

40th International Symposium on Military Operational Research

Royal Holloway University of London, 18th – 20th July 2023

Programme

Updated 14 July 2023

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

Time	Item	Virtual
Monday 17 July – Pre-Symposium		
15:45 – 22:00	Imperial War Museum <i>Celebrating ISMOR's 40th Symposium</i> Optional private guided tour, with places offered to delegates in the order of registration. Transport and packed meal provided. <i>Kindly sponsored by CORDA, DAS and Lockheed Martin.</i>	No
Tuesday 18 July – Day 1		
08:15 – 08:45	Registration	
08:45 – 09:00	Welcome and Introduction Symposium Chair will welcome delegates and Programme Chair will introduce the ISMOR 40 Programme.	Yes
09:00 – 09:05	Introduction to Presentation Session 1:	Yes
	<i>Assessing and optimising force design and adaptability</i> Brown	
09:05 – 09:30	1.1 Military Adaptation in War and Requisite Variety Frelin	
09:30 – 09:55	1.2 A holistic simulation model to explore the availability and costs of military assets in the exploitation stage Salome	
09:55 – 10:20	1.3 Insights from the main execution phase of a large-scale multi-domain wargame Murton	
10:20 – 10:30	Presenters' Q&A Panel	
10:30 – 11:00	Networking Break	
11:00 – 11:05	Introduction to Presentation Session 2:	Yes
	<i>Analysing and optimising mission effects</i> Price	
11:05 – 11:30	2.1 Application of a novel technique to help determine mission success in computation multi-mission modelling Smith	

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11:30 – 11:55	2.2 Modelling Task Group Operations Across the Underwater and Above Water Domains Young	
11:55 – 12:20	2.3 Rapid analysis in a congested environment Beckett	
12:20 – 12:30	Presenters' Q&A Panel	
12:30 – 13:30	Lunch	
13:30 – 13:35	Introduction to Presentation Session 3: <i>Artificial intelligence and autonomous systems</i> Tozer	Yes
13:35 – 14:00	3.1 Stochastic Navigation of Unmanned Aerial Vehicles (UAVs) for Border Patrolling: A Response Surface Methodology Approach Biskin et al	
14:00 – 14:25	3.2 Autonomy in Military Engineering Potts et al	
14:25 – 14:50	3.3 Determining the Value of Multi Domain Integrated Swarms (MDIS) to Defence Hodge	
	(Session continued after the break)	
14:50 – 15:20	Networking Break	
15:20 – 15:45	3.4 Red's Shoes Jaya-Ratnam	Yes
15:45 – 16:00	Presenters' Q&A Panel	
16:00 – 17:00	Big Debate Launch and initial syndicate discussions The Big Debate challenges delegates to tackle a key question in the field of military OR in small discussion groups in the margins of the symposium. Delegates will be introduced to this year's Big Questions and grouped into syndicates for an initial discussion. A plenary session on the final day provides an opportunity for groups to share their insights on the challenge question.	Yes
19:00	Informal Barbeque Dinner in the courtyard of the Founder's Building <i>Kindly sponsored by Roke.</i>	

Time	Item	Virtual
Wednesday 19 July – Day 2		
08:30 – 08:45	Registration	
08:45 – 09:00	Welcome and Overview Symposium Chair will recap previous day and Programme Chair will provide overview of the day's programme.	Yes
09:00 – 09:45	Keynote by Mr Y. H. (Eric) Kim , Executive Director, Office of Strategic Intelligence and Analysis, United States Department of Defence <i>Avoiding Strategic Shock in Operational Research – Holistic Approaches and Lessons Learned for Decision Advantage</i>	Yes
09:45 – 09:50	Introduction to Presentation Session 4: OR for strategy and portfolio analysis Glover	Yes
09:50 – 10:15	4.1 Eating the Elephant: Analysis and Planning NATO's Acquisition Portfolio Rose	
	(Session continued after the break)	
10:15 – 10:30	Workshop Orientation Introduction to afternoon workshops and sign-up process.	No
10:30 – 11:00	Networking Break and workshop sign-up	
11:00 – 11:25	4.2 Finding Space to Play in Wargames Burn	Yes
11:25 – 11:50	4.3 Future Materiel Distribution Land (FMDL) Strategy Jaya-Ratnam	
11:50 – 12:15	4.4 OR for the Royal Canadian Air Force future strategy Billyard	
12:15 – 12:30	Presenters' Q&A Panel	
12:30 – 13:30	Lunch	
13:30 – 15:00	Workshop Session 1 Option to attend one of six workshops running in parallel. (Delegate sign-up will take place during the morning break).	No
	A Appealing to the New Generation: How do we make a career in Defence OR more attractive to Graduates and Early Careers Gahan BAE Systems	
	B Have fun, solve problems, make a difference: Volunteering opportunities with The OR Society Hardy ORS	

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	C Rapid assessment of Whole Life Costs and Benefits through structured judgment - hands-on testing of a new ready reckoner Page Morshead Consulting	
	E Programme Evaluations as an Example of Multidisciplinary Working Bishop MOD	
	G Scoring - It's More Than Just Numbers Anthony Sirius Analysis	
	I Tactical Wargame Methodology Workshop Hood Sirius Analysis	
15:00 – 15:30	Networking Break	
15:30 – 17:00	Workshop Session 2 Option to attend one of six workshops running in parallel. (Some workshops are repeated from Session 1).	No
	A Appealing to the New Generation: How do we make a career in Defence OR more attractive to Graduates and Early Careers Gahan BAE Systems	
	C Rapid assessment of Whole Life Costs and Benefits through structured judgment - hands-on testing of a new ready reckoner Page Morshead Consulting	
	D Field Army Operational Research Branch Woodhall MOD	
	F The Beer Game Woodham DAS	
	H Be part of defining appropriate Analytical Quality standards for OR Glover Dstl	
	I Tactical Wargame Methodology Workshop Hood Sirius Analysis	
19:00 – 19:30	Reception Drinks <i>Kindly sponsored by TP Group</i>	
19:30 – Late	Gala Dinner Featuring guest speaker Professor Nira Chamberlain OBE PhD HonDSc , President of The Mathematical Association, Past President of the Institute of Mathematics and its Application (IMA), Visiting Professor of Loughborough University Mathematical Sciences Department and Technical Fellow for Mathematical Modelling for Atkins a member of the SNC-Lavalin Group	

Time	Item	Virtual
Thursday 20 July – Day 3		
08:45 – 09:00	Registration	
09:00 – 09:15	Welcome and Overview Symposium Chair will recap previous day and Programme Chair will provide overview of the day's programme.	Yes
09:15 – 10:00	MORS Eugene Visco Prize Winning Presentation Resilient Position Data Fusion with a Generic Kalman Filter Method Fanto	Yes
10:00 – 10:05	Introduction to Presentation Session 5: <i>Lessons from leading and managing collaborative OR</i> Page	Yes
10:05 – 10:30	5.1 Electric UAVs: Lessons from collaborative multi-supplier utility studies Chung	
	(Session continued after the break)	
10:30 - 11:00	Networking Break	
11:00 – 11:25	5.2 Collaboration across Boundaries Brown	Yes
11:25 – 11:50	5.3 Collaboration across boundaries – An ASTRID perspective Aubrey	
11:50 – 12:15	5.4 Operations Research Group in the Israeli ministry of health (MOH) Covid Task Force Mizrahi	
12:15 – 12:30	Presenters' Q&A Panel	
12:30 – 13:30	Lunch	
13:30 – 13:35	Introduction to Presentation Session 6: <i>Leveraging and interpreting historical data and analyses</i> Gould	Yes
13:35 – 14:00	6.1 Juxtaposing Narrative and Numbers: Utilising Quantitative and Qualitative Methodologies in the Historical Analysis of Defensive Operations Brown et al	
14:00 – 14:25	6.2 World War 2 Operational Research revisited: Air Power against the U-boats Magill	
14:25 – 14:50	6.3 Historical analysis of urban combat casualties and loss rates Syms	
14:50 – 15:00	Presenters' Q&A Panel	
15:00 – 15:30	Networking Break	

Time	Item	Virtual
15:30 – 16:10	Big Debate Review Discussion groups will be invited to share their insights on the key questions of the Big Debate.	Yes
16:10 – 16:30	Award Ceremony Presentation of awards for prize-winning ISMOR papers. <i>Prizes courtesy of our sponsor TP Group.</i>	Yes
16:30	Close	