The IDEAL Collaboration Annual Conference 2026

Evaluation in the Digital Age: Robotics, AI and Beyond

9 - 10 November 2026
Trinity College, Oxford, UK

Conference Programme

We are very grateful to our sponsors for providing their support for the Conference.

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The IDEAL Collaboration Annual Conference 2026

Welcome to the IDEAL Conference 2026!

Surgical innovation is advancing rapidly, making rigorous evaluation more important than ever. This year's conference will explore the challenges of evaluating innovation in the digital age, from early development through to wider adoption, and how our methods must evolve to meet them.

We are very grateful to our sponsors, **Medtronic**, **Globus Medical** and **Panda Surgical Ltd** for their support with the Conference

We area delighted to welcome colleagues old and new to Oxford, and look forward to two days of lively discussion, critical debate and collaboration.



Professor Peter McCulloch
Conference Chair
Founding and Former Chair
The IDEAL Collaboration



Professor Hani Marcus
Interim Chair
The IDEAL Collaboration

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Conference Speakers & Session Chairs

Professor Peter McCulloch	Professor of Surgical Sciences & Practice University of Oxford Founding and Fomer Chair, IDEAL Collaboration
Professor Hani Marcus	Professor of Neurosurgery, UCL, Consultant Neurosurgeon at the National Hospital for Neurology and Neurosurgery, Interim Chair, IDEAL Collaboration
Dr Arsenio Paez	Sleep Neuroscientist & Clinical Scientist, Gillings Global Public Health Fellow, Institut Pasteur, Parism Exécutive Director, Canadian Sleep Societ, Montreal QC, Member of the IDEAL Council
Professor Andrew Cook	Prof of Health Technology Assessment, University of Southampton, NIHR
Dr Pietro Mascagni	Co-founder at Scialytics, Director Surgical Video Analysis at Gemelli, CS & AI Research at IHU-Strasbourg, AI chair at EAES
Dr Baptiste Vasey	Thoracic Surgery Resident at CHUV, Clinical Research Fellow, University of Oxford
Mr Joachim Starup-Hansen	Neurosurgery Resident (ST3 SpR), ex-Innovate-MD Fellow
Professor Sheraz Markar	Professor of Upper GI Surgery & Diretor of NDS SITU, University of Oxford, Consultant Oesophago-Gastric Surgeon, Surgical Speciality Lead for Oesophageal Cancer, RCS England

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Conference Speakers & Session Chairs

Professor Dhananjaya Sharma	Emeritus Professor and head of the Department of Surgery at NSCB Government Medical College Jabalpur (MP) India.
Professor Bruce Biccard	Nuffield Professor of Anaesthetic Science, University of Oxford,Director of the African Perioperative Research Group (APORG
Mr Danyal Khan	Neurosurgery Trainee - London Deanery, Doctoral Fellow, NIHR, Google PhD Fellow
Mr Noel Aruparayil	NIHR Clinical Research Fellow - Global Surgery, University of Leeds
Dr James Porter	Chief Medical Officer, Robotics and Digital Technologies, Medtronic
Dr Mark Slack	Founder and CMO, CMR Surgical, Associate Lecturer, Univesity of Cambridge
Dr Josh Burke	NIHR Academic Clinical Fellow, University of Manchester, Colorectal Surgery (UK) PhD FRCS, Co-Director, @RCSnews Innovation Hub, Innovation Advisor
Mr Rory W Clarke	ICRE Resident Co-Chair, Clinical Research Fellow Barnsley Hospital NHS Foundation Trust, YES Collaborative Founder and President, General Surgery Registrar, Yorkshire and Humber

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Conference Speakers & Session Chairs

Dr Mirre Schölte	Assistant Professor in early health technology assessment, Department of Medical Imaging, IQ Health, Radboud University Medical Centre
Dr Daisy Elliott	Senior Research Fellow, Applied Health Research, University of Bristol
Miss Jigishaa Moudgil-Joshi	Neurosurgery Registrar (ST3) & Clinical Research Fellow, UCL
Dr Melody Ni	Senior Research Fellow Department of Surgery & Cancer - Faculty of Medicine
Professor Richard Lilford CBE	Department of Applied Health Sciences, University of Birmingham, Director of National Institute for Health Research (NIHR) Applied Research Centre West Midlands (ARC WM)
Professor Peter Friend	Emeritus Professor of Transplantation, Former Director, Oxford Transplant Centre, Founder, OrganOx

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Free Papers

Dr Girishkumar Sivakumar **Academic Foundation Doctor** **National Hospital for Neurology and Neurosurgery, UCL**	Quantifying Surgical Learning Curves in X-ray-guided Spinal Surgery: An Interpretable Framework for Systematic Evaluation
	From Beta Thresholds to Learned Control: Staging Machine Learning-Driven Adaptive Deep Brain Stimulation Within the IDEAL Framework
	Evaluation Before Adoption: Machine Learning versus Conventional Statistical Models for Predicting Outcomes After Spine Surgery—A Systematic Review and Meta-Analysis
Dr Imad Rajput **FY2 Doctor** **Oxford University Hospital Trust**	Measuring without deciding: an IDEAL Stage 2a/2b proposal for algorithm-guided immunosuppression in kidney transplantation
Dr Oliver Burton **Academic Clinical Fellow in Neurosurgery ST2, University of Plymouth**	Lost in Aggregation: Can National Never Events Data Support Surveillance of Surgical Innovation?
Mr Hugo Layard-Horsfall **Neurosurgery Registrar and PhD fellow, Francis Crick Institute/UCL**	A clinically integrated, frameless human Neuropixels workflow: an IDEAL 2a study
Dr Daisy Elliott **Senior Research Fellow** **University of Bristol**	“Nerve-wracking unfamiliarity”: A qualitative study of the UK’s initial uterine transplants in real time

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Free Papers

Dr Sanchita Bhatia **Neurosurgery Academic Clinical Fellow, UCL**	Prospective iterative deployment of a large language model for clinical trial recruitment
Dr Helen Parsons **Associate Professor, Warwick Clinical Trials Unit** **University of Warwick**	Lessons learned from the IDEAL Stage 3 RACER study
Dr Riadh Salem **DPhil student / Research Fellow** **University of Oxford**	Modifications of Established Operations Can Be Defined and Assigned an IDEAL Stage by Checkable Criteria
Dr Sajjad Saghebdoust **Junior Clinical Research Fellow in Precision Neurotechnology Queen's Hospital, Barking, Havering and Redbridge University Hospitals NHS Trust**	Multi-phase multidisciplinary formative evaluation of map-OR, a digital platform for intraoperative language testing during awake craniotomy: an IDEAL-D Stage 0 study
Miss Nainika Menon **DPhil student, SITU, University of Oxford, General Surgery Registrar Thames Valley Deanery**	Feasibility of developing an artificial intelligence (AI)-based anatomy recognition model for video analysis-based surgical quality assurance (SQA) in anti-reflux surgery (ARS)

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Sandpit Session

Mr Matthew Boucher, PhD Student, Department of Medical Physics and Biomedical Engineering, UCL	Development of a Modular Robotic Stereotactic Workflow for Intraoperative MRI-Guided Brain Biopsy and Laser Interstitial Thermal Therapy: An IDEAL Stage 2a Proposal
Dr Daniela Flores Guerrero Clinical Research Specialist Houston Methodist Hospital Texas, USA	Evaluating Surgeon Learning Curves with a Novel Robotic Platform for Total Hysterectomy: An IDEAL Stage 2b Study
Dr I-Han Cheng DPhi Candidate, University of Oxford	From generic model to digital twin: proposal for an IDEAL Stage 2a study of patient-specific planning for tibialis posterior tendon transfer

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Poster Presentations

Mr S Klyde Alistar **Medical Student, University of Sheffield**	AI Use for Decision Making in General Surgery: A Scoping Review
Miss Shiraz Hamad **Medical Student, University of Nottingham**	Open versus Endoscopic Thoracic Decompression: A Systematic Review and Meta-Analysis of Clinical and Peri-operative Outcomes
Dr Aymen Khawar **Junior Clinical Fellow, KCL**	Does Robotic Surgery Improve Surgeon Ergonomics? A Systematic Review and Meta-Analysis of Robotic versus Laparoscopic General Surgery
Mr Imran Rauf **Medical Student, St George's Hospital**	Prompt-based vision-language feature learning for surgical gesture recognition in robot-assisted radical prostatectomy: a preliminary transferability study

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Poster Presentations

Dr Ella Lubberdink
PhD candidate
Radboud University, Netherlands

PriORitize-II: Supporting Evidence-Based Surgical Prioritisation

Miss Fahmida Zahin
Medical Student, University of Buckingham

FLOW-GATE: An IDEAL Stage 2a Development Study of Human-in-the-Loop LSCI Perfusion Alerting During Intracranial Aneurysm Clipping

Mr Pranine Mankongcharoen
Medical Student, KCL

Structured Prompting for Chatbot Responses to Cataract and Macular Hole Surgery Questions: A Multi-Model Evaluation of Understandability, Actionability, and Readability

Mr Andrew Linn
PhD Candidate
University of Edinburgh

Attaching the IDEAL Framework for Surgical Robotics to Practice

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Day 1: Monday 9th November

Time	Session
08:30-09:00	Registration of attendees
IDEAL: Past, Present and Future Chairs, Profs Peter McCulloch & Hani Marcus	
09:00 - 09:10	Welcome & Conference Opening Conference Director's welcome, scope and housekeeping
09:10 - 10:30	SESSION 1A | IDEAL: Foundations and State of Play Chair: Profs Hani Marcus / Peter McCulloch What is IDEAL? Origins, development and educational foundations Prof Peter McCulloch Expanding IDEAL. The Life Cycle Framework: from surgery to AI Dr Arsenio Paez Real World Potential of IDEAL and barriers to adoption Prof Andrew Cook 10:10 - 10:30 Moderated Q&A
10:30 - 11:00	Networking & Refreshments

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Day 1: Monday 9th November

Time	Session
Future IDEAL: Evaluation in the Digital Age Chair: Prof Hani Marcus	
11:00 - 12:45	The challenges and opportunities of AI in surgical evaluation Dr Pietro Mascagni DECIDE-AI and ASSESS-DHT: reporting and evaluation standards Dr Baptiste Vasey Robotics: An analysis of current evaluation Mr Joachim Starup-Hansen Robotics: evaluation challenges and open questions Dr Mark Slack Global IDEAL: promoting evaluation in low- and middle-income surgery Mr Aruparayil & Mr Danyal Khan Global IDEAL: Challenges and Solutions Professor Bruce Biccard and Prof Dhananjaya Sharma (remote from India)
13:00 - 13:45	Lunch & Networking

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Day 1: Monday 9th November

Time	Session
Evaluation, Training and Robotics	
Free Papers (1)	
13:45 - 15:15	Free Papers on IDEAL Evaluation Chair: Dr Mirre Schölte Six selected abstracts: 10-minute presentation + 3-minute Q&A each
15:15-15:45	Networking & Refreshments
15:45 - 16:30	IDEAL BCI Dr Arsenio Paez IDEAL-T Mr Rory Clarke, Dr Josh Burke
16:30 - 17:30	Debate: How Should We Evaluate Robotic Surgery? Chair: Prof Andrew Cook Motion: *This house believes the evaluation of robotic surgery needs radical reform* Debaters: Dr Mark Slack, Prof Hani Marcus Dr Jim Porter, Mr Joachim Starup-Hansen
17:30 - 17:45	Day 1 Reflections and Close

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Day 2: Tuesday 10th November

Time	Session
Free Papers, Surigcal Quality & Innovation	
09:00 -09:15	Day 2 Welcome and Recap Prof. Peter McCulloch
Free Papers (1)	
09:15 - 10:45	Free Papers on IDEAL Evaluation Chairs: Dr Baptiste Vasey, Dr Daisy Elliott Six selected abstracts: 10-minute presentation + 3-minute Q&A each
10:45 - 11:15	Networking & Refreshments
Surigcal Quality, Methods & Innovation Chair: Miss Jigisha Moudgil-Joshi	
11:15 - 12:30	Evaluating Surgical Quality Prof Sheraz Markar Bayesian Methods in Surgical Evaluation Dr Melody Ni and Prof Richard Lilford
12:30 - 13:15	Lunch & Networking

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Day 2: Tuesday 10th November

Time	Session
The Sandpit and Keynote Addresss	
SANDPIT SESSION: Reimagining Evaluation Together Chair: Prof Prokar Dasgupta Panellists: Dr Mark Slack, Prof Peter McCulloch	
13:15 - 14:45	3 proposers bring evaluation challenges and co-design IDEAL solutions in real time with help from experts and audience Format: 15 min framing • 45 min breakout work • 30 min plenary feedback
14:45- 15:00	Presentation of Awards for Best Free Paper and Best Evaluation Challenge
15:00 - 15:15	Networking & Refreshments
15:15 - 16:30	Keynote Address: The OrganOx Story: Evaluation During Groundbreaking Innovation Prof Peter Friend 40-minute keynote followed by 20-minute audience Q&A A landmark case study on evaluating a genuinely disruptive surgical technology from bench to bedside
16:30 - 16:45	Closing Remarks & Conference Farewell Synthesis, commitments and the road to IDEAL 2027 Prof Peter McCulloch • Prof Hani Marcus

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Get Involved with The IDEAL Colloboration

The work of the IDEAL Collboration relies on the voluntary contributions and dedication of a smalll group of researchers and clinicians. We are always seeking interest for new members who would like to get involved with our work.

If you area interested in joining the IDEAL Collaboration, please complete the contact form via our website at https://www.ideal-collaboration.net/members/

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