Artificial Intelligence in Healthcare Technology 2019 at St. James’s Hospital is designed to provide the non AI expert with a basic technical understanding of AI concepts and a road map to the application of AI in healthcare. Intended for clinicians, healthcare professionals, engineers and scientists, the objective of the event is to demystify AI and to provide an understanding of the practical issues on the pathway from concepts to applications.

PROGRAM

9:00 Introduction & welcome
Lorcan Birthistle CEO St. James’s Hospital

SESSION I: AN INTRODUCTION TO ARTIFICIAL INTELLIGENCE CONCEPTS

Chair: Dr. Geraldine O’Reilly
Chief Physicist/Head of Department, Medical Physics & Bioengineering St. James’s Hospital

9:15 - 9:30 The Clinical case for Artificial Intelligence
Data rich clinical scenarios and the need for AI.
Prof. Roman Romero-Ortuno TCD/St. James’s Hospital

9:30 - 10:15 SESSION KEYNOTE: Introduction to Artificial Intelligence concepts
A beginner’s guide to concepts behind AI and Machine Learning and how they are applied to practical problems.
Prof. John Kelleher TU Dublin/ADAPT Centre

10:15 - 10:45 Coffee
SESSION II: AI APPLICATIONS IN HEALTHCARE
Chair: Prof. Brian Lawlor
Connolly Norman Professor of Old Age Psychiatry; Deputy Executive Director, Global Brain Health Institute, Trinity College Dublin

10:45 - 11:30 SESSION KEYNOTE: AI applications in healthcare: state of the art
Dr. Pulkit Sharma  Computational Health Informatics Lab, University of Oxford
An overview of how and where AI is making an impact on hospitals and healthcare right now, and what to expect next as technology and clinical uptake advances.

11:30 - 11:45 Monitoring brain health in newborn infants with AI
Prof. Geraldine Boylan  INFANT, University College Cork
How AI is being applied in assessing brain injury and in detecting seizures in newborns.

11:45 - 12:00 AI Applied to Stroke: The Precise4Q Study
Prof. John Kelleher  TU Dublin/ADAPT Centre
Precise4Q is an EU H2020 funded project (Grant Agreement No. 777107) with the objective of using data driven computer simulations to enable personalised stroke management from prevention, treatment, rehabilitation and reintegration.

12:00 - 12:15 AI in assessing cognition and cognitive decline
Dr. Brian Murphy  BrainWaveBank
How AI could become part of the toolbox for assessing Mild Cognitive Impairment and other conditions.

12:15 - 12:30 Using AI for more effective health and social care
Dr. Carlos Alzate  IBM Research—Ireland
How IBM is developing AI based solutions for integrated care, focusing on efficient service delivery and reducing fraud, waste and abuse.

12:30 - 12:45 Clinical Application of Artificial Intelligence to Radiology
Dr. Brendan Kelly  Specialist Registrar in Radiology, St. Vincent’s University Hospital / Clinical Lecturer in Radiology UCD
An overview of AI applications in Radiology

12:45 - 13:30 Lunch
SESSION KEYNOTE: Artificial Intelligence: Can it help medical analysis?
Noel Murphy, Vice President AIPG (Artificial Intelligence Products Group), Director of Engineering, Intel® Movidius™
Intel R&D Ireland Ltd
The potential for AI in healthcare, and how Intel technology is enabling developers simply integrate AI in devices.

14:10 - 14:30  AI Toolkits
Dr. Christian Saam, Research Fellow, ADAPT Centre, TCD
A beginner’s guide to the array of AI tools available

14:30 - 14:50  Coffee break

SESSION IV: PRACTICAL ISSUES IN ENABLING CLINICAL AI
Chair: Prof. Joseph Harbison
Consultant Stroke Physician & Geriatrician, SJH; Assoc. Professor Dept. of Medical Gerontology, TCD

14:50 - 15:30  SESSION KEYNOTE: AI and stroke prediction: a story of clinical innovation
Dr. Dietmar Frey, Berlin Charité Hospital
The journey of a clinician in bringing an AI concept to fruition.

15:30 - 15:50  Medical equipment connectivity
Debbie Pope, Capsule Technologies Ltd
Ronan O’Brien, Cardiac Services Ltd.
The practical issue of getting data off medical equipment for high level processing and analysis.

15:50 - 16:10  Bringing Machine Learning to clinical research
Dr. Ciarán Finucane, Dept. of Medical Physics & Bioengineering /MISA, St. James’s Hospital
Experiences of applying AI to clinical research data

16:10 - 16:25  The Clinical Data Ecosystem
Gemma Garvan, Director of Health Informatics, St. James’s Hospital
Clinical data analysis in the real world

16:25-16:45 CLOSING DISCUSSION
Chair: Prof. Rose Anne Kenny
Director, Mercer’s Institute for Successful Ageing, St. James’s Hospital; Head of Medical Gerontology, TCD