propulsion Technology Survey – Optimizing Air & Missile Defense Interceptors Doyle LAHTI, Aerojet Rocketdyne	127 The study of a European space-based missile early warning system: ODIN'S EYE Michele BONERBA, OHB System AG
17:10	79 The Benefits of centralized Multi-Tier Missile Defense Alon KAHANA, IAI		102 Coupled solid Divert and Attitude Control Systems with extensive maneuverability Pascal CAUBET, Philippe SAUNOIS, ArianeGroup	146 Operational Viewpoint of New Multifunctional Radar System Ramazan ÇETINER, ASELSAN
17:30	INTERSESSION (10')			

## Wednesday, June 14th, 2023

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	<b><u>SESSION 21</u></b> Chairperson : D. ZETZMANN, IABG, DE	<b><u>SESSION 22</u></b> Chairperson : N. GIACOMETTI, NATO, BE	<b><u>SESSION 23</u></b> Chairperson : P. LE CLÉACH, Naval Group, FR	<b><u>SESSION 24</u></b> Chairperson : Y. THOMAS, ArianeGroup, FR
	Defence Architectures & Integration of Air and Missile Defence - 5	CRAM, Counter UAV, GBAD & NBAD - 1	Command and Control - C2, combat cloud - 1	Lethality / Testing, Targets & Demonstration Programs - 1
17:40	16 The Impact of Missiles Sophistication  Alik HERMETZ, WALES, Ltd.	116 Skyranger 30 – the C-UAS Solution  Reto MAURER, Rheinmetall Air Defence AG	135 Consistent C2 system architecture for all layer air & missile defence  Gerd BROSZEIT, Airbus Defence and Space GmbH	23 NATO BMD and IAMD Capability Development in coordination with national exercises  Joe MAGGS, NCI Agency
18:00	90 Interoperability, System of Systems and architectures vs. the speed of relevance in procurement: opposing trends?  Gunter EMRICH, IABG mbH		56 Technical advancements to meet the demands of a Future Air Defence System  Sophie EVANS, MBDA	25 Back to the future with ATBM kill mechanism  Elie LEVY, Linkcom Telecom
18:20	151 Operational Effectiveness Considerations in Employing Defence Architectures  Tyler DRUCE, Lockheed Martin			62 Development of a Flexible-Use Hypersonic Test Platform Using Sounding Rocket Delivery Vehicles  Braeden CALLIS, Kratos Defense & Security Solutions
18:40	<b>End of Sessions</b>			

Thursday, June 15th, 2023

08:30	<p><b>PLENARY SESSION - KEYNOTE SPEECH</b>                  Dr. Olivier ZAJEC, Université de Lyon (FR)</p>			
09:00	INTERSESSION (10')			
	<b>ROOM 1</b>	<b>ROOM 2</b>	<b>ROOM 3</b>	<b>ROOM 4</b>
	<b>SESSION 25</b> Chairperson : N. GIACOMETTI, NATO, BE	<b>SESSION 26</b> Chairperson : A. KAHANA, IAI, IL	<b>SESSION 27</b> Chairperson : J. VAN HOOF, TNO, NL	<b>SESSION 28</b> Chairperson : D. ZETZMANN, IABG, DE
	Testing, Targets & Demonstration Programs - 2	CRAM, Counter UAV, GBAD & NBAD - 2	Command and Control - C2, combat cloud - 2	Directed Energy Weapons
09:10	95 The COI tool HEAT and Aspects of Consequences on LEO satellites Martin GLENDE, tms mbH	40 The Changing Face of War - Nagorno-Karabakh, Ukraine and On... Azriel LORBER, RTG	34 Multi-Layered GBAD Mission Optimization System Fredri TZIMET, Omnisys	57 High-Energy Lasers Against Drone Threats Maximilian TAILLANDIER, MBDA
09:30	50 Formidable Shield 2023 - A Dutch perspective Rogier NOORLAND, Thales Nederland B.V.	54 Counter UAS – An effector approach for modern battlefield scenarios Andreas HEINEMANN, MBDA	88 An Industry Perspective on IMLAMD - Integrated Multi-Layer Air and Missile Defense System Claudio PONZI, MBDA Italy	85 Ultrashort Pulse Lasers to counter Hypersonic Weapons Francisco Javier CRUZ HERNÁNDEZ, TecnoBit - Grupo Oesia
09:50	27 NATO Missile firing installation Stylianios RODOUSAKIS, NATO Missile Firing Installation	119 German inner layer air defence programme NNbS – from industries perspective Bernhard MOELLMANN, Hensoldt Sensors GmbH	106 Dynamic Target Weapon Assignment and Scheduling Solution for Air Missile Defence Systems: A Multi – Objective Linear Programming Approach Göksu UZUNTÜRK, ASELSAN	72 The Requirement Management with Model Based Systems Engineering Approach in Directed Energy Weapon Systems Fehmiye YILDIZ, ROKETSAN INC.
10:10		131 PARADE C-UAS system, initiating a new generation Philippe JUGE, Thales LAS France	121 Collaborative engagement against air and missiles threat Luc DINI, Thales LAS France	24 Experimental Investigation of Correlation between Ground-Based Atmospheric Turbulence Strength (Cn2) and Meteorological Parameters during Winter Season Cafer BAYAR, Roketsan
10:30	COFFEE BREAK			
	<b>ROOM 1</b>	<b>ROOM 2</b>	<b>ROOM 3</b>	
	<b>SESSION 29</b> Chairperson : E. LEVY, Linkcom Telecom Ltd, IL	<b>SESSION 30</b> Chairperson : A. KAHANA, IAI, IL	<b>SESSION 31</b> Chairperson : Y. THOMAS, ArianeGroup, FR	
	Disruptive Approaches	CRAM, Counter UAV, GBAD & NBAD - 3	Command and Control - C2, combat cloud - 3	
11:00	46 Advanced Grid Structure for Missiles with Embedded Fiber Optic Sensing Capability Ilan WEISSBERG, IAI (Israel Aerospace Industries)	61 NIAG SG265 SBAMD Study Review Jacques BLANQUART, MBDA France	147 Anti-Air Warfare Naval Collaborative Engagement – Beyond Force Threat Evaluation & Weapons Assignment Renaud BARATTE, Naval Group	
11:20	103 Open-air hardware in the loop simulation by robosim Hakan AKGUN, Aselsan	69 C-UAS ONERA Researches Laurent BARRILLIET, ONERA	48 Mastering complexity of the IAMD Command and Control through an augmented all-domain Decision-making process Gilles DESCLAUX, THALES	
11:40		76 Facing new low cost threats: a way to address this challenge Badri BADREDDINE, MBDA	84 Distributed Architecture and Technologies for Air Defense Combat Cloud Alfredo VERNUCCI, MBDA Italy	
12:00	NETWORKING LUNCH			

**Thursday, June 15th, 2023**

**PLENARY ROOM**

**SESSION 32**

**PLENARY SESSION : ROUNDTABLE**

Moderator: Uzi RUBIN, Begin Sadat Center for Strategic Studies, IL

13:20	124 Examination of a RUS ICBM in the Context of Missile Defence Markus SCHILLER, AMDC GmbH
13:40	143 ALBMs; history, current programmes and challenges to IAMD architectures Pierre GRASSER, Thales LAS France, Yannick JAMOT, Ariane Group
14:00	44 Threat Suppression in Support of Integrated Air and Missile Defense Herbert KEMP, OneALPHA Corporation
14:20	7 The DPRK's January 2022 "hypersonic" missile tests, an open-source analysis Ralph SAVELBERG, Netherlands Ministry of Defence
14:40	60 Maritime Supremacy and Anti-ship Threat Arthur DAIRE, MBDA
15:00	12 The Need for Comprehensive Cruise Missile Defense Uzi RUBIN, BSCSS
15:20	<b>CLOSING ADDRESS - Conference Co-Chairs</b> Emmanuel DELORME, MBDA - Yannick DEVOUASSOUX, ArianeGroup - Luc DINI, Thales Group
15:30	<b>End of IAMD 2023</b>