



10th Oxford-Man Institute Machine Learning Workshop

Thursday 24th October 2019 2pm-5.30pm

**AHL Lecture Theatre & Common Area
Oxford-Man Institute
Eagle House**

We are amid an information revolution, where advances in science and technology, as well as the day-to-day operation of successful organisations and businesses, are increasingly reliant on the analysis of data. Driving these advances is a deluge of data, which is outstripping the increase in computational power available to process it. Research in machine learning, AI & data science is already transforming our ability to work with large amounts of complex information. Over the next few years these trends will revolutionise how we think about data, how we process and visualise it, and how we put it to use.

Schedule of talks

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| 2.00 - 2.10 | Welcome & Introduction to the workshop (Steve Roberts, OMI Director) |
| 2.10 - 2.50 | Alessandro Abate (Computer Science & OMI)
<i>Logically-guided Reinforcement Learning</i> |
| 2.50 - 3.30 | Anup Aprem (Engineering Science)
<i>Bayesian learning in games: Problems in pricing and oligopolies.</i> |
| 3.30 - 4.00 | Discussion & coffee/tea break |
| 4.00 - 4.40 | Mike Rabbat (Facebook AI Research)
<i>Efficient, scalable decentralized learning with gossip algorithms</i> |
| 4.40 – 5.30 | Discussion, networking, drinks and canapés (kindly sponsored by Man/AHL) |

The Oxford-Man Institute of Quantitative Finance

The Oxford-Man Institute (OMI) of Quantitative Finance is an interdisciplinary research centre in quantitative finance, now part of the Department of Engineering Science, with a focus on alternative investments and data-driven science. It aims to carry out academically outstanding research that addresses the key problems facing the financial industry. Its researchers create new tools and methods that can give deeper insight into financial markets – how they behave, how they become stable or unstable, how to extract value from data at scales beyond human and how they could be made to work better. This is achieved through a unique combination of academic innovation and external engagement. The OMI has its own building in the heart of Oxford, which houses its faculty, post-docs and students, as well as support staff. It provides excellent research facilities including outstanding computing and data resources and a well-supported seminar and conference program. The University of Oxford and Man Group have worked in partnership since 2007 when Man Group provided the cornerstone funding for the OMI, co-located with the firm's own commercial research laboratory and research staff, establishing the OMI as a world-leading interdisciplinary academic institute for research into quantitative finance. The OMI will continue to conduct its outstanding research programme, now with the benefit of additional machine learning focus and expertise, both in techniques that are directly applicable to finance and those transferrable from other fields of study. This focus will create a hub for machine learning and data analysis at Eagle House, the current home of the OMI and Man AHL's Oxford research lab. The aim is to foster a stimulating environment composed of researchers focused on machine learning techniques, whereby machine learning and data analytics expertise can be shared and leveraged. For more information see www.oxford-man.ox.ac.uk.

