Mihály Koltai

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CURRENT POSITION

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

EDUCATION

Ruprecht-Karls-Universität Heidelberg — **Heidelberg, Germany**
PhD in Computational Biology — *May 2016*
Grade: 1.0 (highest distinction)

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

PROJECTS

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

- Regression analysis of omics and drug response data for construction of stochastic logical (Boolean) models
- MATLAB toolbox for exact calculation for stochastic logical models available on group's Github
- Manuscript on calculation method submitted to *Bioinformatics*
- Model optimization with drug response, phosphoprotein and CRISPRi data as constraints
- Project coordination: leading collaboration with experimental partners and presenting results at progress meetings on behalf of Curie SysBio team

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

- Construction, numerical analysis and parameter fitting of ODE and algebraic models for yeast signaling
- Stochastic simulations of bacterial motility, derivation of analytical solution
- Collaboration with experimental biologists: model fitting by microscopy and flow cytometry data
- Publications: Nature Communications, PNAS

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

- Manual curation and database entry for the SignaLink database of eukaryotic signaling
- Stochastic rule-based modeling of yeast mating pathway signaling

SKILLS

- Programming languages: R, MATLAB, Python, Mathematica, Bash, Perl, LaTeX
- Languages (scale: A1-A2-B1-B2-C1-C2-Native): Hungarian (N), English (C2), French (C1), German (C1)
- Recent certificates:
  - Python: Applied Plotting & Data Representation in Python, Introduction to Data Science in Python
  - Machine Learning: Machine Learning (12 weeks), Neural Networks and Deep Learning, Improving Deep Neural Networks

PUBLICATIONS

See Google Scholar profile. 3 shared first author articles (PNAS, Nature Communications). Total citations (10/2019): 167.

References

Prof. Emmanuel Barillot (current PI)
Unit Director of U900 (Bioinformatics, Biostatistics, Epidemiology and Computational Systems Biology of Cancer)
Group Leader of Computational Systems Biology of Cancer group
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Dr. Andrei Zinovyev (postdoc supervisor, scientific coordinator)
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Prof. Victor Sourjik (PhD advisor & PI)
Managing Director of Max Planck Institute for Microbiology
Group leader of Microbial Networks group
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Prof. Kai Thormann (PhD collaboration)
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