informatik — Studium mit Zukunft

JYU JOHANNES KEPLER UNIVERSITÄT LINZ

informatik-Kolloquium

The Department of Computer Science of Johannes Kepler University Linz[1] together with the Austrian Society of Computer Science (ÖGI) invites to the following talk:

Topic: **Machine learning for inference of human demography and biology**

Presenter: **Gerton Lunter**

Date: **Monday October 2nd 2017, 10:15-11:45**

Location: **JKU, Computer Science Building (Science Park 3), room S3 055**

Abstract: The emergence of sequencing technologies have made biology into a data-rich science. However, standard statistical inference procedures struggle to process these data, and researchers in statistics and machine learning have developed new methods to extract meaningful patterns for large data sets. Here I will focus on two such methods, particle filters and deep neural networks, and I will show how we have applied these methods to two problems in biology: the inference of human demographic history from whole-genome data, and how predicting recombination hotspots can give us a glimpse of the underlying biology of recombination.

Short Bio: Dr. Gerton Lunter is an Associate Professor at the Wellcome Trust Centre for Human Genetics of the University of Oxford. His group aims at understanding how genomes evolve through mutations and evolutionary pressures, and use this understanding to inform research ranging from disease to human ancestry. To this end, the group focuses on the development of novel and efficient algorithms for analyzing various biological data, in recent years, also including deep learning.

http://www.well.ox.ac.uk/dr-gerton-lunter

Organizer: Prof. Dr. Sepp Hochreiter
               Institute of Bioinformatics