



2nd IMA Congress: AI Unlocked: Innovation, Insight and Impact

Programme

Thursday 17th September – Friday 18th September
2026

Hyatt Regency, Birmingham, UK

Day 1- 17th September 2026

08:45 – 09:30	Registration with Tea & Coffee
09:30 – 09:45	Welcome, Introduction & Housekeeping <i>Rosalind Azouzi – IMA Executive Director</i>
09:45 – 10:00	Chair's Opening Address & Announcement of Discussion Paper <i>Anjulika Salhan – CEO System Holdings & ITIXA</i>
10:00 – 10:15	Welcome from the IMA President <i>Heather Tewkesbury</i>
	Opening Keynote Talk
10:15 – 10:45	Gauss is Wrong Part 2: AI, Mathematics, Strategy and Culture <i>Nira Chamberlain OBE – AtkinsRéalis</i>
10:45 – 11:00	Tea & Coffee Break
	Mathematics Behind Modern AI: Networks, Vision and Robotic Healthcare Session Chair: David Snee – Dstl
11:00 – 11:30	Imaging in the Age of AI: Combining Physics, Mathematics and Data <i>Carola Bibiane Schönlieb – University of Cambridge</i>
11:30 – 12:00	Precision by Numbers: The Mathematics of Robotic Knee Surgery <i>Akash Sharma – Royal Orthopaedic Hospital Birmingham</i>
12:00 – 12:30	What (and Why) Is Graph-Based Learning? <i>Jeremy Budd, Assistant Professor – Birmingham University</i>
12:30 – 12:45	Should you Listen to your Knees? Using A.I. with Acoustic Signals to Monitor the Condition of Knee Joints. <i>Gordon Hunter</i>
12:45 – 13:55	Lunch
	Foundations of Trustworthy AI: Mathematics, Ethics, Society and Law Session Chair: Stephen Lynch – Loughborough University
14:00 – 14:30	AI Ethics: Mathematical Challenges and Progress <i>Richard Pinch – IMA Council Member and AI SIG</i>
14:30 – 15:00	From Equations to Enterprise: Legal Foundations for Commercialising AI <i>Sarah Coe – Collyer Bristow</i>
15:00 – 15:15	Refinement and the Universal Refinement Principle: Theory, Structure Emergence, and Cross-Domain Performance <i>Lance Carr</i>
15:15 – 15:30	Tea & Coffee Break
	Mathematics Education in the Age of AI Session Chair: Jeremy Budd, Assistant Professor – Birmingham University
15:30 – 16:00	Mathematics Education in the Age of AI <i>Stephen Lynch – Loughborough University</i>

16:00 – 17:00	Panel Discussion- Maths Education in the Age of AI <i>Rachad Zaki – Director of Cambridge Mathematics</i>
17:30 – 19:00	Drinks Reception

Day 2- 18th September 2026

09:30 – 10:00	Tea & Coffee
10:00 – 10:30	Welcome, Introduction & Housekeeping <i>Rosalind Azouzi – IMA Executive Director & Anjulika Salhan – CEO System Holdings & ITIXA</i>
	From Physics to Biology: Scientific Foundations for the Next Generation of AI Session Chair: Rosalind Azouzi – IMA Executive Director
10:30 – 11:00	AI for Science <i>Marika Taylor – University College London</i>
11:00 – 11:30	Engineering Living Brain Circuits <i>Paul Roach – Loughborough University</i>
11:30 – 11:45	Tea & Coffee Break
	The Future of Tax Compliance: Mathematics, AI and Public Trust Session Chair: Stephen Lynch – Loughborough University
11:50 – 12:20	Confidence Is Not Correctness, An Algebraic Foundation for Trustworthy AI in Regulated Industries <i>Anjulika Salhan – CEO System Holdings & ITIXA</i>
12:20 – 12:35	Geometric Properties of Sentence Embeddings for Invoice Categorisation <i>Emma Ceccherini</i>
12:35 – 12:45	How Certain is the AI Neural Network Conformal Inference for Financial Document Classification <i>Neva Fradd (Poster)</i>
12:50 – 13:50	Lunch
	AI for Defence and National Security: Research, Resilience and Future Capability Session Chair: Jeremy Budd, Assistant Professor – Birmingham University
13:55 – 14:25	A Quarter Century of AI Research in Defence and Security <i>Richard Lane – QinetiQ</i>
14:25 – 14:55	The Underpinning Trifecta: Mathematics, AI and Future Hardware <i>David Snee – Dstl</i>
14:55 – 15:25	AI Unlocked in Autonomous Sensing: Bridging Foundation Models, Transformers, and Bayesian Tracking <i>James Hopgood – The University of Edinburgh</i>
15:25 – 15:40	Understanding The Confidence with which a Machine Learning Model Classifies an Input Datum <i>Daniel Sumler</i>

15:40 – 15:55	Trajectory-Free Parameter Estimation in Interacting Particle Systems via Topological-Frequencies <i>Mu'izz Asif</i>
15:55 – 16:15	Tea & Coffee Break
	From Equations to Intelligence: The Mathematics of AI <i>Session Chair: David Snee – Dstl</i>
16:15 – 16:45	Scientific Machine Learning <i>Chris Budd OBE – University of Bath</i>
16:45 – 17:00	Prize Presentation – System Holdings <i>Rosalind Azouzi – IMA Executive Director & Anjulika Salhan – CEO System Holdings & ITIXA</i>
17:00 – 17:15	Closing Speech <i>Anjulika Salhan – CEO System Holdings & ITIXA</i>
17:15	Congress Group Photograph Close