





# 41<sup>st</sup> International Symposium on Military Operational Research National Oceanography Centre, 16th – 18 July 2024 **Programme**

Updated 4 July 2024

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

Time

#### MONDAY 15<sup>th</sup> JULY 2024

Item

1710 Out Networking social to the Isle of Wight via ferry
2005 Rtn Optional boat trip, with places offered to delegates in the order of registration.
Return ferry ticket and fish & chip dinner included.
Red Funnel Red Jet Terminal, 7 Town Quay, Southampton SO14 2AQ

#### TUESDAY 16<sup>TH</sup> JULY 2024

0830-0900 REGISTRATION

0900 – 0930	Welcome and Introduction Symposium Chair will welcome delegates ISMOR 41 Programme.	and Programme Chair will introduce the
0930 – 1030	<b>Keynote</b> by <b>Stephan De Spiegeleire</b> , Principal Scientist at the Hague Centre for Strategic Studies (HCSS) Are we punching below our weight? Leveraging the skill set of our OR&A community to bring more rigour and creativity to strategic decision making in defence and security	
1030 - 1100	BREAK	
1100 – 1105	Introduction to Presentation Session 1a Accounting for uncertainty   Price	Introduction to Presentation Session 1b Multi-domain operations   Page
1105 – 1130	1a.1 Softer Methods for a Hard-to- Understand World: A Case Study in Competition   <b>Sinha</b>	1b.1 Integrated Air and Missile Defence – why it's not just about integration   <b>Omar</b>
1130 – 1155	1a.2 Managing Uncertainty in the Analysis Process   <b>Barratt</b>	1b.2 Multi-Domain Integrated Systems (MDIS) Operational Analysis (OA) modelling   Ainger & Deith
1155 - 1220	1a.3 Modelling Military Adaptation   Carling	1b.3 Assessing the utility of Non-Lethal Weapons   Asquith & Chung
1220 - 1230	Presenters' Q&A Panel	Presenters' Q&A Panel
1230 – 1330	LUNCH	

LOCKHEED MARTIN



Time

BAE SYSTEMS



Item

1330 - 1500	Workshop Session A Option to attend one of four workshops running in parallel.	
	(Delegate sign-up will take place during the morning break).	
A1	From RAGs to Defense Analytical Richness: Large Language Models, Retrieval- Augmented Generation and Defense and Security Analysis   <b>DE SPIEGELEIRE</b>   HCSS This workshop requires participants to have a laptop that can connect to open WiFi.	
A2	How can analysts help Defence decision makers when the only seemingly sensible answer is "it depends"? A demonstration using exploratory modelling   <b>ROCKETT &amp; WILLIAMS</b>   DSTL	
A3	Capability Planning: Exploring the shifts of scientific paradigms among Operations Analysts   <b>ROXSTRÖM</b>   FOI	
A4	Pop-up CBRN - how to deliver specialist add-ons to mainstream wargames   <b>WOOD</b>   MORSHEAD CONSULTING	
1500 – 1530	BREAK	
1530 – 1630	MORS Eugene Visco Prize Winning Presentation   Beard	
	Infrastructure Systems as Institutional Relics   Desai	
1900	Informal Barbeque Dinner NOC	

## WEDNESDAY 17<sup>TH</sup> JULY 2024

0830 - 0900	REGISTRATION	
0900 – 0910	Welcome and Introduction Symposium Chair will welcome delegates and Programme Chair will introduce the ISMOR 41 Programme.	
0910 – 0955	Panel   International research collaborati Chair Ben Taylor   DRDC Jim Squire   DSTL Andrew Beard   DSTL	on in OR
0955 – 1000	BREAK for room moves	
1000 – 1005	Introduction to Presentation Session 2a Tools techniques & processes 1   Woodhall	Introduction to Presentation Session 2b Space-based capabilities   Gould
1005 - 1030	2a.1 Adaptability Assessment Framework (AAF)   <b>Stewart</b>	2b.1 Operational research in space   Magil
1030 – 1055	2a.2 SCIFI   Tillett	2b.2 Hypersonic weapons – what is the hype?   <b>Omar</b>
1055 - 1100	Presenters' Q&A Panel	Presenters' Q&A Panel



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Time Item

	1100	- 1130	BREAK
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1130 – 1135	Introduction to Presentation International concepts & play Croucher		Introduction to Presentation Session 3b Advanced computer analytics   Fry
1135 – 1200	3a.1 Feasible, Applicable, Va in support of NATO Concept Development and Experime Sherburne & LtCol Juozaitis	t ntation	3b.1 Using LLMs and RAG to examine (stated) differences between different 'ways of war'   <b>De Spiegeleire</b>
1200 – 1225	3a.2 National and Alliance for planning - parallels and contract <b>Richards &amp; Taylor</b>		3b.2 Effective Human-AI teaming   Lucek
1225 – 1230	Presenters' Q&A Panel		Presenters' Q&A Panel
1230 – 1330	LUNCH		
1330 – 1430	Workshop Session B Option to attend one of four workshops running in parallel. (Delegate sign-up will take place during the morning break).		
B1	Critical thinking: Understanding the relative criticality of infrastructure in Defence   <b>BUNN</b>   CATALYZE		
B2	Strategic analytics   PARLIER   INDEPENDENT		
B3	The problem of bad information   ADAM   ROKE		
B4	Wargame design methods – making the intangible tangible   BAGWELL   DSTL		
1430 - 1500	BREAK		
1500 – 1545	Panel   Wargaming Chair Pip Pepper	1500 – 1505	Introduction to Presentation Session 4 Policy   Price
	Lockheed Martin Mike Bagwell   DSTL Rory Kinane   SONAC	1505 – 1530	4.1 Assessing Women, Peace and Security in military operations   Lackenbauer
	TBC   Defence Wargaming Hub Dr Maeve Ryan   KCL	1530 – 1555	4.2 Hierarchical Structure of Brazilian Sovereignty: A Multi-Criteria Analysis of Defense Policy Variables Through the SAPEVO-H <sup>2</sup> Method   <b>Frederico</b>
1545 – 1630	Panel   OR&A in NATO Chair Ben Taylor   DRDC Glenn Richards   NCIA	1555 – 1620	4.3 Filling the Operational Vacuum: A Crie de Coeur   Capt (Retd) Poole OBE & LtCol (Retd) Firth
	Sue Collins   ACT	1620 – 1630	Presenters' Q&A Panel
1900	<b>Symposium Dinner</b> Dancing Man Brewery		tpgroup



Time

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### THURSDAY 18<sup>TH</sup> JULY 2024

0830 - 0900	REGISTRATION	
0900 – 0915	Welcome and Introduction Symposium Chair will welcome delegates and Programme Chair will introduce the ISMOR 41 Programme.	
0915 – 1000	Panel   Understanding JSP 939 Chair Pip Pepper   Lockheed Martin Grant Bailey   DMSO Andrew Beard   DSTL	
1000 – 1015	BREAK for room moves	
1015 – 1020	Introduction to Presentation Session 5a Tools techniques and processes 2   Page	
1020 – 1045	5a.1 Bridging the gap between soft and hard OR for rapid military Applications   <b>Solly</b>	5b.1 A mix methods approach combining vulnerability- and lethality analysis (VLA) with war-gaming, in support of Swedish capability development concerning long-range weapons   Andersson & Ågren
1045 - 1110	5a.2 Building confidence through rapid analysis   Murgatroyd & Gould	5b.2 Operationalising recreational computer wargames: MOD's growing Capability   <b>Bell</b>
1110 - 1135	5a.3 TBC   McCormack & Rowlands	5b.3 AI for Grey Zone Wargaming   Lucek
1135 – 1145	Presenters' Q&A Panel	Presenters' Q&A Panel
1145 – 1245	LUNCH	
1245 – 1250	Introduction to Presentation Session 6a <i>Learning from the past</i>   Gould	Introduction to Presentation Session 6b Concept & capability development   Croucher
1250 – 1315	6a.1 From U-Boats to AI: The Unseen Force Behind 80 Years of United States Defense Strategy   <b>DeGrange</b>	6b.1 Warship Land Strike Capability Exploration   <b>Charlton</b>
1315 – 1340	6a.2 Capability Planning: Exploring the shifts of scientific paradigms among Operations Analysts   <b>Roxström</b>	6b.2 How the Land Warfare Centre Operational Research Branch supports UK Field Army   <b>Woodhall</b>
1340 - 1405	6a.3 Medium Heavy helicopter Mix Study   <b>Snowden</b>	6b.3 Quick on the Draw: Tank Battlesight Shooting   <b>Salt</b>
1405 - 1415	Presenters' Q&A Panel	Presenters' Q&A Panel
1415 – 1445	BREAK	



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1445 – 1600	Workshop Session C – repeat of a subset of those workshops from sessions A and B Option to attend one of five workshops running in parallel. (Delegate sign-up will take place during the morning break).	
C1	Critical thinking: Understanding the relative criticality of infrastructure in Defence   <b>BUNN</b>   CATALYZE	
C2	Strategic analytics   PARLIER   INDEPENDENT	
C3	The problem of bad information   ADAM   ROKE	
C4	Wargame design methods – making the intangible tangible   <b>BAGWELL</b>   DSTL	
C5	How can analysts help Defence decision makers when the only seemingly sensible answer is "it depends"? A demonstration using exploratory modelling   <b>ROCKETT &amp; WILLIAMS</b>   DSTL	
1600 - 1605	BREAK for room moves	
1605 – 1630	Award CeremonycatalyzePresentation of awards for prize-winning ISMOR papers.catalyze	
1630	CLOSE	