

Gergo Bohner

Born: 21/10/1990, Budapest, Hungary

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Research and Teaching

Gatsby Computational Neuroscience Unit PhD Student Sep. 2013 -

University College London- London, United Kingdom

- Advised by Maneesh Sahani
- Solving difficult imaging and data analysis problems in neuroscience via development of novel machine learning algorithms
- Creating and testing computational models of brain functions

London Research Institute Diploma Student Jun. 2011 - Feb 2013

Cancer Research UK, London Research Institute - London, United Kingdom

- Microtubule Cytoskeleton Group (Thomas Surrey)
- Development of Matlab software for dynamical analysis of microtubules and associated proteins imaged via Total Internal Reflection Microscopy, utilising two dimensional model fitting and Bayesian inference.

Optical Tweezers modeling Sep. 2010 - Apr. 2011

Pazmany Peter Catholic University - Budapest, Hungary

- Building model of near-focus electromagnetic fields in optical tweezers, based on the input parameters available for experimentalists. Calibrating the parameters for optimal experimental results during kinesin step detection.

Summer Course in Quantum Physics Jun. 2010 - Aug. 2010

Pazmany Peter Catholic University - Budapest, Hungary

- Studying computational methods for Quantum Electrodynamics

TA (Computational Neuroscience, UCL) Sep. 2014 - Jan. 2015

TA (Machine Learning, UCL) Sep. 2014 - Jan. 2015

TA (Physics of Information Technology, PPCU) Feb. 2012 - Jun. 2012

Education

**University of Leuven
Faculty of Engineering** Feb. 2013 - Jul. 2013

Leuven, Belgium

- Erasmus in Advanced Master of Artificial Intelligence (select courses)

**Pazmany Peter Catholic University
Department of Information Technology** Sep. 2009 - Jan. 2013

Budapest, Hungary

- B.S., Molecular Bionics, GPA: 4.91/5.00

Szent Istvan High School 2003 - 2009

Budapest, Hungary

- Advanced Mathematics Class, GPA: 5.00/5.00

Publications

- G. Bohner & M. Sahani, “Convolutional Higher Order Matching Pursuit”, *to appear at: MLSP*, Sep. 2016
 - M. Sahani, G. Bohner & A. Meyer, “Score-Matching Estimators For Continuous-Time Point-Process Regression Models”, *to appear at: MLSP*, Sep. 2016
 - M. Park, G. Bohner & J. Macke, “Unlocking neural population non-stationarity using a hierarchical dynamics model”, *NIPS 2015*, Dec. 2015
 - G. Bohner*, N. Gustafsson*, N. I. Cade, S. P. Maurer, I. Griffin & T. Surrey, “Important factors determining the nanoscale tracking precision of dynamic microtubule ends”, *Journal of Microscopy*, Aug. 2015
 - S. P. Maurer*, N. I. Cade*, G. Bohner*, N. Gustafsson, E. Boutant & T. Surrey, “EB1 Accelerates Two Conformational Transitions Important for Microtubule Maturation and Dynamics”, *Current Biology*, vol. 24, issue 4, pp. 372-384, Feb. 2014
 - S. P. Maurer*, F. Fourniol*, G. Bohner, C. Moores & T. Surrey, “EBs Recognize a Nucleotide-Dependent Structural Cap at Growing Microtubule Ends”, *Cell*, vol. 149, issue 2, pp. 371-382, Apr. 2012
 - G. Bohner, “A lézercsipesz elméleti modellezése Rayleigh-tartományban és a modell alkalmazása kinezin mozgásának vizsgálatára [Theoretical modeling of optical tweezers in the Rayleigh-regime and application for studying kinesin movement]”, presented at National Scientific Students’ Associations Conference, Nyíregyháza, Hungary, Apr. 2011
- *Equal contribution

Grants and Prizes

Grants

- Gatsby Computational Neuroscience Unit PhD Studentship (2013-2017)
- Grant of the Hungarian Republic (for academic excellence, 2011/12 and 2012/13)
- Departmental Grant (for social activities and academic excellence, 2010/11/I and 2010/11/II)
- Academic Grant (for academic excellence, 2010-2012)

Prizes

- 1st Prize at Faculty Research Student Conference - Simulation category (2010)
- 2nd Prize at national K&H Banking Management Contest, team (2010)
- Regional Finals at ACM International Collegiate Programming Contest, team (2011)
- Finals at National High School Competitions in Physics and Programming (2009)
- 3rd Prize at national invitational Dusza Árpád Programming Contest, team (2009)