Jiří Moravec

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Interests

Statistical analysis and mathematical modeling of evolutionary processes, ranging from biological, cultural to social evolution, and their application.

Work experience

Research Assistant   **December 2022**
Pathology Department, University of Otago
- post-processing Illumina 850k methylation data

Lecturer   **March 2022 − October 2022**
School of Mathematics and Statistics, University of Canterbury
- teaching Data Mining (STAT318/STAT462), intensive communication with students

Postdoctoral Fellow   **February 2019 − September 2022**
Biological Data Science Lab, Computer Science department, University of Otago
- development and application of novel methods for the phylogenetic inference from cancer data

Bioinformatician   **October 2013 − December 2013**
Institute of Vertebrate Biology, Academy of Sciences of the Czech Republic, v.v.i.
- assembled de novo bat genome and processed fungal transcriptome; developed and implemented code for new method for detection of horizontal gene transfer

Lab Technician   **September 2012**
Institute of Vertebrate Biology, Academy of Sciences of the Czech Republic, v.v.i.
- isolated DNA; designed primers and performed a qPCR assay

Education

PhD in Statistics   **2014 − 2018**
Massey University, Institute of Fundamental Sciences, New Zealand
    Thesis: *Computational approaches to the study of post-marital residence*

MSc in Computational Biology   **2008 − 2013**
Masaryk University, Faculty of Science, Czech Republic
    Thesis: *Population history of viruses causing rabies*

Skills

Computer skills

R: packages baffle for base waffle plots, rrnni to calculate RNNI distances, and beter to create XML templates for BEAST, contributed to import; data wrangling and analyses

Python: vcm.py to get single-cell SNVs out of bulk called VCFs using the Pysam library

C/C++: usually in combination with R; such as the binding of the treeOclock code for the rrnni package

Java: wrote an Agent based model utilizing a Repast Symphony framework; contributed to the beast-phylonco package, and to the BEAST software