

# 43<sup>rd</sup> International Symposium on Military Operational Research

## National Oceanography Centre, 14th – 16 July 2026

### Programme

Updated 30 June 2026

*Content and timings subject to change up to the start of the symposium.*

Time Item

#### MONDAY 13<sup>TH</sup> July 2026

1900 **Welcome Reception**, a networking event with food and a welcome drink provided  
HARBAR at the Harbour Hotel, Ocean Village, Southampton  
*Kindly sponsored by Techmodal*

#### TUESDAY 14<sup>TH</sup> JULY 2026

0830–0930 REGISTRATION

0930–1000	<b>Welcome and Introduction</b> Symposium Chair will welcome delegates, and Programme Chair will introduce the ISMOR 43 Programme   <b>Matt Bunn &amp; Rebecca Fry</b>	
1000–1100	<b>Keynote by Prof. Dr. Ana Barros</b> , Principal Scientist at TNO <i>Artificial Intelligence has entered warfare — but has warfare become more intelligent?</i>	
1100–1125	NETWORKING BREAK	
1125–1130	<b>Introduction to Presentation Session 1a</b> <b>General OA (A)</b>   Chapman	<b>Introduction to Presentation Session 1b</b> <b>Engineering Capability Assessments</b>   Pepper
1130–1200	1a.1 Army Warfighting Experiment (AWE) on Robotics and Autonomous Systems (RAS)   <b>Wilder &amp; Freeland</b>	1b.1 NATO SACT: Force Lethality Enhancement for Combat Engineering   <b>Riley</b>
1200–1230	1a.2 Naval force modelling through commander taskings to subordinates employing tactics, techniques and procedures   <b>Young</b>	1b.2 Chry5alis: Exploring the feasibility and benefit of emerging communications technology   <b>Barwell</b>
1230–1330	LUNCH	

Time	Item	
1330–1500	<b>Workshop Session A</b> Option to attend one of four workshops running in parallel. <i>(Delegate sign-up will take place during the morning break)</i>	
A1	Impactful Presenting: Top tips to prepare and deliver briefings with ease   <b>BUNN, THOMPSON &amp; EVANS</b>   Sirius Analysis	
A2	Visualising Complexity: A Practical Workshop on Ecosystem Mapping   <b>HOLNESS</b>   Sirius Analysis	
A3	Exploring Modelling in Defence: Methods, Limitations and Uncertainty   <b>WALKER</b>   Arke Ltd	
A4	Edge of Tomorrow: Outlining a Pathway Methodology for Scenario Development   <b>TROSKIE, JEFFRIES &amp; RIGGS</b>   QinetiQ Training and Simulation Ltd	
1500–1525	NETWORKING BREAK	
1525–1530	<b>Introduction to Presentation Session 2a Uncrewed Systems</b>   Ward	<b>Introduction to Presentation Session 2b Simulation Modelling</b>   Aubrey
1530–1600	2a.1 A computational framework for optimal task assignment in uncrewed underwater vehicle fleets   <b>Dunn</b>	2b.1 Integrated Surgery Scheduling and Post-Surgical Bed Planning in a Military Hospital   <b>Carneiro</b>
1600–1630	2a.2 Analysing How to Counter the Threat from Combined Uncrewed Systems   <b>Hodge</b>	2b.2 When Does the Budget Break? Agent-Based Modelling and Generative AI for Royal Navy Corridor Planning Under Compound Uncertainty   <b>Singh</b>
1630–close	<b>Networking Dinner</b> , with a pub quiz starting at 1700, followed by dinner from 1800 National Oceanography Centre <i>Kindly sponsored by Catalyze</i>	

**WEDNESDAY 15<sup>TH</sup> JULY 2026**

0830–0900 REGISTRATION

0900-0920	<b>Welcome and Introduction</b> Symposium Chair will welcome delegates, and Programme Chair will introduce the ISMOR 43 Programme   <b>Matt Bunn &amp; Rebecca Fry</b>
0920–0930	<b>OR Society Presentation</b>   Sarah Davis Maximise your network with the OR Society
0930–1030	<b>Ronnie Shephard Address</b> by <b>Nicola Morrill</b> , Chief Analyst at Dstl and joint Head of Profession for OR within UK Ministry of Defence

1030–1055 NETWORKING BREAK

1055–1100	<b>Introduction to Presentation Session 3a General OA (B)</b>   Troskie	<b>Introduction to Presentation Session 3b Digital Twins</b>   Chapman
1100–1130	3a.1 Analytic Support to Military Adaptation   <b>Frelin</b>	3b.1 Artificial Intelligence-Extended Reality (AI-XR) and Digital Twin Architectures for Resilient Defence Decision-Making Across the Capability Lifecycle   <b>Snook</b>
1130-1200	3a.2 Typhoon Pilot Training Wargame Modelling   <b>Deevoy</b>	3b.2 Digital twins with multi-objective optimisation in defence   <b>Ross</b>

1200–1315 LUNCH *with Poster Session from 1230*

1230–1315	<b>Poster Session</b>
A	Multi-target path planning for pseudo-collaborative scalable Artificial Intelligence Unmanned Aerial Vehicle swarms using Quality-Diversity neuro-evolution   <b>SCARRETT</b>   MBDA UK
B	Carbon Fighting - An Arke carbon model   <b>HURST</b>   Arke Ltd
C	From Observations to Interventions: A Method for Analysing Complex Training Processes   <b>GOMES</b>   Sirius Analysis
D	Speaking the same language: Using the Strategic Planning Framework to align Strategy, Risk and Resources   <b>SHARROCK</b>   Catalyze
E	From Wargame to Dataset: A Platform for Real-Time Wargame Data Collection and Analysis   <b>PEDERSEN</b>   Sirius Digital
F	Turning Science Fiction into Science Fact   <b>DOWNWARD</b>   Sagentia Defence
G	Climate Change Impacts on Defence and Security   <b>WALKER</b>   QinetiQ

1315–1445	<b>Workshop Session B</b> Option to attend one of four workshops running in parallel. <i>(Delegate sign-up will take place during the morning break)</i>	
B1	Networking – How to build and grow your connections   <b>WARD &amp; SOLLY</b>   Arke Ltd & Cosimmetry	
B2	Visualising Complexity: A Practical Workshop on Ecosystem Mapping   <b>HOLNESS</b>   Sirius Analysis	
B3	Exploring Modelling in Defence: Methods, Limitations and Uncertainty   <b>WALKER</b>   Arke Ltd	
B4	Edge of Tomorrow: Outlining a Pathway Methodology for Scenario Development   <b>TROSKIE, JEFFRIES &amp; RIGGS</b>   QinetiQ Training and Simulation Ltd	
1445–1505	NETWORKING BREAK	
1505–1510	<b>Introduction to Presentation Session 4a</b> <i>OA Drawing on Historical Data</i>   Rowley	<b>Introduction to Presentation Session 4b</b> <i>Adversarial Reasoning under Uncertainty</i>   Pepper
1510–1540	4a.1 Morale and Combat Effectiveness   <b>Coulson, Main &amp; Fahey</b>	4b.1 Opponent State Inference Under Partial Observability in Competitive Strategic Systems   <b>Kleisarchaki</b>
1540–1610	4a.2 Developing a Corps Level Attrition Model   <b>Robson</b>	4b.2 Camouflage, Concealment & Deception in an Age of Artificial Intelligence   <b>Magill</b>
1610–1615	ROOM CHANGE	
1615–1700	<b>Panel Discussion</b>   Synthetic Environments for Defence Chair Matthew Harrison, <i>Sirius Analysis</i>	
1900	<b>Symposium Dinner</b> Banana Wharf, Ocean Village, Southampton <i>Kindly sponsored by Sagentia Defence</i>	

**THURSDAY 16<sup>TH</sup> JULY 2026**

0830–0900 REGISTRATION

0900–0915	<b>Welcome and Introduction</b> Symposium Chair will welcome delegates, and Programme Chair will introduce the ISMOR 43 Programme   <b>Matt Bunn &amp; Rebecca Fry</b>	
0915–0925	ROOM CHANGE	
0925–0930	<b>Introduction to Presentation Session 5a Wargaming</b>   Troskie	<b>Introduction to Presentation Session 5b OA using Mathematical and Statistical Methods</b>   Ward
0930–1000	5a.1 Communications & Electronic Warfare (EW) Warfare Development (WARDEV)   <b>Dobrosavljevic &amp; Holford</b>	5b.1 Multilayered combat modelling using dynamical systems equations inspired by Mathematical Ecology   <b>Lloyd</b>
1000–1030	5a.2 Blended Wargaming: Integrating Manual and Digital Wargames   <b>Bolt</b>	5b.2 Enhancing Online Statistical Decision-Making in Maritime Command and Control Systems: A Resilience Analysis of the LORD Procedure Under Adversarial Data Perturbations   <b>Benicio</b>
1030–1055	Networking Break	
1055–1100	<b>Introduction to Presentation Session 6a General OA (C)</b>   Rowley	<b>Introduction to Presentation Session 6b Artificial Intelligence Enabled OA</b>   Aubrey
1100–1130	6a.1 Modeling Interdependencies and Cascading Effects on Critical Infrastructures with Risk-Posture-Driven Aviation Security Portfolio Optimization   <b>Leonard</b>	6b.1 A Framework for Assessing Sovereign Decision Support   <b>Chapman &amp; Salmons</b>
1130–1200	6a.2 Mission Engineering - a potential solution to systematic capability audits   <b>Schwarting</b>	6b.2 Edge Artificial Intelligence and automation supporting decision-making efficiency in defence   <b>Carter</b>
1200–1230	6a.3 Evidencing the Hybrid Navy: Operational Analysis for System-of-Systems Maritime Force Design   <b>Bray</b>	6b.3 What can Artificial Intelligence really do for defence OA?   <b>Clayton</b>
1230–1330	Lunch	

1330–1430	<p><b>MORS Eugene Visco Prize Winning Presentation</b></p> <p>Scaling the Modeling Pyramid: Lessons Learned from Integrating Physics-Based Models into Large-Scale Operational Simulations   <b>Nikas</b></p>
1430–1515	<p><b>Closing Panel   Closing Discussion</b></p> <p>Chaired by Matt Bunn, <i>Catalyze</i></p>
1515–1530	<p><b>Award Ceremony &amp; Closing Remarks</b></p> <p>Presentation of awards for prize-winning ISMOR presentations and poster</p>
1530	CLOSE