

# Plenary speakers RSC 2022

June 6, 2022

## **Professor Theodore Kypraios - Bayesian Computation and Statistical Machine Learning**

Professor Theodore Kypraios is the head of the probability and statistics group at the University of Nottingham. His work includes "the development of novel statistical methodology for Bayesian inference and model selection for high-dimensional complex data with a particular focus on designing stochastic epidemic models and fitting them to infectious disease outbreak data". Theodore served as the chair of the RSS statistical computing section from 2018 to 2020, and remains a highly valued member of academic staff at the University of Nottingham.



## **Professor Stefanie Biedermann - Missing data and experimental design**

Professor Stefanie Biedermann held an associate professor position within Mathematical Sciences at the University of Southampton, whose research focuses on enabling researchers in Medicine and Science to draw accurate conclusions from their experiments. She has published prolifically to address optimal designs for broad classes of statistical models, however her recent interest in informative censoring in survival analysis has led to her being awarded a grant by the Medical Research Council (MRC) to develop new modelling approaches for sensitivity analyses. Stefanie was due to give a talk for Nottingham RSC in person in 2020, before the conference was moved online. Her talk will cover elements of both probability and statistics, thus enhancing the range of topics covered by the plenary talks.



**Dr Danielle Belgrave - Machine learning challenges for positive impact in health, especially in developing personalized treatment and intervention strategies**

Dr Danielle Belgrave is a Senior Research Scientist at DeepMind and was previously working in the Healthcare Intelligence group at Microsoft Research, in Cambridge. Her research focuses on integrating medical domain knowledge, probabilistic graphical modelling and causal modelling frameworks to help develop personalised treatment and intervention strategies for mental health. She is involved in many ethical groups such as Black in AI and promote AI for Social Good.



**Professor Marc Deisenroth - Data-efficient machine learning and autonomous systems**

Professor Marc Deisenroth is the DeepMind Chair of Machine Learning and Artificial Intelligence at University College London and the Deputy Director of UCL's Centre for Artificial Intelligence. Marc's research interests centre around data-efficient machine learning, probabilistic modelling and autonomous decision making. He has made insightful progress in the field of Gaussian Processes for data modelling and uncertainty quantification. He is the leadership team of Queer in AI.



**Dr Katie Severn - How capture and release methods can be used to model modern day slavery**

Katie Severn is an assistant professor in statistics at the University of Nottingham. Her research has included comparison of different tangent coordinates of the pre-shape sphere, in particular for enzyme shape data. Alongside her research, Katie is a PhD mental health ambassador at the University of Nottingham, as well as a Women in maths ambassador and an Equality, Diversity and Inclusion (EDI) committee member. Her talk will detail how capture and release methods can be used to model modern day slavery.



**Karim Beguir - How AI helps to predict high-risk coronavirus variants**

Karim Beguir Is the Chief Executive Officer of the Artificial Intelligence (AI) company InstaDeep founded in 2014 and with headquarters in London. InstaDeep helps companies get to grips with the latest AI breakthroughs and deploy decision making AI products. Karim is a Google Developer Expert, a mentor at Google for Startups Accelerator and is a steering committee member of Deep Learning Indaba that aims to strengthen the African Machine Learning community. One of his missions is to democratise AI and make it accessible to a wide audience.

