

Machine Learning of Wearables in Large Scale Biomedical Studies

21 September – 26 September Jesus College, Oxford
N.B - Exemplar of the previous course timetable

Talk	Practical	Social
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	Sunday 21 September	Monday 22 September	Tuesday 23 September	Wednesday 24 September	Thursday 25 September	Friday 26 September
8:00 – 9:00	Participants are able to check into their rooms from 14:00, however A member of the course administration team will be at Jesus College from 13:00. We will have a brief orientation meeting at 17:30, where the both the admin team and course director Professor Aiden Doherty will answer any questions and give an outline of how the week will proceed.	Breakfast				
9:15 – 9:45		Lecture Wearables in large-scale biobanks Laura Brocklebank	Lecture Processing accelerometer data Ben Maylor	Lecture Self-supervised machine learning Abram Schonfeldt	Lecture Accelerometers in physical activity epidemiology Barbara Jefferis	Lecture Epidemiological consequences of within person variation Charilaos Zisou
9:45 – 10:15		Coffee Break				
10:15 – 11:30		Practical Virtual environments Adam Huffman & Shing Chan	Practical Accelerometer processing Shing Chan & Ben Maylor	Practical Using SSL models Abram Schonfeldt & Aidan Acquah	Practical Deploying wearable models at scale Shing Chan & Awa Bator	Practical NHANES analysis continued Charilaos Zisou & Ben Maylor
11:30 – 12:30		Lecture How can wearables inform the global physical activity agenda? TBC	Lecture How commercial wearables can advance biomedical research TBC	Lecture Opportunities for wearables and AI to transform healthcare systems TBC	Lecture Patient-relevant endpoints in clinical trials Laurent Servais	Lecture Mobile health research in rheumatology and beyond Will Dixon (Manchester) 12.20 - Closing comments
12:30 – 13:30		Lunch				
13:30 – 14:30		Practical Wearable sensors data collection Tatiana Plekhanova & Abram Schonfeldt	Practical Accelerometer processing Shing Chan & Ben Maylor	Practical Measuring steps Shing Chan & Ben Maylor	Practical Deploying models at scale (continued) Shing Chan & Awa Bator	Please note that participants will need to check out of their room by 10:00 on Friday, however there will be an area you can leave your suitcase where it will be secure.
14:30 – 15:00		Lecture Design considerations for sensor validation datasets Laura / Ben	Lecture Time-series machine learning Aidan Acquah	Lecture Multimodal sensing to advance cardiovascular research Stefan van Duijvenboden	Lecture Wearable epidemiological considerations Derrick Bennett	
15:00 – 15:30		Coffee break				
15:30 – 17:00		Tour of Oxford 15.30	Practical CAPTURE-24 ML (Shing Chan & Aidan Acquah	Practical Sleep (Hang Yuan & Tatiana Plekhanova)	Practical Epidemiology in NHANES (Charilaos Zisou & Ben Maylor)	
17:00 - 18:00		Welcome Drinks 17:45 <i>followed by</i>	Free	Free	Free	
18:00 – 19:45		Welcome Dinner 18:15	Dinner	Dinner	Dinner	Gala Dinner 18:30 Drinks followed by dinner