PERSONAL INFORMATION

Family name, First name: **Vacha, Robert**
Date of birth: 29th December 1980
ResearcherID, ORCID: D-1824-2012, 0000-0001-7610-658X
URL for web site: http://lcc.ncbr.muni.cz/~robert/

EDUCATION:

09/05 - 06/09 **Ph.D.** with **Pavel Jungwirth** at Faculty of Science, Charles University in Prague, Czech Republic - ***Molecular simulations of surfaces of aqueous solutions***

09/07 - 06/09 **International Max Planck Research School** for "Dynamical Processes in Atoms, Molecules and Solids" in Dresden, Germany

09/99 - 05/05 **MSc.** in Biophysics and Chemical Physics at Faculty of Mathematics and Physics, Charles University in Prague, Czech Republic

POSITIONS:

07/17 – **Group leader,** CEITEC (Central European Institute of Technology) and Faculty of Science at Masaryk University, Brno (Czech Republic)

04/16 – 06/17 **Associate Professor** and **Researcher,** CEITEC (Central European Institute of Technology) and Faculty of Science at Masaryk University, Brno (Czech Republic)

10/11 – 04/16 **Assistant Professor** and **Researcher,** CEITEC (Central European Institute of Technology) and Faculty of Science at Masaryk University, Brno (Czech Republic)

08/11 – 10/11 **Postdoctoral Research Associate,** group of Mikael Lund, Department of Chemistry, **Lund University** (Sweden): *Coarse-grained models of amyloids, Dynamic Monte Carlo (DMC) technique*

08/09 – 07/11 **Postdoctoral Research Associate**, group of Daan Frenkel, Department of Chemistry, **University of Cambridge** (UK): *Coarse-grained models of phospholipid membranes and proteins MD and MC*

FELLOWSHIPS:

06/10 – 08/11 **Junior Research Fellowship** at Churchill College, Cambridge Highly competitive research fellowship - few postdoc positions within the whole University of Cambridge per year

11/08 - 12/08 **Fellowship** in group of Nobuyuki Matubayasi at Institute for Chemical Research, **Kyoto University** in Japan: *Investigation and application of free energy calculations*

09/07 - 09/07 **Short fellowship** in group of **Max Berkowitz** at University of North Carolina, USA

07/06 - 08/06 **Fellowship** in group of **Rainer Böckmann** at University of Saarland, Germany

TEACHING ACTIVITIES AND MENTORING:

2017 - **Lecturing** – *Problems and issues of molecular modelling* C9926 Masaryk University, Brno, Czech Republic

2015 - **Lecturing** - *Physics of biopolymers* F8510 Masaryk University, Czech Republic

2013 - **Lecturing** - *Interactions of proteins and membranes – introduction to soft matter* NBCM147, Charles University, Prague, Czech Republic

2012 - **Lecturing** - *Introduction to soft matter models of membranes and proteins* C9925, Masaryk University, Brno, Czech Republic

2010 - 2011 **Supervisions** of *Thermodynamics and Kinetics* at Churchill College, Cambridge (3 small groups of three 1st year students)

2010 - 2011 **Mentoring** 5 students (2 Ph.D. and 3 MSc.)

2009 - 2010 **Supervisions** of *Statistical Mechanics* at Chemistry Department, University of Cambridge (small group teaching of three 3rd year students)

2006 - 2008 **Assistant** teacher of *Classical molecular dynamics* at Faculty of Mathematics and Physics, Charles University in Prague

GRANTS:

2017 - 2019 Czech Science Foundation grant (**GACR**) – PI, Amphiphilic Peptides at Phospholipid Membranes, 3 years (180 000 EUR)

2017 - 2019 Grant Agency of Masaryk University (**GAMU**) – co-PI, Computational chemistry for Wnt signaling pathway, 3 years (190 000 EUR)

2014 - 2016 Czech Science Foundation grant (**GACR**) – PI, Self-assembly of patchy spherocylinders, 3 years (160 000 EUR)

2008 Japan Society for the Promotion of Science (**JSPS**) - fellowship grant at Institute for Chemical Research, Kyoto University, Japan, 2 months, Investigation and application of novel free energy calculations (3 300 EUR)

2008 Grant Agency of Charles University **GAUK** – PI, 1 year grant, Czech Republic Creation on investigation of mixed phospholipid membrane with atomistic resolution by means of computer simulations (4 600 EUR)

INVITED LECTURES (selected):

2018 43rd FEBS Congress Prague, Czech Republic

2018 CECAM workshop - Nano-structured soft matter: a synergy of approaches to amphiphilic and block copolymer systems, Lincoln, United Kingdom

2018 CECAM workshop - Frontiers in Computational Biophysics, Lugano, Switzerland

2017 CECAM workshop - The future of biomembrane simulations: hidden pitfalls and future challenges, Lyon, France

2017 Joint Meeting of Czech and German Biophysicists, Hünfeld, Germany

2016 Organizing Molecular Matter - A soft matter symposium, Lund, Sweden

2015 CEITEC/ICRC Annual Conference, Brno, Czech Republic

2013 TAPPO workshop, Levi, Finland

2012 CECAM workshop - Design of Self-assembling Materials, Vienna, Austria

2012 Telluride Science Research Center - Protein and Peptide Interactions in Cellular Environments, Telluride, CO, USA

2011 ACS national meeting, Denver, USA

AWARDS:

2014 Best talk of early stage researcher – CECAM workshop

2013 International travel award from Biophysical Society

06/10 – 08/11 **Junior Research Fellowship** at Churchill College, Cambridge Highly competitive and prestigious research fellowship – a dozen postdoctoral positions are offered per year within the whole of the University of Cambridge

2010 **Bolzano Prize** in natural sciences - Charles University in Prague – awarded to the two best Ph.D. theses in the natural sciences at Charles University each year

09/99 – 06/04 Scholarship for the 50 best students in each year (about 10% of all students)

PUBLICATIONS:

I have published 45 peer-reviewed articles, one book chapter and three editorial comments in major international journals that have attracted more than 2500 citations (excluding self-citations according to ISI Web of Science in March 2018), yielding an H-index of 28. These publications include PNAS, Nano letters, ACS Nano, JACS, Angewandte Chemie, and Accounts of Chemical Research. I review 6-12 paper a year.