



## Statistics of Big Data and Machine Learning

### Programme

**Tuesday 6<sup>th</sup> November 2018**

**Venue: Council Chamber, Main Building (Main/1.77)**

Time	Speaker	Topic
13:45-14:00		Opening
14:00-14:50	Lars Carlsson	Conformal Prediction in Machine Learning and Applications
14:50-15:40	Alexander Gammerman	Reliable Machine Learning by Conformal Predictors

**Venue: Wallace Lecture Theatre, Main Building (Main/0.13)**

16:00-16:50	Coralia Cartis	Stochastic variants of classical optimization methods, with complexity guarantees
16:50-18:20	Arthur Gretton	The Maximum Mean Discrepancy for Training Generative Adversarial Networks

**Wednesday 7<sup>th</sup> November 2018**

**Venue: Committee Room 1, Glamorgan Building**

#### Tutorials on Machine Learning

09:00-09:50	Alexander Balinsky	Mathematics of Deep Learning
10:00-10:50	Irena Spasić	Multi-word Expressions in Text Mining
10:50-11:10		Coffee Break
11:10-12:00	Francesco Archetti and Antonio Candelieri	Optimization in Machine Learning and Applications
12:10-13:00	Timos Kipouros	Visual Analytics for High-Dimensional Data Exploration and Engineering Design Optimisation
13:00-14:00		Lunch

**Venue: 1.64 Lecture Theatre, Glamorgan Building**

14:00-14:50	Anatoly Zhigljavsky	Peculiarities of High Dimensions
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**Workshop on Big Data Issues in Genomics**

14.50-15.40	Valentina Escott-Price	Introduction to genomic data and overview of machine learning attempts to analyse genomic data
15.45-16.05	Dobril Ivanov	Using Genomic Data to Describe Phenotypes
16.10-16.30	Matthew Smith	Genomic data analyses with different machine learning approaches
16.35-16.55	Elliott Rees	Rare variation in human genome and next generation sequencing data generation
17.00-17.20	Emily Baker	POLARIS: Polygenic LD-Adjusted Risk Score Approach for Set-Based Analysis of Genomic Data

**Thursday 8<sup>th</sup> November 2018**

**Venue: Committee Room 1, Glamorgan Building**

09:30-10:00	Coffee and networking
10.00-12.30	<p>Roundtable Discussion on Big Data and Industrial Applications. Several 10-15 minute presentations. Confirmed speakers (alphabetic order):</p> <ul style="list-style-type: none"><li>• Prof Francesco Archetti (University of Milano-Bicocca &amp; Consorzio Milano Ricerche)</li><li>• Prof Antonio Candelieri (University of Milano-Bicocca &amp; Optimization Analytics Knowledge Simulation)</li><li>• Dr Alistair Edwardes (Office for National Statistics)</li><li>• Dr Angelico Fetta (McLaren)</li><li>• Dr Roman Guchenko (CrimTan)</li><li>• Dr Penny Holborn (University of South Wales / Tata Steel)</li><li>• Dr Matthew Jones (Nationwide)</li><li>• Dr Leanne Smith (London Ambulance Service)</li></ul>

For further information see <http://ssa.cf.ac.uk/big-data/>