

UK ROBOTICS SUMMER SCHOOL EDINBURGH

More information can be found at <https://ukrss.site.hw.ac.uk/>

Location: Heriot-Watt University
The National Robotarium – 22, 24, 25, 26 June AND The Postgraduate Centre
(PGG01)- 23 June
Date: 22nd - 26th June 2026

Monday 22nd June – Bioinspired Robotics – The National Robotarium (Multi-flex Room)

08:30 – 09:00 Refreshments

09:00 – 09:10 Introduction to Summer School, [Yvan Petillot, Heriot-Watt University](#)

09:10 – 10:30 Bioinspiration – why and how and research highlights, [Barbara Webb, University of Edinburgh](#)

10:30 – 11:00 Refreshments

11:00 – 12:30 Robot building workshop – connecting sensing to action, [Barbara Webb, University of Edinburgh](#)

12:30 – 13:30 Lunch

13:30 – 15:00 The robot zoo – surveying the landscape of bioinspiration, participants will present

15:00 – 15:30 Refreshments

15:30 – 17:00 Theory of mind: history, controversies and its utility in Human-Robot Interaction, [Thusha Rajendran, Heriot-Watt University](#)

Abstract: Here I will present a history of *Theory of Mind*: from its roots in Philosophy and Evolutionary, Comparative and Developmental Psychology – to its influence in Social Neuroscience. I will discuss how Theory of Mind has been used in Human-Robot Interaction (HRI). Specifically, I will argue that Theory of Mind is best utilised, not as an umbrella term, but when it is clearly specified. Hence, I will argue that in Theory of Mind can make a significant contribution to the field of HRI when operationalised correctly and with clarity about terminology, e.g. *Belief Attribution*, *Mentalising*, *Intentionality*, *Deception*, *Inferencing*, *Visual Perspective Taking*.

Tuesday 23rd June - Healthcare and Robotics – Postgraduate Centre PGG01

08:30 – 09:00 Refreshments

09:00 – 09:45 Setting the landscape – AI in Assistive Autonomy, [Ram Ramamoorthy, University of Edinburgh](#)

09:45 – 10.30 Workshop – Mathworks, Martina Sciola and Andrew Redfearn (tbc)

10:30 – 11:00 Refreshments

11.00- 12.30 Workshop – Mathworks (cont)

12:30 – 13:30 Lunch

13.30 – 14.00 Talk: Medical Imaging - [Sotirios Tsafaris, University of Edinburgh](#)

14.00 – 14.30 Talk: Internet of Things & Robotics for Independent Living, [Mauro Dragone, Heriot-Watt University](#)

14.30 – 15.00 Talk: From ideation to medical translation: the role of the Medical Device Manufacturing Centre for academics and companies. [Marc Desmulliez, Heriot-Watt University](#)

15:00 – 15:30 Refreshments

15.30 – 17.00 Immersive Suite Tour - Hazel Matthews, Heriot-Watt University

17.00 – 17.30 Panel/Interactive session “How do you start a PhD in Healthcare Robotics?”

Panelists: Senior academics (All speakers), Late-stage PhD / postdoc

Topics of discussion:

- How to choose a clinically relevant problem?
- How early should you talk to clinicians?
- What makes experiments publishable?
- Common mistakes in Year 1

19:00 Summer School Dinner at the [Doric Tavern Edinburgh](#) (meet there)

Wednesday 24th June - Generative AI for Robotics –The National Robotarium (Multi-flex Room)

08:30 – 09:00 Refreshments

09:00 – 10:30 Introduction to Generative AI for Robotics, [Oliver Lemon, Heriot-Watt University](#) and [Alessandro Suglia, Heriot-Watt University](#)

10:30 – 11:00 Refreshments

11:00 – 12:30 Fundamentals of Generative AI, [Alessandro Suglia, Heriot-Watt University](#)

12:30 -13:30 Lunch

13:30 – 15:00 Multimodal Generative AI for Robotics and/or practical session using AutoGen, LeRobot, [Oliver Lemon, Heriot-Watt University](#) and [Alessandro Suglia, Heriot-Watt University](#)

15:00 – 15:30 Refreshments

15:30 – 16:15 Invited talk, "Generative AI for Robotics at Google Deepmind" - [Abhishek Jindal](#), Google DeepMind

16:15 – 17:00 Invited talk, Gemini Robotics

Thursday 25th June - Safe AI for Robotics - The National Robotarium (Multi-flex Room)

9:00 – 10:30 Machine Learning and Robotics: How/why ML models maybe "unsafe",
[Ekaterina Komendantskaya, University of Southampton / Heriot-Watt University](#)

10:30 – 11:00 Refreshments

11:00 - 12:30 Successes of formal verification of ML models in the Cyber-Physical Systems Domain, [Ekaterina Komendantskaya, University of Southampton / Heriot-Watt University](#)

12:30 – 13:30 Lunch

13:30 – 15:00 Use case: verification of gliding drones, [Colin Kessler, Heriot-Watt University and Edinburgh University](#)

15:00 – 15:30 Refreshments

15:30 – 17:00 Use Case: Verification of a controller in a medical device. [Alistair Sirman, Southampton University](#)

There will also be laboratories in the afternoon for verifying neural network controllers.

Friday 26 June – Applications Day – The National Robotarium (Multi-flex Room)

08:30 – 09:00 Refreshments

9.00 – 10:00 Applications – Marine robotics [Yvan Petillot, Heriot-Watt University](#)

10:00 -11:00 Applications –Manipulation and robotics TBC

11:00 - 11.30 Refreshments

11:30 - 12.30 Applications – Defence - How robotics and AI are transforming defence TBC

12.30 – 13:30 Lunch

13:30 - 14:00 The UK-RAS Network; an overview of activities and opportunity to engage,
[Andy Weightman, University of Manchester](#)

14:00 – 15:00 Exhibits and demonstrations and a Tour of the National Robotarium.

15:00 Close