Mihály Koltai

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CURRENT POSITION

Institut Curie, U900 (Computational Systems Biology of Cancer group) — **Paris, France**
Bioinformatician postdoctoral research associate — *Sept 2016 -*

EDUCATION

Eotvos Lorand University — **Budapest, Hungary**
Diploma (5-year course) at Department of Biological Physics — *February 2012*

Ruprecht-Karls-Universität Heidelberg — **Heidelberg, Germany**
PhD in Computational Biology — *May 2016*

PAST EXPERIENCE

Ruprecht-Karls-Universität Heidelberg & Max Planck Institut Marburg — **Heidelberg, Germany**
Research associate and PhD candidate — *March 2012 - May 2016*

University of California San Francisco — **San Francisco, United States**
Intern as M.Sc. student, Prof. Wendell Lim's group — *October – December 2011*

Eotvos Lorand University — **Budapest, Hungary**
Junior research associate, Department of Biological Physics — *September 2010 – January 2012*

L'Harmattan — **Budapest, Hungary**
Translator (book translation from English on international economics) — *January - April 2010*

PROJECTS

COLOSYS project: systems biology of drug resistance in colon cancer — *Sept 2016 - Present*

- Identification of tumor drivers from omics data: PCA, differential gene expression analysis, clustering
- Model optimization/machine learning by using omics and clinical data as contstraints
- Simulations and analysis of logical and differential equations models of gene/protein interactions
- EU project coordination: coordinating collaboration and meetings with experimental partners

PhD project on mathematical modeling of microbial signaling — *March 2012 - May 2016*

- Parameter fitting of sytems of ordinary differential equations for biological signaling networks
- Stochastic simulations of bacterial motility, derivation of analytical solution
- Cost-benefit analysis of microbial (yeast) behavior using algebraic formalism
- Collaboration with experimental microbiologists: model fitting by microscopy and flow cytometry data
- Teaching: basics of mathematical modeling for M.Sc. Biology and Physics students

M.Sc. project: rule-based modeling of signal transduction — *September 2010 - January 2012*

- Manual curation and database entry for the SignaLink database
- Stochastic rule-based modeling of signal transduction

SKILLS

- Programming languages: MATLAB/Octave, R, Python, Wolfram Mathematica, Bash, Perl, LaTeX
- Languages (scale: A1-A2-B1-B2-C1-C2-Native): Hungarian (N), English (C2), French (C1), German (C1)
- Certificates:
  - Applied Plotting, Charting & Data Representation in Python (Certificate: KXS95CKA8543)
  - Introduction to Data Science in Python (7LRMLRPA9F6B)
  - Machine Learning (SRWRJ5WYBGKN)

PUBLICATIONS

See Google Scholar profile. 3 (shared) first author articles, journals: PNAS, Nature Communications. Total citations (03/2018): 116.