Future Blood Testing Network+

Future Blood Testing Network+: Digital Health Conference

21-22 November 2024
Henley Business School's Greenlands Campus, Henley-on-Thames

Programme

UKRI Engineering and Physical Sciences Research Council
University of Reading
The University of Nottingham
University of Kent
University of Southampton
Warwick The University of Warwick

Welcome

Dear Delegate

We are excited to invite you to our EPSRC Future Blood Testing Network+: Digital Health Conference 2024, taking place on 21st-22nd November 2024 at Henley Business School Greenlands Campus in Henley-on-Thames.

The Future Blood Testing Network+ is dedicated to creating a multidisciplinary community focused on developing digital health technologies for remote, rapid, affordable, and inclusive monitoring and personalized analytics. Our goal is to address three technology challenges, namely remote monitoring, information and communication technology, personalised analytics and artificial intelligence (AI). This Network Plus is funded by EPSRC under Grant No: EP/W000652/1.

The 2-day workshop will bring together industry leaders, academics, healthcare professionals, and policymakers to exchange insights and foster collaboration in the fast-evolving field of health technology. In the past two years, we have successfully hosted conferences such as **Future Blood Testing: Challenges and Opportunities 2022 Conference** and the **Future of Healthcare: Remote Blood Testing, Monitoring & AI 2023 Conference**. This year, we will focus on digital health technologies, the role of AI in healthcare, and the challenges these innovations present to life, work, and society.

Highlights include:

- Discussions on cutting-edge **AI** and **digital health** advancements
- The launch of our **UK Laboratory Landscape Report**
- Announce **achievements** and **future opportunities** in Future Blood Testing Network+
- A Panel discussion exploring the future of healthcare and its impact on the workforce, co-hosted by the **World of Work Institute (WOWI)**

Register here: **https://futurebloodtesting.org/fbtn2024**

This workshop is an excellent opportunity to harness new ideas and conduct thought provoking conversations on how we can progress in these areas, and we are delighted that you could join us over the next two days.

Professor Weizi (Vicky) Li
Director of the Future Blood Testing Network+

Agenda

Thursday 21st November 2024

Time	Session 1: Session chair - Dr Samantha Pearman-Kanza *(University of Southampton)*	Location
10:00	**Guest arrival, Coffee & Registration**	River House Upper Conference room
10:20	**Welcome and General Information**	
10:25	**Digital Technology, Data and Artificial Intelligence in Healthcare** Prof Weizi (Vicky) *Li (University of Reading, Director of Future Blood Testing Network+)*	
10:40	**Data Science and AI to leverage Big BioMedical Data for the benefit of patients** Prof Jean-Baptiste Cazier *(The Francis Crick Institute)*	
11:05	**Delivering the Thames Valley and Surrey NHS Secure Data Environment** Kerrie Woods *(Oxford University Hospitals NHS Foundation Trust)*	
11:35	**A Radical Solution to the Visualisation and Interaction with Timeline Structured Information** Dr David Rew *(University Hospital Southampton)*	
12:00	**Lunch and Networking**	Heyworth Restaurant
Time	**Session 2: Session chair- Dr Bing Zhai (*Northumbria University*)**	**Location**
13:00	**The State of UK Diagnostics Post-COVID: Piecing Together the Landscape** Prof Dimitris Grammatopolous *(University of Warwick and UHCW NHS Trust)*	River House Upper Conference room
13:30	**The Future of Blood Testing for Digital Remote Care from Home for Precision Healthcare and Predictive Medicine -** Dr Hector Zenil *(King's College London)*	
13:55	**Data for developing diagnostics: measuring, protecting, analysing data** Dr Mark Preston *(Prismea Limited)*	
14:20	**The future of high quality immunoassay data- Certimmune** Dr Andrea Tattersall *(Revvity)*	
14:45	**Development of a blood-based POC assay for real-time monitoring of inflammatory conditions such as sepsis and cancer -** Dr David Sarphie *(Seroxo Ltd)*	
15:10	**Coffee Break & Networking**	
Time	**Session 3: Session chair - Tim Dong *(University of Bristol)* & Dr Bing Wang *(University of Reading)***	**Location**
15:40	**Ageing and Health: Genetic, epigenetic, and external influences** Dr Archana Sharma-Oates (*University of Birmingham)*	River House Upper Conference room
16:00	**BIOVIT: AI-Powered, Bio-Based Personalised Nutrition Matched to an Individual's Micronutrient Metabolism Type** Eimear Sutton and Ky Wright *(BioVit)*	
16:20	**Smart Portable and Fast Acute Myocardial Infarction Detection Device for Ambulance Crew Use -** Dr Xinli Du *(Brunel University London)*	
16:40	**Innovation in rehabilitation technologies through multimodal blood analysis** Dr Jessie Howell and Nicole Hall *(University of Strathclyde)*	
16:55	**OxonFair: A Flexible Toolkit for Algorithmic Fairness** Dr Zihao Fu *(University of Oxford)*	
17:10	**Squishing Biology to Advance Healthcare: A Journey from Saliva to Blood** Dr Robert Barker *(University of Kent)*	
17:30	**Wrap Up & Networking Drinks**	
19:00	**Conference Dinner**	Heyworth Restaurant

Friday 22nd November 2024

Time	Session 4: Session chair- Dr Pradip Moon & Basra Jehangir *(University of Reading)*	Location
09:00	Coffee & Welcome Back	River House Upper Conference room
09:15	**Pre-hospital Virtual Care in BC, Canada: What's the case for remote blood testing and monitoring?** Prof Kendall Ho *(University of British Columbia)*	
09:40	**Experience of developing a tool based on multimodal machine learning for the triage of referrals from general practice to a specialist rheumatology unit** Dr Anthony Bradlow *(Royal Berkshire NHS Foundation Trust)*	
10:00	**Remote monitoring in Rheumatology** Dr Antoni Chan *(Royal Berkshire NHS Foundation Trust)*	
10:20	**Online health communities: The good, the bad, and the ugly** Professor Phillip Wu *(Royal Holloway University of London)*	
10:40	**Digital health and diagnostic tests: challenges when moving beyond test tubes and petri dishes** Dr Al Edwards *(University of Southampton)*	
11:00	Coffee Break	
Time	**Session 5: Session chair- Dr Muhammad Salman *(Queen Mary University of London)***	**Location**
11:20	**The future regulation of IVDs in the UK** Stuart Angell *(IVDeology Ltd)*	River House Upper Conference room
11:45	**The power of standards in digital health** Emma Glass (*British Standards Institution, BSI*)	
12:10	**Digital Med Tech as an enabler for Precision Medicine** David Browning *(Precision Health Technologies Accelerator)*	
12:35	**Wearable and Implantable Optical Biosensors in Medical and Healthcare Applications** Dr Chenyang He *(University of Nottingham)*	
13:00	**Lunch and Networking**	Heyworth Restaurant
Time	**Session 6: Session chair- Prof Keiichi Nakata (*University of Reading)***	**Location**
14:00	**WOWI Panel Discussion: How will Digital Health change the future of work in healthcare?** ♦ Prof Keiichi Nakata *(University of Reading)* ♦ Lisa Barclay *(University of Reading)* ♦ Dr Melissa Carr *(University of Reading)* ♦ Professor Phillip Wu *(Royal Holloway University of London)* ♦ Prof Kendall Ho *(University of British Columbia)* ♦ Lucy Lehane *(Lehane Consulting Ltd)*	River House Upper Conference room
15:30	Wrap up	

Speakers, Panellists & Chairs

Prof Weizi (Vicky) Li is the Principal Investigator (PI) and Director of EPSRC Future Blood Testing for Inclusive Monitoring and Personalised Analytics Network+ at the University of Reading. She is Professor of Informatics and Digital Health, focusing on using informatics, data science and machine learning to solve real-world healthcare challenges. She is also the PI of UKRI EPSRC Technology mission fund: Advancing machine learning to achieve real-world early detection and personalised disease outcome prediction of inflammatory arthritis; PI of NIHR Invention for Innovation Product Development Award: Machine learning-enabled decision support system to improve early detection and referral of rheumatic and musculoskeletal diseases. Her work has been successfully implemented in NHS and has received the Research Engagement and Impact award and shortlisted for national Health Service Journal (HSJ) patient safety award. She is the academic lead of a large collaborative project of Improving the Quality of Healthcare through an Integrated Clinical Pathway Management Approach and Cloud-based Digital Data Integration Platform, which was awarded ESRC O2RB Excellence in Impact Award in 2018 and 4*/3* impact case study in REF 2021 for her research impact on healthcare quality improvement.

Dr Samantha Pearman-Kanza is a Senior Enterprise Fellow at the University of Southampton and is a Pathfinder Lead in Process Recording for the Physical Sciences Data Infrastructure (PSDI) Initiative. She completed her MEng in Computer Science at the University of Southampton and then worked for BAE Systems Applied Intelligence for a year before returning to do an iPhD in Web Science (in Computer Science and Chemistry), which focused on Semantic Tagging of Scientific Documents and Electronic Lab Notebooks. She was awarded her PhD in April 2018. Samantha works in the interdisciplinary research area of applying computer science techniques to the scientific domain, specifically through the use of semantic web technologies and artificial intelligence. Her research includes looking at electronic lab notebooks and smart laboratories, to improve the digitization and knowledge management of the scientific record using semantic web technologies; and using IoT devices in the laboratory. She has also worked on a number of interdisciplinary Semantic Web projects in different domains, including agriculture, chemistry and the social sciences.

Kerrie Woods has had an extensive career within the NHS and currently serves as Director of R&D Clinical Informatics at Oxford University Hospitals NHS Foundation Trust. She is the Director of the Thames Valley and Surrey Secure Data Environment. Her earlier experience includes roles in programme delivery and data governance within government organisations such as the NIHR, as well as at Genomics England, where she was Director of Informatics and Programmes. Notably, Kerrie has recently been shortlisted for the Woman of the Year award as part of the Women in Tech Excellence Awards 2024. She is also a frequent speaker at prominent digital health and TechBio events.

Prof Jean-Baptiste Cazier, Originally trained as a Mathematical Modeller, he has been working in the field now called Data Science for the past 25 years. Starting from France, he rapidly moved to Switzerland (ETHZ) to Sweden (LTH, SLU) via Iceland (decode Genetics) before reaching the UK at the Cancer Research UK London Research Institute. He then moved to the University of Oxford to lead research groups in Bioinformatics, at the Wellcome Trust for Human Genetics and the department of Oncology in 2008. Subsequently, he joined the University of Birmingham as chair of Bioinformatics in 2014 to create the highly cross-disciplinary Centre for Computational Biology (CCB), leading both research and teaching. This includes the creation of MSc Bioinformatics programmes in Birmingham, Dubai as well as online. His research interest is very broad with method development and application with highlights in Data Science and AI, Genomics and Population Genetics using a wide range of data from *Omics to Clinical and Environmental , applied to a variety of conditions from Cancer to Cardio-vascular and rare diseases. Keywords to define his interest would be Diversity and Context as shown by his Turing fellowship in Population Diversity at varying scale. He has now joined the Francis Crick Institute in London to lead the Bioinformatics and Biostatistics, and the Data Science strategy, working across the Institute to optimise how the Crick can best combine its wealth of data and expertise through the latest in Data Science.

Dr David Rew is a Consultant General Surgeon in Southampton, Honorary Surgeon to the Faculty of Medicine of the University of Southampton and Visiting Professor in Clinical Informatics to Southampton Solent University. He served as the Editor in Chief of the European Journal of Surgical Oncology from 2003 to 2009. Since 2009, he has held the position of global Subject Chair for Medicine on the SCOPUS Content Selection Advisory Board, where he has appraised approximately 3,500 clinical journals. Mr Rew claims no specialist knowledge in haematology, blood testing or genomics, beyond being up to date with his Statutory and Mandatory blood transfusion module in the hospital virtual learning environment. For the past 15 years, David Rew has been the concept lead of a productive software development team at University Hospital Southampton, creating radical solutions to the electronic patient record, a whole-of-life breast cancer data set of more than 20,000 records, and a tool for the greater efficiency of cancer multidisciplinary teams, all of which systems sit at the heart of the unique University Hospital Southampton Clinical Data Estate.

Dr Robert Barker is an Associate Professor in Chemistry in the School of Physical Sciences, Director of Innovation for the Division of Natural Sciences, lead for the 'Positive Environmental Futures' Signature Research, University of Kent (UoK). He is a Royal Society Industrial Fellow and has lead a number of large trans-disciplinary EPSRC and UKRI funded projects, including the Optimising Me Manufacturing Systems [EP/R022534/1], exploring continuous blood processing for healthcare and developing a healthcare micro-factory that provides on-the-body manufacturing of therapeutics, continuously and in response to the body's needs. His work focuses on the whole blood processing and the development of a manufacturing system for T-cell immunotherapies which present a cure for some of the most aggressive forms of cancer (acute lymphoblastic leukaemia and chronic lymphoblastic leukaemia). His research is at the interface of industry and the NHS to meet their needs for continuous blood monitoring and to help the shift away from the current one-size-fits-all approach to deliver patient-specific therapies.

Prof Dimitris Grammatopoulos, PhD, FRCPath, is Professor of Molecular Medicine at Warwick Medical School and Consultant in Clinical Biochemistry and Molecular Diagnostics at the University Hospitals of Coventry and Warwickshire, NHS Trust, United Kingdom. He also leads the Novel Biomarkers theme of the Institute of Precision Diagnostics and Translational Medicine, Pathology-UHCW NHS Trust. where he combines clinical expertise in diagnostic laboratory medicine with a research track-record in application of cutting edge multidiscipline methodologies in routine clinical diagnostics. He received academic and clinical training in Newcastle, Bristol, Johns Hopkins-Baltimore and Warwick. He has expertise in biochemical/molecular diagnosis of many endocrine and metabolic disorders. His translational research interest is focused on stress hormones and homeostatic adaptations of fetal development to maternal disease as well as development of novel -omics based biomarker approaches suitable for precision medicine and better characterization of patient phenotype. He has experience around use of AI and ML for development and refinement of clinical and diagnostic pathways for complex chronic conditions that are considered as national priorities. Dimitris is the Lead in Diagnostics, Global Health Priorities in Health, University of Warwick.

Dr Hector Zenil is an Associate Professor at the School of Biomedical Engineering and Imaging Sciences and the King's Institute for AI at King's College London. Before joining KCL, he was at the Universities of Oxford and, as a faculty member and senior researcher; and with The Alan Turing Institute with which he remains affiliated as an appointed Innovate AI Independent Advisor. He is also the Founder of Oxford Immune Algorithmics, a University of Oxford deep-tech and med-tech start-up that applies Artificial General Intelligence based on symbolic regression and program synthesis to precision healthcare and predictive medicine. Before that, Dr Zenil was a Lab leader at the Algorithmic Dynamics Lab, Unit of Computational Medicine, Center for Molecular Medicine and SciLifeLab at the Karolinska Institute in Stockholm, Sweden. He holds two PhDs, one in Computer Science and one in Logic and Epistemology from Paris 1 Sorbonne/ENS, and Lille 1 in France. His main research interests are the dynamics of health and disease, complexity sciences and applications of (algorithmic) information theory to fundamental science and causal AI. He introduced the field of Algorithmic Information Dynamics, a symbolic regression and program synthesis technique that combines classical and algorithmic information theories with causal inference through perturbation analysis to tackle inverse problems. He is also Academic Entrepreneur in Residence at the London Institute for Healthcare Engineering at King's College London (KCL) and algorithmic information theories with causal inference through perturbation analysis to tackle inverse problems, that is to find mechanistic models for natural and physical phenomena based on fundamental first principles. He is also Academic Entrepreneur in Residence at the London Institute for Healthcare Engineering at King's College London (KCL).

Dr Mark Preston runs a biotech consultancy focussed on data, cloud and compliance. Having previously worked in industry, government and academia, from low-level coding on consumer devices through to running multi-million pound government programmes for the MHRA, he and his team are well placed to help biotech companies of all sizes with all things data. He has worked on projects: applying AI/ML to heterogeneous biological data and images; preparing organisations for moving to clinical trials; creating complex analytical pipelines in the cloud to automate, accelerate, and democratise data and results; performing the first analyses for pre-seed start-ups, and many, many more.

Dr Andrea Tattersall has worked for many years within a leading blood/immune cell diagnostics lab with responsibility for improving efficiencies including increasing automation. Andrea is highly experienced at interfacing with partner labs internationally. Andrea has a strong background in laboratory operations and medical affairs. Andrea began at Oxford Immunotec in 2005 as a Product Support Manager, leading a team and overseeing lab demos and product evaluations. From 2012 to 2014, Andrea managed Oxford Diagnostic Laboratories Ltd., later becoming Director and expanding it into a professional reference lab. They held various roles, including Director of Medical Affairs EMEAI, where they developed teams, engaged key stakeholders, and implemented tuberculosis and COVID plans. In 2021, Oxford Immunotec was acquired by PerkinElmer, which later rebranded as Revvity. In 2023, Andrea joined Revvity as Director of Laboratory Operations, overseeing personnel and technical leadership. Revvity has a comprehensive portfolio including diagnostic instruments and solutions, workflows, clinical testing and screening capabilities.

Dr David Sarphie has over 25 years of industry experience within biotech and diagnostic sectors; co-founder of PowderJect (exit: sold to Chiron in 2003); co-founder of Oxford MediStress, Bio Nano Consulting, AquAffirm and Seroxo. Seroxo is a clinical-stage *in vitro* diagnostics (IVD) company pioneering the development and commercialisation of a transformative POC test for real-time monitoring of inflammatory disease. Seroxo's proprietary LIT™, a 10-minute finger-prick blood test, is a patented breakthrough technology that assesses real-time, 3D neutrophil function with applications in sepsis, cancer, and emergency triage. In particular, LIT is being developed for rapid detection and monitoring of sepsis and for recurrence surveillance and metastasis detection in cancer. With clinical data from ten international clinical studies in over 600 patients, LIT promises to radically improve patient outcomes with a near-patient test that revolutionises patient management.

Dr Sharma-Oates's research interest include the influence of ethnicity on disease onset and disease severity with a focus on autoimmune inflammatory diseases. Following her undergraduate degree, she spent a year working as a research assistant at the Lombardi Cancer Centre, Georgetown University, Washington DC, USA. She returned to the UK to start a Masters in Bioinformatics at the University of Leeds and then went on to pursue a PhD. Following on from PhD, she spent a number of years working as post-doctoral research fellow in a wider range of research areas encompassing cancer, animal development and disease, and more recently, COVID-19. She started her current position as Lecturer in Bioinformatics at University of Birmingham in 2021. She has extensive experience in transcriptomics, whole genome sequence analysis applied to cancer research, as well as the analysis of the methylome applied to musculoskeletal and ageing research.

Eiméar Sutton – Registered Associate Nutritionist (ANutr) and Head of Nutrition at BIOVIT. Eiméar has extensive experience in clinical research with 2 publications in peer-reviewed journals. Her previous roles span product development at PepsiCo, and digital health programme development for Second Nature. At BIOVIT, she leads the company's nutrition strategy, guides new product development, and manages research projects.

Ky Wright – CEO of BIOVIT. Founded and led successful health food companies including Lick Frozen Yogurt and Human Food, both achieving national success and exporting to 12 countries. Ky has a strong track record of collaboration with academia and is currently working with Swansea University on 2 IUK-funded studies assessing the bioavailability and efficacy of plant-derived versus synthetic micronutrients, and developing an AI-powered personalised nutrition system. heart of the unique University Hospital Southampton Clinical Data Estate.

Dr Xinli Du is currently a Reader at Brunel University of London. He has rich experiences in research and teaching, especially for robotics and automation. His research is focusing on applying robotic technology and machine learning algorithm to biomedical engineering, especially in the areas of robotic surgery, cardiovascular, rehabilitation and prosthesis.

Prof Kendall Ho is an emergency medicine specialist and Professor at the University of British Columbia (UBC) Faculty of Medicine. As the leader of the Digital Emergency Medicine Unit, Medical Director for BC Ministry of Health HealthLinkBC 811, and the chair of the Canadian Association of Emergency Physicians (CAEP) Digital Emergency Medicine Committee, he's at the forefront of integrating digital innovations into healthcare. Dr Ho spearheads groundbreaking research in virtual care, wearables, AI, and multicultural health literacy. His pioneering work, which bridges emergency departments with community care, has earned him the BC Medal of Good Citizenship, and awards in research and education. A fellow of the Royal College of Physicians and Surgeons of Canada and the Canadian Academy of Health Sciences, Dr. Ho dedicates his work to contribute to shaping the future of digital health through his academic work.

Dr Anthony Bradlow is an Emeritus Consultant Rheumatologist and General Physician who continues to work as an appraiser, coach and mentor at the Royal Berkshire Hospital, Reading. He has extensive experience in clinical internal medical practice, management, medical education and assessment. Since 2018 he has worked with Prof Weizi Li at the University of Reading on the development of multimodal machine learning for the triage of case referrals from general practice to specialist rheumatology units. From that work he has developed a more-general interest in the interface between digital systems and clinical medical practice.

Prof Philip Fei Wu is Professor of Information Management and Head of Department of Information and Operations Management at Royal Holloway, University of London. Broadly speaking, Dr Wu's research examines human behaviour in technology-mediated environments from sociopsychological perspectives. In recent years, his work has focused on digital health, digital labour platforms, and online customer reviews. He has published in leading academic journals such as ACM Transactions on Information Systems, Information System Journal, Journal of the Association for Information Systems, Social Science & Medicine, among others. Dr Wu serves on the editorial boards of Information Systems Journal, Information Technology & People, and Journal of the Association for Information Science and Technology.

Dr. Antoni Chan is a Consultant Rheumatologist and Associate Medical Director at the Royal Berkshire NHS Foundation Trust. Dr. Chan qualified in medicine in 1997 with a commendation from the University of Aberdeen. He completed specialist rheumatology training in Oxford and was awarded the Arthritis Research UK (ARUK) Clinical Research Fellowship from 2003 to 2006, during which he completed laboratory and clinical research into the immunology of rheumatic diseases. He also holds a PhD in clinical immunology from the Weatherall Institute of Molecular Medicine. Dr. Chan is an examiner of the MRCP examinations and a fellow of the Royal College of Physicians. He is a member of the British Society of Rheumatology and Immunology and a full member of the Assessment of Spondyloarthritis International Society (ASAS). He won the British Society for Rheumatology Best Practice Award. In 2018 he received the Patient Choice Award for Best Care by a Rheumatologist from the National Ankylosing Spondylitis Society. He leads the Axial Spondyloarthritis service in his hospital and the team were awarded the NASS Aspiring to Excellence Award in 2019.

Stuart Angell - As the Managing Director and Co-founder of IVDeology, Stuart brings over 20 years' experience within the IVD industry. Stuart has worked for over 30 years in the regulatory industry (including at the large corporate life sciences firms, Novartis and Thermo Fisher Scientific) before cofounding his consultancy business as an expert advisor and trainer on the regulation of diagnostics (IVDs) mainly in the UK and EU. Stuart is an accomplished speaker and is also Vice Chair of the Regulatory Affairs Working Party of the British In Vitro Diagnostics Association (BIVDA). Stuart will offer his recent knowledge as an MHRA Trusted Advisor as part of BIVDA, and can discuss the future of IVD regulation in the UK and EU. In addition, Stuart works with several clients who are currently bringing onto the UK market various AI IVD tools, and thus understands the regulatory challenges associated with the developing landscape with respect to digital aspects of diagnostics.

Dr Al Edwards- With a background in fundamental immunology combined with expertise in biochemical engineering, Al Edwards is an interdisciplinary researcher focussed on solving current and future healthcare challenges using an engineering science approach that combines a range of fields from biology, biochemistry, chemistry and physics. He works at the interface between academic technology discovery and industrial development and have experience of both fundamental research and the commercialisation of new technology. The two main challenges he currently work on are the development of affordable microfluidic technology for clinical diagnostics and microbiology, and the engineering science of complex biologic therapeutics such as vaccines.

Emma Glass is the University Partnerships Manager in the Knowledge Solutions division of the British Standards Institution (BSI). She leads BSI's innovation policy, engaging with universities and funding bodies in healthcare, AI and quantum research to raise awareness of standards and standards development. Recent work includes leading BSI's response to the AI Safety Summit 2023, with endorsement from the Department of Science, Innovation and Technology and developing an educational program for Biomedical Engineering students on the value of standards in healthcare. Prior to working at BSI, Emma launched new open-access science journals in digital health, nuclear medicine and radiology. She also authored Central Banking Publication's Big Data Focus Report in 2016 and 2017 and was Editor of the Central Bank Directory. Emma has a degree in English Literature from the University of Exeter.

Dr Zihao Fu is currently a Postdoctoral Researcher at the University of Oxford, engaged in the Trustworthiness Auditing for AI project, in collaboration with Dr. Chris Russell, Prof. Sandra Wachter, Prof. Brent Mittelstadt, and other researchers. Prior to this, he served as a Research Associate (PostDoc) in the Language Technology Lab at the University of Cambridge under the guidance of Prof. Nigel Collier. His research mainly focuses on Natural Language Processing, Text Generation, Machine Learning, Biomedical Applications, and etc. Before he came to Cambridge, he received his Ph.D. degree from The Chinese University of Hong Kong under the supervision of Prof. Wai Lam. He has also been a visiting student at the NLP Lab of Tsinghua University, working with Prof. Zhiyuan Liu. Before he started his Ph.D. study, he had three years of experience in developing large-scale distributed parallel algorithms for the PAI platform in Alibaba Cloud.

Nicole Hall is currently a 3rd year PhD student at the University of Strathclyde with Dr Melanie Jimenez. She graduated from the University of Glasgow where she obtained an Integrated Masters degree in Biomedical Engineering. Nicole also graduated from the University of Edinburgh obtaining a Master of Science by research degree in Regenerative Medicine and Tissue Repair. Her current research focuses on ultra-rapid microfluidic-based processing techniques for particle separation and enrichment, with a focus on blood sorting for medical diagnostics.

Dr Jessie Howell's goal with her work has always been to advance the medical field of medical research in order to give people a better quality of life. In pursuit of this aim, she first undertook her undergraduate in immunology at the University of Glasgow. Throughout this time, she discovered an interest in both parasitology and the implementation and design of engineering solutions to biological problems. In 2020, this led her to start a PhD with Dr Melanie Jimenez and Dr Tansy Hammarton. Here, she used a multitude of imaging and engineering techniques to help study the tropical parasite Leishmania mexicana. Currently, her passion for cell imaging techniques is currently being put to use in two projects working on analysing blood cells in healthy and diseased patients. Outside of work, Jessie enjoys a very active life, full of friends, family and everything outdoors.

Dr Chenyang He is an early career academic at the University of Nottingham and has been engaged in developing various fibre optic bio-/chemical/physiological sensors for healthcare applications. Examples include point-of-care sensors measuring blood and breath biomarkers of disease through medical devices such as optical fibre-based antibody (IgG) monitoring and anti-cancer drug (Dabrafenib) monitoring and a smart wound dressing for monitoring healing and infection of diabetic foot ulcers (biomarkers: temperature, humidity, NH3 and CO2). These utilise a range of different sensing mechanisms including optical gratings, absorption dyes, Fabry-Perot interferometers and plasmonic nanostructures.

Prof Keiichi Nakata is Professor of Social Informatics at the Informatics Research Centre, Henley Business School at the University of Reading, UK. Keiichi's main research interests lie at the interface between technology and people, in the areas of computer-supported collaborative work, cognitive systems engineering, and information systems. Recently he has been engaged in research into acceptance of pervasive systems, social media, and participatory systems. Prior to the current appointment, he was Dean of School of Information Technology at International University in Germany. His past appointments include Associate Professor at the Institute of Environmental Studies at the University of Tokyo, and Research Scientist at German National Research Centre for Information Technology. He obtained his Ph.D. in Artificial Intelligence from the University of Edinburgh, UK, and M.Eng. and B.Eng. in Nuclear Engineering from the University of Tokyo.

Dr Melissa Carr in a lecturer in International Human resource Management and Director (EDI) at the World of Work Institute, Henley Business School. Her research interests are around equity, diversity and inclusion and how contingent labour impacts on different groups within society. Prior to joining Henley, Melissa worked in consultancy, executive education and leadership development.

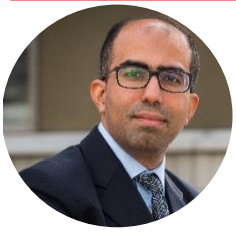
Lisa Barclay is a PhD student in the International Business and Strategy department at the Henley Business School. Her research is interested in flexible work practices and neurodiversity in the workplace, effects on well-being, career progression and the implications for multiple stakeholders.

Lucy Lehane is an independent Medical Diagnostics Consultant who began her career in the National Health Service as a Clinical Scientist. It was here that she gained first hand insights into the importance of diagnostic testing in improving health and disease management, and enhancing patient experiences. Fast forward nearly 25 years, and Lucy has spent her career in the commercial world of diagnostic testing holding leadership roles in Product Management, Technical Marketing and Medical Affairs for several leading diagnostic companies. In 2023, Lucy established her own consultancy business - Lehane Consulting Ltd. providing medical diagnostics expertise to guide businesses to bring their diagnostic products to market. Lucy endeavours to apply her 25 years of experience in the IVD industry to provide expert advice for product development, market understanding, devising clinical studies and communications to help bring products to life.

Tim Dong is a researcher at the Bristol Heart Institute. His expertise is primarily in machine learning for cardiovascular medicine, biology and precision medicine. His areas of interest outside work include exploring the origin and purpose of life as well as theology.

Dr Pradip Moon, a Research Fellow in AI and Healthcare at the University of Reading, holds a PhD in Computer Science from Teesside University, specializing in Artificial Intelligence and Machine Learning. He has expertise in multimodal data integration, genome-scale metabolic modelling, and predictive healthcare modelling. Pradip has published research on AI-enhanced medical imaging and lung cancer prognosis, and he is proficient in Python, R, and various AI frameworks. He has also collaborated with academic and industry partners to implement AI solutions in healthcare and has experience as a lecturer and research associate.

Dr Bing Zhai is a Lecturer in Computer Science. His research agenda is to develop practical AI tools to solve time-series data challenges in real-world applications. He is particularly interested in time series data analysis, e.g., biosignal analysis, computational behaviour analysis and healthcare applications. He is also interested in AI for good, computer vision and audio/speech analysis. He is currently conducting research at Northumbria University on explainable data-driven digital biomarkers discovery for monitoring sleepiness and fatigue through wearable technology and machine learning techniques, he collaborates with research institutions across Europe on the IDEA-FAST project.



Dr Muhammad Salman Haleem is currently Lecturer (Assistant Professor) in School of Electronic Engineering and Computer Science at Queen Mary University of London. He is involved in teaching Joint Programme in collaboration with Beijing University of Posts and Telecommunications. Previously, he served as Assistant Professor-Research Focused in Applied Biomedical Signal Processing and Intelligent eHealth Lab, School of Engineering at University of Warwick since August 2020. Dr. Haleem finished his PhD in Computing from Manchester Metropolitan University where he received the prestigious scholarship on EPSRC-DHPA. The title of his research was 'Automatic Extraction of Retinal Features to Assist Glaucoma Disease Diagnosis'. After completion of his PhD in 2015, he served as a Research Associate – Data Science in the same university till 2020 where he designed and developed novel computer aided methods to advance operational analytics and policing methods for improved well-being. Dr. Haleem research interests lie in artificial intelligence, data science and deep learning solutions with special focus on medical and healthcare data analytics. His research works focus on design and development of novel Artificial Intelligence based solutions for improved chronic disease monitoring (such as Diabetes, cardiovascular diseases); physical activity and stress monitoring; retinal image and MRI analysis etc. He has authored/co-authored more than 40 peer-reviewed papers including systematic literature reviews, study protocols, scientific articles, book chapters in top academic journals and conference proceedings. He has also been regular reviewer of top scientific journals such as Biomedical Signal Processing and Control, Computerized Medical Imaging and Graphics, IEEE transactions in Biomedical Engineering, IEEE journal of Biomedical and Health Informatics, etc.

David Browning has 40 years of life science experience, including significant in vitro diagnostics innovation; NHS Clinical Biochemistry, Amersham International, J&J, Philips, MediCity/BioCity (now Pioneer Group), Oxford, and other university spin-outs. His current board and advisory roles include the Institute for Cancer Research, Precision Health Technology Accelerator, Clinical Immunology Service, OBN, and digital med-tech companies.

Basra Jehangir is pursuing her PhD at the University of Reading, focusing on time series analysis. She is currently collaborating on the Virtual Ward project with the Royal Berkshire Hospital, aiming to improve healthcare insights through predictive analytics. Skilled in Python, R, and AI frameworks, she has a foundation in industry and now academia. Her previous experience includes expertise in Natural Language Processing (NLP) and biomedical image processing, allowing her to apply advanced data science techniques to real-world healthcare and language-based applications.

Dr Bing Wang is currently a Research Fellow at the Informatics Research Centre, Henley Business School, University of Reading, and a data scientist at the Royal Berkshire NHS Foundation Trust and Oxford University Hospital. His research interests focus on the application of Natural Language Processing, Multimodal Machine Learning, and Graph Machine Learning in healthcare and digital health.

Rachel Mudzinganyama is a Social Science Professional with a strong academic background and extensive experience in project coordination and management. Currently serving as the Research Coordinator for the Future Blood Testing Network+, she manages the coordination of operational aspects for the EPSRC-funded Network+. In this capacity, she ensures the smooth running of network activities, facilitates collaboration between diverse stakeholders, and is part of the team responsible for the successful organization of this event.

Venue Details

Venue & Refreshments

The conference will be held at Henley Business School, Greenlands campus. Coffee breaks and drinks reception will take place in a designated area, with lunch and the Conference Dinner both held at the Heyworth restaurant.

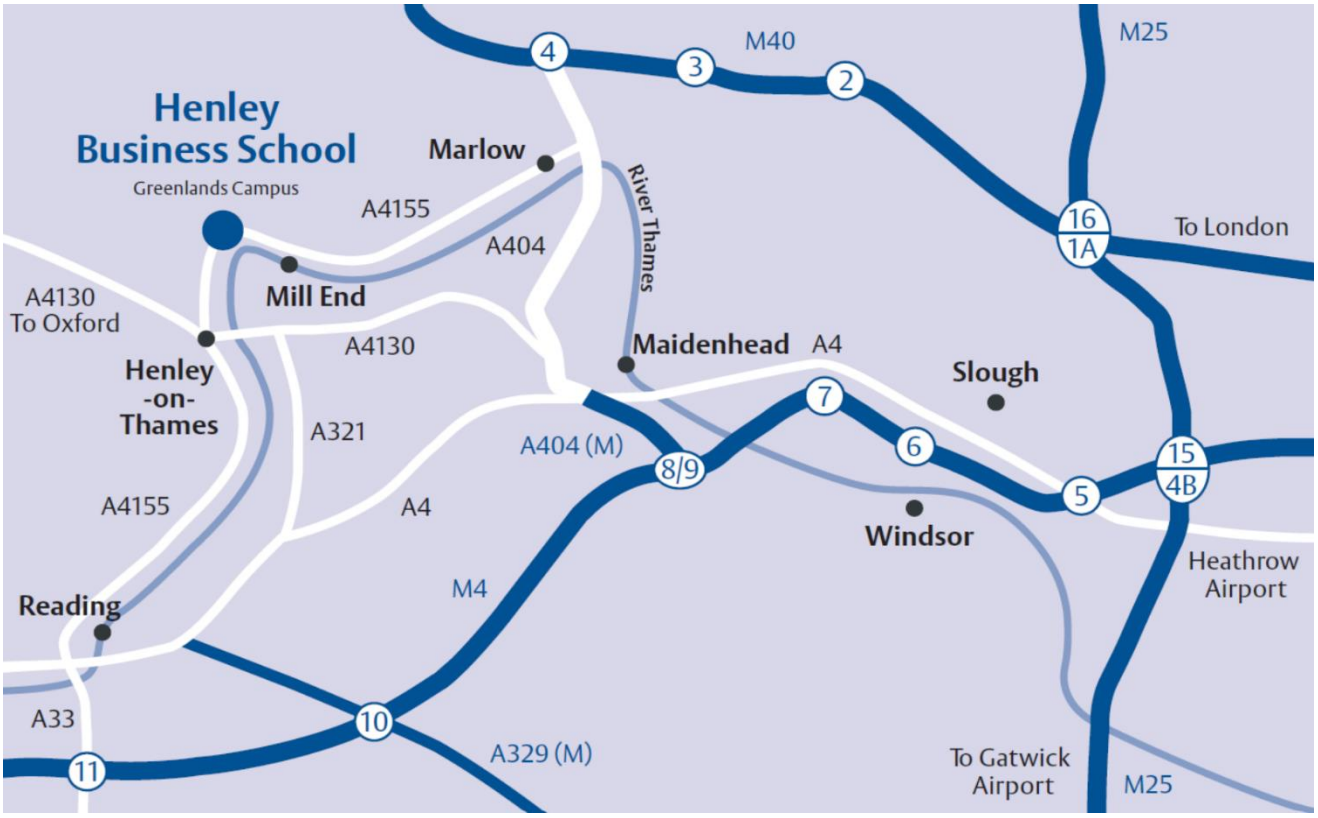
Wifi Details

To use the free wifi, simply connect to The Cloud via Sky Wi-Fi. Select 'WiFi Guest' (Not UoR guest) from the available network list. Your web browser should then open, and you will just need to accept the terms.

Parking

Provide car registration prior to your arrival and parking is complimentary on site. Delegates will need to use the Satnav postcode RG9 3AU to reach the venue; Henley Business School, Henley Greenlands, Henley on Thames, RG9 3AU.

Map



DIRECTIONS TO GREENLANDS CAMPUS

DIRECTIONS FOR TRAVELLING BY ROAD

From M4/London/Heathrow
Leave the M4 motorway at Junction 8/9 signposted to Henley (via the A404(M)). Take the A4130 into the centre of Henley.

From M4/Bristol
Leave the M4 at Junction 10 signposted A329(M) towards Reading. Follow the Henley signs via the A4 and the A321 through Wargrave. Then join the A4130 towards Henley Bridge.

From M40
Leave the M40 at Junction 4. Take the A404 dual carriage way signposted Marlow/Bourne End. From Marlow town centre take the A4155, towards Henley-on-Thames.

From M25/North
Leave the M25 at Junction 16. Take the M40, signposted Oxford. Then follow the directions above for arrival from M40

From M25/South
Leave the M25 at Junction 15. Take the M4 West. Then follow the directions for M4/London as above.

APPROACHING THE BUSINESS SCHOOL

Approaching from Marlow/A4155
The main Business School entrance is on the left approximately 1 mile after the speed de-restriction sign as you leave the village of Mill End.

Approaching from Henley Bridge/A4130
Go straight across the traffic lights on the bridge over the river. Go up to the next traffic lights in the town centre. Turn right following the signs for Marlow (A4155). At the first mini roundabout, go straight ahead, then turn right towards Marlow/A4155 at the second mini roundabout. The Business School is situated on the right approximately 2 miles from Henley.
The turning into the Greenlands site is quite acute. It can be identified by a small white gatehouse, behind a low brick wall with black railings.

Please note: If you are using a sat nav, please use the following postcode in order to navigate to the Greenlands Campus: RG9 3AU.

DIRECTIONS FOR TRAVELLING BY RAIL

South West Trains and First Great Western operate from London Paddington to Reading. Or, there is a regular train service from London Marylebone to High Wycombe.

Taxis are available from Reading (telephone Chiltern Taxis 01491 578 899 or County Cars on 01491 579696 or 01491 572422 and at High Wycombe.

There are also direct rail links to Reading from many major cities, including Birmingham, Manchester, Glasgow, Cardiff, Bristol and Exeter. Then there is a rail link from Reading to Henley via Twyford.

INFORMATION FOR TRAVELLING TO READING BY AIR

For the onward journey to Henley at Greenlands, please refer to the road or rail sections.

London Heathrow (LHR)

The RailAir Bus picks up passengers from the Central Bus Station, and stand 9 at the Terminal 5 Bus and Coach Station. After you have collected your luggage and passed customs, follow the directions, outlined below, from your terminal to the Central Bus Station. Tickets can be purchased from the counter in the Central Bus Station, and from the National Express Sales Desk at Terminal 5. A single ticket costs £14, and return tickets are also available. Coaches run every 20 minutes, and take one hour.

Directions from Terminals 1-4 to the Central Bus Station, and to the Terminal 5 Bus and Coach Station are listed below:

Terminal 1 - From International arrivals follow the sign for Underground and Central Bus Station. From UK and Ireland follow signs for Underground and Terminals 2 and 3, which direct you towards the lifts (then follow signs for Underground and Central Bus Station.) Use the lifts to reach the basement level.

Terminal 2 - Leave the building through the doorway immediately in front of the exit from customs and follow signs for Underground and buses, which direct you towards the below-surface travelator. Alternatively, you may prefer to use the street-level access by exiting the terminal building through the revolving doors on the ground floor.

Terminal 3 - Follow signs for Underground and Central Bus Station, taking the ramp or stairs to access the below-surface subway link.

Terminal 4 - Use the FREE Heathrow Express shuttle service. Travel in the carriages at the rear of the train and alight at Terminals 1, 2 and 3. Follow signs for Terminals 2 and 3 but as soon as you see signs for buses and underground follow these instead.

Terminal 5 - Follow signs for Local Buses upon exiting arrivals. If you do not already have a ticket, these can be purchased from the National Express Sales Desk which is located inside the Terminal building (turn left out of arrivals) opposite Costa Coffee. You will find stand 10 by exiting the terminal building opposite the National Express Sales desk.

London Gatwick (LGW)

Direct trains run to Reading from Gatwick Airport every hour and take about 1hr 15 minutes. A single ticket costs around £15 and can be purchased at the station in Gatwick airport.

Future Blood Testing Network+

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Engineering and Physical Sciences Research Council

University of Reading

The University of Nottingham

University of Kent

University of Southampton

Warwick