

An aerial photograph of London, showing a mix of historic architecture and modern buildings, with green spaces and a river in the background. Overlaid on the top half of the image is a large white logo that reads "AI 2026". The "AI" is in a stylized font, with a blue diagonal line through the "I". The "2026" is in a clean, sans-serif font.

AI 2026

Conference Programme

26-28 August | London UK

Venue Information

The conference main venue is the Blackett Laboratory at Imperial College London. All oral sessions will take place there. The poster sessions on the second day of the conference will take place in the Royal Geographical Society, which is only 5-minute walk away from the main venue. The conference banquet will be hosted in the Great Hall at King's College London. To reach the conference main venue, please use the entrance on Prince Consort Road, next to the Royal Albert Hall, marked on the map below.



International Conference on AI in Healthcare

Third Edition

26-28 August 2026, Imperial College London

Welcome

On behalf of the organising committee, we welcome all delegates from 45 different countries to attend this third edition of the International Conference on Artificial Intelligence in Healthcare (AliH), which is hosted in August 2026 in Imperial College London UK.

AliH was established to provide a dedicated forum for researchers, practitioners, clinicians, and innovators working at the intersection of artificial intelligence and healthcare. While advances in AI have transformed many fields, healthcare continues to present distinctive challenges that span technical, ethical, regulatory, and societal dimensions. AliH seeks to foster the exchange of ideas, promote interdisciplinary collaboration, and accelerate the development and adoption of trustworthy AI technologies that can improve healthcare delivery, patient outcomes, and clinical decision-making.

The 2026 conference attracted significant interest from the community. By the April submission deadline, we received 172 full-length papers (12 pages plus up to 2 pages of references) and 87 abstracts (up to 5 pages, excluding late-breaking abstracts), representing substantial growth compared with previous editions. All full-length submissions underwent a rigorous double-blind peer-review process. Each paper received a minimum of two reviews, with an average of three reviews per submission, while abstracts were evaluated by one or two expert reviewers. Following careful assessment, 101 full-length papers were accepted for publication in these proceedings and 41 abstracts were selected for online archival with DOI assignment. The acceptance rate for full papers was 58.7%, while 23.3% of submissions were selected for oral presentation.

AIiH 2026 also received 71 late-breaking abstract and survey paper submissions by the July deadline. As a result, a further 39 submissions are included in our conference programme.

A new feature of AIiH 2026 is the introduction of the State-of-the-Art Surveys (STARS) track. Designed to capture emerging developments and provide authoritative overviews of rapidly evolving research areas, STARS submissions may be up to 24 pages in length. We also launched the DoRa-PVS Challenge (Domain Randomisation for Perivascular Space Segmentation), developed in collaboration with leading experts in medical image analysis. A dedicated special session was organised around the challenge, providing an opportunity to evaluate and discuss methods that can robustly generalise to heterogeneous and previously unseen MRI datasets. Contributions to AIiH 2026 were received from researchers representing 35 countries, underscoring the truly international character of the conference. The conference Best Paper Award will be announced during the conference and the Best Poster Prize will be handed out during the closing session.

We are delighted to welcome five distinguished invited speakers. Prof. Stephen Smith (University of York) presents the conference tutorial, Translating AI into Clinical Practice. The keynote programme features talks from Prof. Alejandro Frangi (University of Manchester), Prof. Huiru Zheng (Ulster University), Prof. Michael Lones (Heriot-Watt University), and Prof. Giuseppe Carbone (University of Cassino, Italy). We sincerely thank them for sharing their expertise and perspectives with the AIiH community.

The success of AIiH 2026 would not have been possible without the dedication of our reviewers. We are deeply grateful for their time, expertise, and commitment to maintaining the quality of the conference. We would especially like to

acknowledge the outstanding contributions of Annie Rathore (Scale AI), Connor Clarkson (Swansea University), Gary Tam (Swansea University), María Garrosa (Universidad Carlos III de Madrid), and Longfei Chen (University of Edinburgh), whose reviews were consistently thorough, constructive, and insightful.

We would also like to express our appreciation to Dr. Yilun Zhang, our student volunteers, the Special Session organisers, and all members of the organising committee for their invaluable support. We gratefully acknowledge the contributions of our industrial sponsors and thank Springer for publishing these proceedings in the LNCS series as well as sponsoring the Best Paper Award. Finally, we extend our sincere thanks to all authors, presenters, and attendees. Their enthusiasm, engagement, and scientific contributions continue to make AliH a vibrant and stimulating venue for advancing artificial intelligence in healthcare.

Hao Ni
Daniele Cafolla
Xianghua Xie

People

Co-Chair:

Hao Ni

University College London

Daniele Cafolla

Swansea University

Clinicians and Medical Students Engagement Officer

Duaa Alim

Imperial College London

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Xianghua Xie

Swansea University

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Brüningk

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Longfei

Chen

University of Edinburgh, UK

Chen

Chen

University of Sheffield, UK

Parvathy

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John	Chiverton	University of Portsmouth, UK
Federica	Cilia	UPJV, France
Connor	Clarkson	Swansea University, UK
Matthew	Cockayne	Keele University, UK
Hirad	Daneshvar	Institut National de la Recherche Scientifique (INRS), Canada
Margarita	Deli-Slavova	Swansea University, UK
Mahmoud	Elbattah	UWE Bristol, UK
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Muhammad	Faheem	University of East Anglia, UK
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Thomas	Greatrix	Cardiff University, UK
Krishnam	Gupta	Audere, India
Ali	Guran	Swansea University, UK
Bingjun	Han	Swansea University, UK
Kenji	Hashimoto	Waseda University, Japan
Chen	Hu	Swansea University, UK
Ioannis	Ivrissimtzis	Durham University, UK
Hassan	Khan	Aston University Birmingham, UK
Sulaiman	Khan	Hamad Bin Khalifa University, Qatar
Hasitha	Kuruwita A.	Griffith University, Australia
S.	Lakshmi	SSM Institute of Engineer-ing and Technology, India
Yiming	Li	Swansea University, UK
Haiping	Liu	University of Manchester, UK
Akhil Reddy	Mandadi	Meta, USA
Giovanni	Mastrangelo	University of Rome Tor Vergata, Italy
Mihir	Mulye	Heinrich Heine University, Germany
Marco	Ortolani	Keele University, UK
Matt	Ploszajski	Swansea University, UK
Rakesh Reddy	Ramasani	Microsoft, India
Annie	Rathore	Scale AI, India

Hanchi Cristian	Ren Rodriguez Rivero	Swansea University, UK Polytechnic University of Catalonia Barcelona Tech, Spain
Matteo Ahmad	Russo Salman	University of Rome Tor Vergata, Italy American University in the Emirates, UAE
Gani	Sergazin	Eurasian National University, Kazakhstan
Faisal	Shafait	National University of Sciences and Technology, India
Asad Mohammod	Shah Naimul Islam	University of Jeddah, Saudia Arabia Suvon University of Shef-field, UK
Gary	Tam	Swansea University, UK
Maria	Tamoor	University of Hull, UK
Nupur	Thakur	Arizona State University, USA
Xianghua	Xie	Swansea University, UK
Mingjing	Xu	Swansea University, UK
Su	Yang	Swansea University, UK
Yue	Yang	Swansea University, UK
Vincent	Zakka	Aston University, UK
Biao	Zeng	University of South Wales, UK
Yilun	Zhang	Swansea University, UK

Programme: Wednesday 26th August

08:30 Registration (until 17.00)

08:50-09:00 Welcome

Tutorial

09:00-10:00 Translating AI in Clinical Practices
Stephen Smith, University of York

10:00-10:40 Best paper candidate session one

Chair: Daniele Cafolla, Swansea University

10:00-10:10 Graph Priors Improve Seizure Onset Zone
Identification in a Graph Convolutional Network of
StereoEEG

*Baizhou Pan (Pennsylvania State University); Xiaoxiao Sun
(Pennsylvania State University); Alain Zingraff Lekoubou Looti
(Pennsylvania State University College of Medicine); Andrew
Geronimo (Pennsylvania State University College of Medicine)*

10:10-10:20 Pharmacokinetic State Space Models for Unbiased
Prediction of Haemodynamic Collapse

*Rithin Nagaraj (PES University); Sudiksha Chindula (PES
University); Bhaskarjyoti Das (PES University)*

10:20-10:30 Tabular Foundation Models for Clinical Survival
Analysis via Survival-Aware Adaptation

*Minh-Khoi Pham (Dublin City University); Luca Cotugno
(University of Bologna); Alina Sirbu (University of Bologna); Tai
Tan Mai (Dublin City University); Martin Crane (Dublin City
University); Marija Bezbradica (Dublin City University)*

10:30-10:40 RehabilitIA: Generative AI Agents for Personalized
Aphasia Therapy in Spanish

*Andrea Galindo-Cera (Universidad de Los Andes); Santiago
Navarrete (Universidad de Los Andes); Ruben Manrique*

(Universidad de Los Andes); Andrea Herrera (Universidad de Los Andes)

10:40-11:00 Break (tea & coffee)

11:00-12:00 **Poster Spotlight Presentations (Session 1)**

Chair: Daniele Cafolla, Swansea University

12:00-13:00 Lunch

Keynote

chair: Xianghua Xie, Swansea University

13:00-14:00 **In Silico ≠ AI – and Why the Difference Matters**

Alejandro Frangi, University of Manchester

14:00-14:20 **Best paper candidate session two**

chair: Xianghua Xie, Swansea University

14:00-14:10 Auditable AI Governance for Algorithmically Mediated Self-Harm Risks: A Brazil-EU Digital Health Framework

Adriano Galindo Leal (IPT - Instituto de Pesquisas

Tecnológicas); José Ricardo de Oliveira (IPT - Instituto de

Pesquisas Tecnológicas); Denis Bruno Virissimo (Institute for

Technological Research); Brenno Castrillon Menezes (Institute

for Technological Research); Vinícius Monteiro de Paula

Guirado (Universidade de São Paulo); Márcio Biczysk do Amaral

(Universidade de São Paulo)

14:10-14:20 Benchmarking Foundation Models for Pulmonary Embolism Diagnosis and Prognosis to Reveal Demographic Disparities

Milan Mohan (Stanford University); Saketh Lingisetty (Stanford

University); Umar Ahmad (Stanford University); Avi Kumar

(Stanford University); Shankar Harikrishnan (Stanford

University); Sanjana Chamarty (Stanford University); Kiran

Nijjer (Stanford University); Adnan Ahmed (York University)

- 14:20-14:30 **Patient data and privacy**
chair: Xianghua Xie, Swansea University
- Per-Patient Shapley Explanations Fail Silently Under Federated Privacy – and Warm-Start Restores Them
Iain Swift (Munster Technological University); JingHua Ye (Munster Technological University)
- 14:30-14:50 **Break (tea & coffee)**
- 14:50-16:30 **Poster Spotlight Presentations (Session 2)**
Chair: Daniele Cafolla, Swansea University
- 16:30-16:50 **Ethics of AI in healthcare**
chair: Hao Ni, University College London
- 16:30-16:40 Resampling for Clinical Predictions: Balancing Subgroup Utility, Calibration, and Explanation Stability
Paul Ellis (Cardiff University); Sylwia Polberg-Riener (Cardiff University)
- 16:40-16:50 A Safety Verification Framework for AI-Driven XR Clinical Simulators
David Dasa (Bournemouth University); Michele Board (Bournemouth University); Ursula Rolfe (Bournemouth University); Tom Dolby (i3 Simulations); Wen Tang (Bournemouth University)
- 16:50-18:00 **Machine & deep learning for health data**
chair: Stephen Smith, University of York
- 16:50-17:00 Learning Cardiac Features: ECG Biometrics Across Time and Exercise
Luca Thiébaud (LIS - Aix Marseille Université); Paul Chauchat (LIS - Aix Marseille Université); Mustapha Ouladsine (LIS - Aix Marseille Université); Stéphane Delliaux (APHM - Aix Marseille Université)

- 17:00-17:10 ClinTrialCQA: Benchmarking Corpus Scale Question Answering Over Clinical Trial Protocols
Daniel Goldwater (Parexel); Mohammed Terry-Jack (Parexel); Kenza Benkirane (Parexel); Martin Asenov (Parexel); Aneiss Ghodsi (Parexel)
- 17:10-17:20 DINO-Med: A Unified Patch-Based Adaptation Framework for Multi-Modal Medical Image Analysis Applied to Liver Fibrosis Staging
Boya Wang (University of Nottingham); Ruizhe Li (University of Nottingham); Chao Chen (University of Nottingham); Xin Chen (University of Nottingham)
- 17:20-17:30 Cross-Attention Fusion Improves Time-Series Foundation Model Performance in Short Horizon Forecasting Tasks in Data-Sparse Environments
Matt Ploszajski (Swansea University); Xianghua Xie (Swansea University); Gary Tam (Swansea University)
- 17:30-17:40 Empirical investigation of 3D CT Foundation Models and Unsupervised Adaptation for Head and Neck Cancer Recurrence Prediction
Bilel Guetarni (Université de Lille); Feryal Windal (JUNIA ; IEMN); David Pasquier (Centre Oscar Lambret ; Université de Lille); Halim Benhabiles (IMT Nord Europe)
- 17:40-17:50 Parameter-Efficient Multi-Task Learning for Biomedical Abbreviation Disambiguation
Vijayalakshmi Manikandan (Athabasca University); Dunwei Wen (Athabasca University); M. Ali Akber Dewan (Athabasca University)
- 17:50-18:00 The Impact of Temporal Harmonization on Patient Trajectory Analysis in Multiple Sclerosis
Niels Jodts (Ghent University - Imec); Lorin Werthen-Brabants (Ghent University - Imec); Charlotte Herzeel (Imec); Christel Meertens (Imec); Roel Wuyts (Imec); Bart Van Wijmeersch (Hasselt University - Noorderhart); Liesbet Peeters (Hasselt University); Tom Dhaene (Ghent University - Imec); Dirk Deschrijver (Ghent University - Imec)

Programme: Thursday 27th August

08:30	Registration (until 17.00)
09:00-10:00	Poster Spotlight Presentations (Session 3) <i>chair: Daniele Cafolla, Swansea University</i>
10:00-10:20	Predictive analytics and healthcare <i>chair: Daniele Cafolla, Swansea University</i>
10:00-10:10	Make better use of LOS prediction via a subgroup discovery: estimation in an Emergency Department <i>Nolwen Gallier (University of Caen Normandie); Bertrand Cuissart (University of Caen Normandie); Firas Abou Kassem (MyCareProcess, France); Ricardo Olivera Da Cunha (MyCareProcess, France); Francois Rioult (University of Caen Normandie)</i>
10:10-10:20	SynthEquity: A Privacy-Preserving Computational Framework for Identifying and Mitigating Medical Deserts Using Generative AI <i>Sarah Zhou (Castilleja School, USA)</i>
10:20-10:40	AI driven early diagnosis & prevention <i>chair: Daniele Cafolla, Swansea University</i>
10:20-10:30	Multi-Source Knowledge Graph RAG for LLM-Based Medical Diagnosis <i>Anirach Mingkhwan (KMUTNB); Kongkiat Kespechara (BDMS)</i>
10:30-10:40	NCD-CIE: A Causal-Informed Clinical Decision Support System with LLM Augmentation for Non-Communicable Disease Healthcare <i>Anirach Mingkhwan (KMUTNB); Kongkiat Kespechara (BDMS)</i>
10:40-11:00	Break (tea & coffee)

11:00-12:00	Poster Spotlight Presentations (Session 4) <i>chair: Daniele Cafolla, Swansea University</i>
12:00-13:00	Lunch
13:00-14:00	Keynote <i>chair: Stephen Smith, University of York</i> Generative AI in machine learning: Emerging risks for healthcare <i>Michael Lones, Heriot-Watt University</i>
14:00-14:15	A short walk from Blackett Laboratory to Royal Geographical Society
14:15-15:30	Poster Session One (Royal Geographical Society)
15:30-15:45	<i>poster change-over (Royal Geographical Society)</i>
15:45-17:00	Poster Session Two (Royal Geographical Society)
19:30-22:00	Conference Dinner (Great Hall, King's Building, King's College London WC2R 2LS)

Poster Session One

- P001 Beyond Trustworthy AI: Unstable Trust, Mental Health AI, and Proof Infrastructures in Healthcare Governance
Celine Gauthier-Maxence (CNRS / PSE); Carine Milcent (CNRS / PSE)
- P002 A Pipeline for Evaluating Context-Aware Privacy Risk in Synthetic Healthcare Narratives
Dalya Radwan (University of West London); Julie Wall (University of West London); Massoud Zolgharni (University of West London)
- P003 FedPhysio-Adapter: Federated CGM Forecasting with Physiology-Aware Adapters and Conformal Deferral
Sarmad Maqsood (Vytautas Magnus University); Muhammad Abdullah Sarwar (Kaunas University of Technology); Tomas Tamosiutis (Lithuanian University of Health Sciences); Egle Belousoviene (Lithuanian University of Health Sciences); Rytis Maskeliunas (Vytautas Magnus University)
- P004 Causal Analysis of Parkinson's Motor Symptoms Using Structured Smartphone Accelerometer Data
Abdulrahman Aloyayri (University of Birmingham); Max Little (University of Birmingham); Nawfal Zakar (University of Birmingham)
- P005 Orthogonal Array-Based Feature Selection for Traumatic Brain Injury Prognosis: A Metaheuristic Benchmarking Framework
Alireza Alibakhshi (University of West London); Arshian Hussain (University of West London); Nasim Dadashi Serej (University of West London); Isreal Ufumaka (University of West London); Hadis Ghasemi (Taras Shevchenko National University of Kyiv); Hosseinali Khalili (Trauma Research Center, Shahid Rajaei (Emtiaz) Trauma Hospital, Department of Neurosurgery); Massoud Zolgharni (University of West London)

- P006 **Uncertainty-Weighted Multi-Task Learning for Early Prediction of Functional Outcome and Length of Stay in Traumatic Brain Injury**
Arshian Hussain (University of West London); Alireza Alibakhshi (University of West London); Abas Abdi (University of West London); Isreal Ufumaka (University of West London); Nasim Dadashi Serej (University of West London); Hosseinali Khalili (Shahid Rajaee (Emtiaz) Trauma Hospital); Massoud Zolgharni (University of West London)
- P007 **A Generative AI Approach for Addressing Skin Tone Imbalance in Dermoscopic Datasets: A Feasibility Study**
Areez Muhammed Shabu (University of Sheffield); Mohammad Samar Ansari (University of Chester); Asra Aslam (University of Sheffield)
- P008 **Multimodal Data Fusion with Federated Multi-Head Attention for Diabetic Retinopathy Severity Classification**
John Ezembu (Dalhousie University); Josteve Adekanbi (Dalhousie University); Oladapo Oyeboode (Dalhousie University)
- P009 **Standardizing Lightweight Neural Adaptation of Pathology Foundation Models for Gene Mutation Prediction**
Mohsin Bilal (Prince Sattam bin Abdulaziz University)
- P010 **MvSG-MI: Multi-View Spectral Graph Learning with Temporal Segmentation for Motor Imagery EEG Classification**
Fauzia Yasmeen (Indian Institute of Technology (BHU) Varanasi); Puneet Jangra (Indian Institute of Technology (BHU) Varanasi); Neeraj Sharma (Indian Institute of Technology (BHU) Varanasi); Shiru Sharma (Indian Institute of Technology (BHU) Varanasi)
- P011 **Interpretable Wearable Gait Phenotyping Identifies Elevated Prodromal Burden in Parkinson’s Disease**
Dante Trabassi (Sapienza University of Rome)

- P012 Latent Gait Instability Reveals a Biomechanical Transition to Falls in Parkinson's Disease
Dante Trabassi (Sapienza University of Rome)
- P013 Predicting the outcome of retinal reattachment surgery with AI
Raheleh Kafieh (Durham University); Ilevante Vasas (Durham University); Nik Tzoumas (Newcastle University); David H Steel (Newcastle University)
- P014 OCT-Derived Retinal Biomarkers for Systemic Disease Monitoring in Alport Syndrome: A Machine Learning Study
Raheleh Kafieh (Durham University); Charlie Thompson (Durham University); Nik Tzoumas (Newcastle University); David H Steel (Newcastle University)
- P015 Trained on the Neurotypical, Deployed on the Neurodivergent: NLP, Mental Health, and the Behavioural Validity Gap
Dr Hina Tahseen (Somerset NHS Foundation Trust); Syed Ghazi Abbas (Independent Researcher)
- P016 Gender-Differentiated Medical Advice in a RAG-Based Healthcare AI Assistant: Findings from a Finnish System
Enni Sanmark (HUS and University of Helsinki)
- P017 Real-time Body Core Temperature Prediction in Military Training: An Arm-Worn Sensor Approach
XIAOHAN ZHANG (Heat Resilience & Performance Centre); Alexandria Marie Remus (Heat Resilience & Performance Centre); WEI LIN (Heat Resilience & Performance Centre); Wee Hon Ang (Heat Resilience & Performance Centre); Lydia Yu Li Law (Heat Resilience & Performance Centre); Jason Kai Wei Lee (Heat Resilience & Performance Centre)
- P018 A stability-driven clustering framework for clinical data: application of paediatric Hypertrophic

Cardiomyopathy identifies patient groups with distinct outcomes

Cameron Taylor (UCL)

P019 Weighted Mean SHapley Additive exPlanations (WMSHAP)

E. F. Haghish (University of Bergen)

P020 Generative AI-Tailored Shared Reading for Pediatric Ophthalmic Education

Hsin-Ming Liu (Mackay Memorial Hospital); Ann Yi-Chiun Chuang (Mackay Memorial Hospital)

P021 Explainable Graph-Based Modelling of Drug Cardiotoxicity from Metabolic Reaction Data

Davide Tugnoli (InSilicoTrials Spa); Gloria Pietropolli (University of Trieste); Simona Catozzi (InsilicoTrials Spa); Daniel Roeshammar (InsilicoTrials Spa); Mario Torcia (InsilicoTrials Spa); Valerio Valente (InsilicoTrials Spa); Paolo Messina (InsilicoTrials Spa); Juan Carlos Vasquez Carmona (InsilicoTrials Spa)

P022 Client AI-First Disclosure in Social Work: Readiness Gaps, Ethics, and Organizational Governance

Davide Tugnoli (InSilicoTrials Spa); Gloria Pietropolli Ho Nam Cheung (The University of Hong Kong); Erin Li (The University of Hong Kong); Vivian Lou (The University of Hong Kong)

P023 CogVis: A Human-Centred Interface for High-Dimensional Alzheimer's Disease Data

Nellia Kornilova (University of Nottingham); Nellia Kornilova (University of Nottingham); Beili Shao (University of Nottingham); Robert S. Laramée (University of Nottingham)

P024 Multi-modal Data Integration Improves Metastatic Risk Prediction of Stage I/II Melanomas Beyond Staging: Results from the Population-based Dutch Early-stage Mela-noma Study (D-ESMEL)

Yunlei Li (Erasmus University Medical Center); Jasper Ouwerkerk (Erasmus University Medical Center); Thamila

Kerkour (Erasmus University Medical Center); Catherine Zhou (Erasmus University Medical Center); Antien Mooyaart (Erasmus University Medical Center); Andrew Stubbs (Erasmus University Medical Center); Marcel Reinders (Delft University of Technology); Loes Hollestein (Erasmus University Medical Center)

P025 Predicting Sepsis Mortality with Expert-Guided, Calibrated Stacking

Akifa Khan (Institute of Business Administration, Karachi); Hina Farheen (Institute of Business Administration, Karachi); Ayesha Salman (Institute of Business Administration, Karachi); Naveed Rehman (Aga Khan University Hospital, Karachi); Tariq Mahmood (Institute of Business Administration, Karachi)

P026 Beyond Discrimination: Calibration and Decision Curve Analysis for 12-Month Survival Prediction After Liver Transplantation – A Retrospective Evaluation

Adriano Galindo Leal (IPT - Instituto de Pesquisas Tecnológicas); Jose Ricardo de Oliveira (IPT - Instituto de Pesquisas Tecnológicas); Rodrigo Luiz Macacari (Hospital das Clínicas (HCFMUSP), Faculdade de Medicina, Universidade de São Paulo); Ben-Hur Ferraz Neto (Instituto do Fígado, Rede Américas do UnitedHealth Group Brasil)

P027 Peak-Aware Two-Stage LSTM Forecasting of Patient Arrivals in Welsh Emergency Departments

Megan Morgan (Swansea University); Alma Rahat (Loughborough University); Gareth Jenkins (NHS); Jiaxiang Zhang (Swansea University)

P028 Do More Modalities Really Help? Evidence from Controlled Multimodal Clinical Prediction

Suchit Bhai Patel (La Trobe University); Manik Gupta (BITS Pilani Hyderabad); Mei-Tai Chu (La Trobe University)

P029 Controlling for Confounding Bias in Linear Prediction Models for Binary Classification

Marta Avalos-Fernandez (University of Bordeaux)

- P030 **Ontology-Constrained Interpretable Path Exploration for Clinical Knowledge Discovery across Traditional Chinese Medicine and Modern Biomedicine**
Xian Zhu (Nanjing University of Chinese Medicine); Qijuan Bian (Nanjing University of Chinese Medicine); Li Yang (Nanjing University of Chinese Medicine); Li Tang (Nanjing University of Chinese Medicine); Chao Chen (University of Nottingham)
- P031 **Bridging the Data Gap: A Hybrid Data Augmentation Approach for Early HIV Screening via Dialogue Classification**
Zhiyang Qi (The University of Tokyo); Haruto Saito (University of Electro-Communications); Ryuma Koseki (University of Electro-Communications); Mai Suzuki (Juntendo University Hospital); Sanae Kubota (Juntendo University Hospital); Toshio Naito (Juntendo University Hospital); Michimasa Inaba (University of Electro-Communications); Chiyoko Kameue (University of Electro-Communications); Haruka Matsukura (University of Electro-Communications); Maki Sakamoto (University of Electro-Communications)
- P032 **Evaluating Counterfactual Explanations in AI-Based Decision Support for Type 2 Diabetes Prevention: A Qualitative Expert Study**
Liv Ziegfeld (TNO (Netherlands Organisation for Applied Scientific Research)); Romy van Drie (TNO (Netherlands Organisation for Applied Scientific Research)); Ajaya Adhikari (TNO (Netherlands Organisation for Applied Scientific Research)); Jasper van der Waa (TNO (Netherlands Organisation for Applied Scientific Research))
- P033 **Longitudinal Brain MRI and Cognitive Trajectories for Dementia Risk Stratification**
Kongkiat Kespechara (Bangkok Hospital Phuket); Tanawat Fongsri (Bangkok Hospital Phuket); Sirisak Yaisoongnern (Bangkok Hospital Phuket); Dr.Anirach Mingkhwan (King Mongkut's University of Technology North Bangkok)

- P034 DocAgent-XAI: An Entropy-Guided Agentic RAG System for Adaptive and Explainable Clinical History-Taking
Samir Jabbar (Université Bourgogne Europe); Oualid Bougzime (Université de technologie de Belfort Montbéliard); Christophe Cruz (Université Bourgogne Europe); Maria Alice Bertolim (Université Bourgogne Europe, ESEO)
- P035 A Multimodal AI-driven Pipeline for Variant Prioritization in Genetic Disorders: Integrating Genomic and Phenotypic Data
Gabriella Trucco (University of Milan)
- P036 FastAPI-Based AI Prototype for Privacy-Preserving Keystroke Analysis in Parkinson’s Detection
Maedeh Golmohammadi (University of the West of England); Domenico Santaniello (University of Salerno); Francesco Colace (University of Salerno); Angelo Lorusso (Pegaso University); Muhammad Khan (University of the West of England)
- P037 Image-based Survival Prediction of Lung Cancer
Eleonora Blazhko (MTU); Ruairi O Reilly (MTU)
- P038 Condition-Specific Structural Heart Disease Screening from ECG Features: An Interpretable Binary Relevance Machine Learning Analysis
Paola Brena (Bryant Univeristy); Nafees Qamar (Bryan University)
- P039 Achieving Fair Skin Lesion Detection through Skin Tone Normalization and Channel Pruning
Zihan Wei (University College London); Tapabrata Chakraborty (University College London)
- P040 Hybrid Sampling with Structured-Text Features for Chronic Pain Prediction in Cognitive Impairment
Do Kieu Trang Thoi (Virginia Tech); Huaiyang Zhong (Virginia Tech); Robert S. McNamara (Virginia Tech Carilion School of Medicine); Jyoti Savla (Virginia Tech)
- P041 Glaucoma and Age-Related Macular Degeneration Detection through Deep Learning: A Comparative Study of AI-Guided Methodologies

Mahdi Hadeef (EMP); yacine said boulehia (EMP); Abdenour Amamra (EMP)

- P042 **LightFusionNet: A Lightweight Multimodal Fusion Framework Combining Facial Dynamics and rPPG Signals for Depression Severity Detection**
Muhammad Bilal (Ghulam Ishaq Khan Institute of Engineering Sciences and Technology); Muhammad Turyalai Khan (Guangdong CAS Cogniser Information Technology Co. Ltd., Guangzhou); Faisal Shafait (Guangdong CAS Cogniser Information Technology Co. Ltd.); Hassan Aqeel Khan (Aston University)
- P043 **Architectural Separation for Privacy-Preserving LLM-Assisted Nursing Handovers in Resource-Constrained Healthcare**
SAYANTAN MANDAL (Visvesvaraya National Institute of Technology); ASHISH TIWARI (Visvesvaraya National Institute of Technology)
- P044 **Early Real-World Clinical Evaluation of an AI-Enabled Decision Support System for Referral Triage in LMIC Primary Care**
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- da Silva (Universidade Federal de Minas Gerais); Juan González (Universidade Federal de Minas Gerais)*
- P144 Reinforcement Learning for Coherent Phase Segmentation of the Clinical Timed Up & Go Test
Muntazir Rashid (Independent Researcher); Arshad Sher (Nottingham Trent University); Isibor Ihianle (Nottingham Trent University); Otar Akanyeti (Aberystwyth University)
- P145 Machine Learning Models in Pan-Cancer Research: A Review of Validation, Interpretability, and Clinical Usefulness
Adedayo Olowolayemo (CCCU); Amina Souag (CCCU)
- P146 Hybrid Regular Expression and Large Language Model Pipeline for Structured Extraction of Histopathology Reports
Benedict Reed (Royal Free Hospital); Afshin Mosahebi (Royal Free Hospital)
- P147 Agentic AI Framework for Training and Explaining AI Models: Use Case Prediction of Body-mass Index from Electrocardiogram
Kawai Leung (Novo Nordisk); Elias Abou Zeid (Novo Nordisk)
- P148 A Cascaded Deep Learning and Clinical Fusion Framework for Clinically Significant Prostate Cancer Detection Using Biparametric MRI
Tom McCloy (Swansea University); Xianghua Xie (Swansea University)
- P149 Single-Solution Calibration Conceals Mechanical Extrapolation Uncertainty in Arterial Modelling
Callum Macaulay (University of Glasgow), Dirk Husmeier (University of Glasgow), Vinny Davies (University of Glasgow)
- P150 Field-Level Malaria Detection from Microscopic Images: A Comparative Study Using a Curated Dataset
Sabrina Nefoussi (URDNRTBC); Sami Maiouh (HCA); Dhia Elhak Menadi (École Militaire Polytechnique); Yousra Zabat (École Militaire Polytechnique); Sanaa Meriem Bouri (École Militaire Polytechnique); Brahim Hadji (Directorate of Research and Development)

P151

Artificial Intelligence-Based Malaria Diagnosis: A
Critical Review, Taxonomy, and Open Challenges
Toward Explainable and Deployable Systems

Aliou Cisse (Cheikh Anta Diop University (UCAD), Senegal);

Ibrahima Niang (Cheikh Anta Diop University (UCAD), Senegal)

Programme: Friday 28th August

08:30 Registration (until 12.00)

Keynote

chair: Hao Ni, University College London

09:00-10:00 From Networks to Digital Health: An AI-Driven Integrative Approach to Healthcare
Huiru Zheng, Ulster University

10:00-10:20 AI led personalised healthcare

chair: Hao Ni, University College London

10:00-10:10 Explicit Prompting Unlocks Evidence Transfer in LLM-Generated Medical Risk Summaries

Ashik Ahamed (Clarkson University); Garrett Ash (Yale School of Medicine); Jeanna Matthews (Clarkson University)

10:10-10:20 Transition-Based Digital Twin Modelling for Alzheimer's Disease under Sparse Longitudinal Data
Yinyu Huang (University of Southampton); Yilin Zhang (University of Southampton); Sofia Michopoulou (University of Southampton); Christopher Kipps (University of Southampton); Rahman Attar (University of Southampton)

10:20-10:40 AI in Pharmacology: drug discovery & drug development

chair: Hao Ni, University College London

10:20-10:30 MambaDDI: A Hybrid State Space Framework for Multiclass Drug-Drug Interaction Prediction
Sathya Abhijna Marisetti (International Institute of Information Technology Hyderabad); Maitreya Maity (International Institute of Information Technology Hyderabad); Deva Priyakumar U (International Institute of Information Technology Hyderabad)

- 10:30-10:40 **A Controlled Study of Tokenizer Scale in SMILES-Based Foundation Models**
Seongik Choi (Ghent University Global Campus); Ju Hyung Lee (Ghent University Global Campus); Utku Ozbulak (Ghent University Global Campus); Joris Vankerschaver (Ghent University Global Campus); Wesley De Neve (Ghent University Global Campus)
- 10:40-11:00 **Break (tea & coffee)**
- 11:00-11:20 **AI driven proactive care and predictive intervention**

chair: Baidaa Al-Bander, Keele University
- 11:00-11:10 **From Accuracy to Reliability: AI-Based Respiratory Mechanics Estimation under Noise and Clinical Variability**
Ashhadul Islam (KTH Royal Institute Of Technology); Fredrik Jalde (Getinge AB); Erik Fransén (KTH Royal Institute Of Technology)
- 11:10-11:20 **Leveraging CNN-Based Cataract Detection for Remote Screening: A Mixed-Methods Feasibility Study in Ghana**
Nicole Nhyira Nanka-Bruce (Ashesi University); Kwabena Bamfo (Ashesi University)
- 11:20-11:50 **Trustworthy AI**

chair: Hassan Khan, Aston University
- 11:20-11:30 **Evaluating Pneumonia Classification Robustness across Architectures under Variable-Quality Chest Radiographs**
Wissam Harib (Aston University); Shereen Fouad (Aston University); Aniko Ekart (Aston University); Bahadar Bhatia (SANDWELL AND WEST BIRMINGHAM HOSPITALS NHS TRUST); Arvind Rajasekaran (SANDWELL AND WEST BIRMINGHAM HOSPITALS NHS TRUST)

11:30-11:40	Trustworthy On-Device Retinal Screening: A Distilled, Calibrated, and Explainable Model for Consumer Smartphones <i>Amarnath K R (Amrita Vishwa Vidyapeetham); Gopal S Pillai (Amrita Vishwa Vidyapeetham); Merin Dickson (Amrita Vishwa Vidyapeetham)</i>
11:40-11:50	Explaining Unsupervised Disease Staging in Huntington's Disease: Insights into Model Representations and Clusters <i>Lubna Abu Zohair (Heriot-Watt University); Hind Zantout (Heriot-Watt University)</i>
11:50-12:00	Multimodal generative AI <i>chair: Hazrat Ali, University of Stirling</i> From Segmentation to Scoring: Clinically-Aligned ASPECTS Prediction on NCCT Using Slice-Gated Loss <i>Hiba Azeem (Aga Khan University); Tahir Syed (Institute of Business Administration); Behraj Khan (Institute of Business Administration); Hazrat Ali (University of Stirling); Adeeqa Aman (Aga Khan University); Shayan Anwar (Aga Khan University); Zainab Samad (Aga Khan University); Aysha Almas (Aga Khan University)</i>
12:00-13:00	Lunch
	Keynote <i>chair: Daniele Cafolla, Swansea University</i>
13.00-14:00	Challenges in Rehabilitation Robotics: Examples of Innovative Solutions <i>Giuseppe Carbone, University of Cassino, Italy</i>

- 14:00-14:20 **Intelligent systems & robotics**
chair: Daniele Cafolla, Swansea University
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- 14:00-14:10 **Multisensor Wearable System for Human Limb Motion Monitoring: Design and Future Integration with Intelligent ALMATY-EXO Platforms**
Zhetenbayev Nursultan (Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev); Bizhanov Dauren (Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev); Kurmangazy Maksat (Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev); Almazuly Aibat (Qazaq Youth Science Hub); Sergazin Gani (Department of Science and Innovations, Mukhametzhan Tynyshbayev ALT University); Ozhikenova Aiman (Satbayev University)
- 14:10-14:20 **3D Printing in Wearable Rehabilitation Robotics: A Review and Development of the Modular ALMATY-EXO System**
Zhetenbayev Nursultan (Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev); Bizhanov Dauren (Almaty University of Power Engineering and Telecommunications named after Gumarbek Daukeyev); Almazuly Aibat (Qazaq Youth Science Hub); Sergazin Gani (Department of Science and Innovations, Mukhametzhan Tynyshbayev ALT University); Ozhikenova Aiman (Department of Robotics and Technical Means of Automation, Satbayev University)
- Ambient assistive living**
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- 14:20-14:30 **Emotion Recognition in Older Adults' Speech: Toward Empathetic Conversational AI in Ambient Assisted Living**
Nadeesha Naradde Vidana Pathirana (Aston University); Amal Htait (Aston University); Elizabeth Wanner (Aston University)

AI innovations in autism diagnosis

chair: Daniele Cafolla, Swansea University

- 14:30-14:40 Attention-Enhanced 3D CNNs for ASD Classification from Structural MRI: A Comparison with Transformer-Based Models
Sahar Alkhaibari (University of Strathclyde); Feng Dong (University of Strathclyde)

- 14:40-15:00 Break (with tea & coffee)

15:00-15:30 Medical image analysis and processing

chair: Xianghua Xie, Swansea University

- 15:00-15:10 Phase-Guided Quality Regression in Apical Echocardiography via CNN-LSTM: A Systematic Backbone Benchmarking Study
Alireza Alibakhshi (University of West London); Jevgeni Jevsikov (Imperial College London); Isreal Ufumaka (University of West London); Rana Binmadi (Imperial College London); Tiffany NG (Imperial College London); Catherine C Stowell (Imperial College London); Arshian Hussain (University of West London); Abas Abdi (University of West London); Nasim Dadashi Serej (University of West London); Matthew J Shun-Shin (Imperial College London); Darrel P Francis (Imperial College London); Charlotte H Manisty (Barts Heart Centre and University College London); Massoud Zolgharni (University of West London)
- 15:10-15:20 A Dual-Domain Grayscale-Wavelet Reparameterization Network for Upper-Limb Long-Bone Abnormality Detection on X-ray Images
Zahra Moradi Pour (University of Florence); Stefano Berretti (University of Florence)

15:20-15:30	GAZE: Grounded Agentic Zero-shot Evaluation with Viewer-Level Tools and Literature Retrieval on Rare Brain MRI <i>Duaa Alim (Imperial College London); Mogtaba Alim (University of Toronto); Liam Chalcraft (University College London)</i>
15:30-15:50	Healthcare workflow optimisation and automation <i>chair: Xianghua Xie, Swansea University</i>
15:30-15:40	Reducing Outpatient No-Shows with Adaptive Reminder Strategies: A Simulation Framework for Contextual Bandit Learning and Data Requirements <i>Ulf Lesley (Stockholm University); Tomas Nordström (Umeå University); Sindri Magnússon (Stockholm University); Adam Carstens (Ersta Hospital)</i>
15:40-15:50	AI-Assisted Rare Metabolic Disease Screening from Targeted LC-HR-MS: A Human-in-the-Loop Pipeline with Synthetic Data Augmentation <i>Matt Ploszajski (Swansea University); Mohsen Ali Asgari (Swansea University); Gary Tam (Swansea University); William Griffiths (Swansea University); Yuqin Wang (Swansea University); Xianghua Xie (Swansea University)</i>
	STARS: State-of-The-ARt Survey (selected) <i>chair: Xianghua Xie, Swansea University</i>
15:50-16:00	From Conversation to Clinical Documentation: A Survey of AI-Driven Pipelines and Localisation for Croatian Healthcare <i>Andrea Rakocija (University of Zagreb); Daniel Hofman (University of Zagreb); Uroš Todorović Mikšaj (University of Zagreb); Hrvoje Mlinarić (University of Zagreb)</i>
16:00-16:20	DoRA-PVS Challenge <i>chair: Xianghua Xie, Swansea University</i>

Assessing Generalisation of Perivascular Space Segmentation Across Heterogeneous MRI Cohorts: The DoRA-PVS Challenge 2026

Sumeet Dash (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)); Maria Valdés-Hernández (The University of Edinburgh); William Pham (Monash University); Mohamed Salah Khlif (Monash University); Amy Brodtmann (Monash University); Marc Joliot (GIN/IMN-UMR5293, CEA, CNRS, University of Bordeaux); Philippe Boutinaud (DV-Digital); Victor Nozais (DV-Digital); Sebastian Ibarra (Universitat de Barcelona); Karim Sleiman (Concordia University); Aron Gimesi (Instituto Superior Técnico); Rachika E. Hamadache (University of Girona); Kaouther Mouheb (Erasmus MC); Xavier Llado (University of Girona); Yuan Cao (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)); Roberto Duarte Coello (The University of Edinburgh); Hendrik Mattern (Otto-von-Guericke Universität); Katja Neumann (University Hospital Magdeburg); Philipp Arndt (University Hospital Magdeburg); Malte Pfister (University Hospital Magdeburg); Coretta Dongmo (University Hospital Magdeburg); Carolin Beck (University Hospital Magdeburg); Huy Trong Mai (University Hospital Magdeburg); Erelle Fuchs (Otto-von-Guericke Universität); Serena Tang (University of California San Francisco); Duygu Tosun (University of California San Francisco); Bianca Besteher (Jena University Hospital); Tonia Rocktäschel (Centre for Intervention and Research on Adaptive and Maladaptive Brain Circuits Underlying Mental Health (C-I-R-C), Halle-Jena-Magdeburg); Philipp Reuken (Jena University Hospital); Andreas Stallmach (Jena University Hospital); Nils Opel (Charité - Universitätsmedizin Berlin); Martin Walter (Jena University Hospital); Christian Gaser (Jena University Hospital); Marc Doerner (University Hospital Zurich); Daniel Behme (University Hospital Magdeburg); Christiane Piechowiak (University Hospital Magdeburg); Yves Lading (University Hospital Magdeburg); Patrick Mueller (University Hospital Magdeburg); Rüdiger Braun-Dullaeus (University Hospital Magdeburg); Sven G. Meuth (Universitätsklinikum Münster);

*Merel M. van der Thiel (Maastricht University Medical Center);
Jacobus F. A. Jansen (Maastricht University Medical Center);
Eva M. van Heese (Amsterdam University Medical Centre); Max
A. Laansma (Amsterdam University Medical Centre); Joanna
Wardlaw (The University of Edinburgh); Stefanie Schreiber
(University Hospital Magdeburg); Jose Bernal (Friedrich-
Alexander-Universität Erlangen-Nürnberg (FAU))**

16:20-16:30 **Best Poster Prize & Closing remarks**

Tutorial:

Translating AI in Clinical Practices



Stephen Smith
University of York

Stephen is currently a Professor in the School of Physics, Engineering and Technology at the University of York, has a BSc in Computer Science, an MSc (by Research) and PhD in Electronic Engineering. His research has always been concerned with the application of computers to problems in healthcare. His current research interests include developing novel representations for evolutionary algorithms, particularly applied to the diagnosis of neurological dysfunction and analysis of mammograms. Stephen has authored over 75 refereed publications, is a Chartered Engineer and a Fellow of the British Computer Society. He is an Associate Editor for the journal Genetic Programming and Evolvable Machines and a member of the editorial board for the International Journal of Computers in Healthcare and Neural Computing Applications.

Keynote:

In Silico $\neq$ AI – and Why the Difference Matters



Alejandro Frangi
University of Manchester

Artificial intelligence and in silico medicine are increasingly spoken of as if they were one and the same. They are not. AI names a method – learning input-output associations from data. In silico medicine names a destination – evaluating therapies, devices and care pathways on a computer, whether by learning from data or by simulating first principles. This lecture offers a clean vocabulary for a community fluent in the former and increasingly drawn to the latter. It separates data-driven learning, which learns the rules, from mechanistic simulation, which encodes them; locates scientific machine learning as the deliberate hybrid between them; and argues that a single idea – credibility for a stated context of use – is the common currency for trusting any computational model, learned or mechanistic. It then shows that regulators have already split their

vocabulary, placing physics-based models and AI/ML under separate frameworks, and asks whether that split can survive the rise of hybrids. The argument lands on exemplars where *in silico* evidence is already regulatory-grade – *in silico* trials of devices, fully synthetic imaging trials, and cardiac digital twins – and where the strongest cases braid mechanism with data.

Professor Alejandro F. Frangi is the Bicentenary Turing Chair in Computational Medicine at the University of Manchester, with joint appointments in Computer Science and Health Sciences, and holds a Royal Academy of Engineering Chair in Emerging Technologies focused on precision computational medicine for *in silico* medical-device applications. He is Executive Director of the UK Centre of Excellence on *In Silico* Regulatory Science and Innovation (UK CEiRSI), which works with regulators to bring computer-modelled evidence and synthetic data into life-sciences innovation. His research spans model-based cardiovascular and cerebrovascular image computing, virtual patients and digital twins, and the machine-learning methods that increasingly connect them. He holds an ERC Advanced Grant, was an Alan Turing Institute Fellow, has published over 345 journal articles (h-index 88; more than 44,000 citations), and is a Fellow of the Royal Academy of Engineering, IEEE, SPIE, MICCAI, EAMBES and ELLIS. He has co-founded three spin-outs – GalgoMedical, adsilico and OculomeX – translating *in silico* methods into clinical and regulatory practice. Away from research, he writes and records music on themes of family, faith and fable through *Cantus in Silico*.

Keynote:

From Networks to Digital Health: An AI-Driven Integrative Approach to Healthcare



Huiru Zheng, Ulster University

The rapid advances in artificial intelligence, high-throughput biomedical technologies, and digital health have transformed healthcare into a data-intensive discipline. Today's healthcare challenges require the integration of heterogeneous information spanning biological networks, multi-omics profiles, clinical records, medical imaging, wearable devices, and patient-generated health data. Harnessing these diverse data sources is fundamental to advancing personalise healthcare and improving patient outcomes.

Drawing on research in computational biology, systems medicine, network biology, multi-omics integration, biomarker discovery,

cancer informatics, clinical decision support, and digital health, this presentation will demonstrate how an AI-driven integrative approach can uncover complex disease mechanisms, identify clinically relevant biomarkers, support patient stratification, and enable more personalised and proactive healthcare. The keynote will also discuss the challenges of data interoperability, model explainability, privacy, ethical governance, and clinical validation.

Prof. Huiru (Jane) Zheng is a Professor of Computer Science with School of Computing and Mathematics, a full member of Computer Science Research Institute and a Fellow of the UK Higher Education Academy. She was awarded a PhD in Bioinformatics in 2003 and a Postgraduate Certificate in Teaching in Higher Education in 2005 from Ulster University.

Prof. Zheng is an active researcher in bioinformatics and healthcare informatics. Within her broad interests in data mining, data integration, machine learning and healthcare decision support, Prof. Zheng has a particular research interest and expertise in integrative data analytics in the field of systems biology, and intelligent data analysis and assistive technology to support healthcare and independent living. She has a successful track record of winning research funding as a principal investigator and has been a grant holder of research projects funded by EPSRC, TSB, DEL, NHS, Invest NI and European Commission including SMART Self Management, NOCTURNAL, CLARCH COPD Self Management, Self Management Platform for Connected Health, CardioWorkBench, mHealth4Afrika, SenseCare and MetaPlat. The products of her research have been reflected in her over 200 peer reviewed journal and conference publications.

Prof. Zheng is an IEEE member. She serves on the editorial board of several international journals and serves as co-chairs and program committees of a number of international conferences.

Keynote:

Generative AI in machine learning: Emerging risks for healthcare



Michael Lones
Heriot-Watt University

Generative AI is rapidly becoming embedded within machine learning (ML) workflows, from data generation and preprocessing to model design, analysis, and decision support. In healthcare, this integration promises major advances, enabling richer data, faster development cycles, and more capable clinical decision systems. However, it also introduces new and often poorly understood risks.

Generative models can amplify long-standing ML pitfalls, such as bias, data leakage, and evaluation errors, while also introducing new challenges around data provenance, security, explainability, and operational control. When deployed across multiple stages of an ML

pipeline, these systems can create complex interactions and feedback loops that are difficult to predict, audit, or regulate, with direct implications for patient safety and clinical trust.

This keynote presents a structured view of how generative AI is currently used within ML workflows, examines the risks associated with each role, and then explores how these risks combine at the systems level. It aims to equip researchers, practitioners, and decision-makers with the tools needed to assess when and how generative AI should be used in healthcare ML - and, importantly, when it should not.

Dr. Lones is a Professor in the School of Mathematical and Computer Sciences, Heriot-Watt University, Edinburgh. His research focuses on machine learning and optimisation, including the development of new methods, applied work in medicine, biology and security, and broader issues around dependability and reproducibility. Professor Lones is a member of the Bio-inspired Computing and Machine Learning, ML-Health, and Lab for AI Verification research groups, and the Edinburgh Centre for Robotics.

Keynote:

Challenges in Rehabilitation Robotics:

Examples of Innovative Solutions



Giuseppe Carbone
University of Calabria, Italy

Giuseppe Carbone received his PhD degree in Robotics from the University of Cassino, Italy, in 2004. He has been Visiting Professor at Universidad Carlos III of Madrid, Beihang University, Waseda University, East China Jiaotong University, and several other well-reputed international research institutions. Since 2020, he has been Chair of the IFToMM Technical Committee on Robotics and Mechatronics. Since 2018, he has been with the University of Calabria, Italy. From 2018 to 2021, he was Visiting Professor at Sheffield Hallam University, UK, where he previously served as Senior Lecturer and

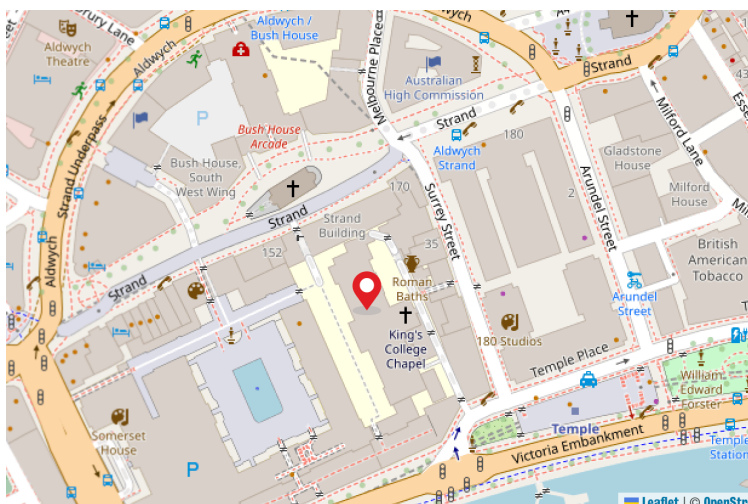
member of the Executive Board of Sheffield Robotics from 2015 to 2017. He has been Scientific Director of the International Research Laboratory on Intelligent Robotic Systems and Technologies. He is Editor-in-Chief of *Robotica* (Cambridge University Press), Section Editor-in-Chief of the *Journal of Bionic Engineering*, Editor of *MDPI Robotics* and *MDPI Machines*, and Technical Editor of the *IEEE/ASME Transactions on Mechatronics*. He has been Principal Investigator or Co-PI of more than 20 research projects, including projects funded under the 7th European Framework Programme and H2020. He has received more than 20 Best Paper Awards and over 10 International Best Patent Awards. His research interests include Engineering Design, Robot Mechanics, Mechanics of Manipulation and Grasping, and Machinery Mechanics. His scientific output includes over 500 research papers, 20 patents, and 16 completed PhD supervisions (with 5 ongoing). He has also served as a member of 20 PhD evaluation committees in Italy, Spain, Finland, the UK, Romania, Mexico, India, and other countries. He has delivered keynote speeches and invited lectures at more than 30 international events. He has edited or co-edited four books published by Springer and Elsevier. His h-index is 40, with more than 6,000 citations (Google Scholar). In January 2023, he received an *Honoris Causa* Doctoral Degree from the Technical University of Cluj-Napoca (Romania), and in June 2023, an *Honoris Causa* Doctoral Degree from the University of Craiova (Romania).

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The conference banquet is hosted in the Great Hall of the King's Building (B in the map below). Banquet starts from 7.30PM.



GOLD



BEST PAPER AWARD

