

Vadim Nemytov

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Education

M.Sc. + Ph.D. Theory and Simulation of Materials	Imperial College London	2013 – 2018
M.Sc. Condensed Matter Theory and Modelling	McGill University, Canada	2011 – 2012
B.Sc. Joint Honours in Mathematics and Physics • 3.72/4.0 GPA (UK 1st class)	McGill University, Canada	2007 – 2011
Highschool Diploma • average 88/100 (UK A*A*A*)	Northview Heights, Canada	2004 – 2007

Computational Tools

Experienced: Python, Fortran, Mathematica, Matlab, Linux, Bash scripting, Git, HPC¹, OpenMP.

Some experience: C++, Machine Learning, AWS.

Experience

Ph.D. Researcher	Imperial College London	Oct. 2014 – Dec. 2017
<ul style="list-style-type: none">• Enabled computer simulations of a new class of materials – a first of their kind in my field.• Proposed a mathematical generalization of my supervisor's model, implemented and tested it in Fortran and successfully used it for new applications.• Parametrized models by minimizing an error function defined on large sets of reference data• Proposed, implemented $O(2)$ faster method of finding self-consistent solution during model fitting• Critically assessed relevant literature, proposed a hypothesis explaining model behaviour• Implemented OpenMP parallelization in Fortran.		
M.Sc. project	Imperial College London	Oct. 2013 – Sep. 2014
<ul style="list-style-type: none">• Implemented a module in C++ and integrated it (via git) as part of a group software project		
Outreach Postgraduate Ambassador	Wohl Reachout Lab, Imperial	Oct. 2014 – Dec. 2017
<ul style="list-style-type: none">• Designed and delivered day-long workshops for students aged 14 - 17 on a set topic, which consisted of talks, demonstrations, visualizations, exercises and hands-on labs		

¹High Performance Computer

- Developed workshop material for and trained newly qualified Outreach Ambassadors

Materials model developer, Researcher Materials Design s.a.r.l. Internship, Paris Sep. 2016 – Dec. 2016

- Achieved set task of parametrizing a pair-additive model for NaCl, novel in its ability to reproduce *both* the solid and the molten states. Integrated it into company's proprietary MedeA software.

Funding team leader, School co-organizer Hermes Summer School 2016 Materials Modelling & Sci. Comm. Oct. 2014 – Dec. 2017

- Led Funding team, raising £10730, balancing £25900 budget, with a surplus enabling 5 fully-funded scholarships for attendees from developing countries
- Co-designed summer school deciding on topic structure, series of communication workshops and individual and group tasks.

M.Sc. Project McGill University June 2011 – Jan. 2012

- Produced a written review of the theory of a recently discovered phase called Topological Insulator
- Implemented a model in Matlab which reproduced the Bi₂Se₃ Topological Insulator
- Formed a hypothesis that Cd₃As₂ is a new Topological Insulator; confirmed two years later².

Visiting Researcher University of Hong Kong Oct. 2011 – Dec. 2011

- Extended a Finite Differences Matlab code to simulate quantum transport of electrons in Bi₂Se₃

Sales and Marketing Analyst XLN Telecom, London Mar. 2007 – Aug. 2007, May 2008 – Aug. 2008

- Developed the metrics to monitor and analyze quality and performance of the Sales team
- Analyzed call recordings, selected cases for staff training and team enhancement purposes
- As a Sales Manager's assistant, prepared daily and weekly reports on team related metrics

Awards

- Director's List mention for 80%+ MSc final average, Imperial College 2014
- Rubin Gruber Scholarship (1,000 \$), McGill University 2008
- Jeffery Scholarship in Science (2,000 \$), McGill University 2008
- J.W. McGonnel Award (1,000 \$), McGill University 2008
- Golden Key International Honours Society – membership by invitation 2008

Interests, Languages

- Interests: Football; indoor bouldering; dancing swing, improvised; reading Fiction, Economics, Philosophy, History, Mathematics; discovering own city by bike, country by visiting cities
- Languages: English, Russian, Lithuanian; Beginner's French.

Last updated: November 26, 2018

²digitool.library.mcgill.ca/thesisfile114415.pdf, Nature Materials 13, 677 - 681 (2014)