Jiri Vanicek

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Education

1998-2003	Ph.D. in theoretical physics, Harvard University (June 2003)
1998-2000	A.M. in physics, Harvard University (June 2000)
1994-7	A.B. *summa cum laude* in physics, Harvard College (June 1997)
1993-4	Charles University, Prague, Czech Republic

Research experience

2007- present	École Polytechnique Fédérale de Lausanne (assistant professor of chemistry)
2005-7	Institute for Advanced Study, Princeton (member, School of Natural Sciences)
2003-5	University of California, Berkeley (postdoctoral fellow in theoretical chemistry)
Spring 2003	Mathematical Sciences Research Institute, Berkeley (fellow)
1995-2002	Harvard University (undergraduate and graduate research assistant)

Referee for:

Swiss National Science Foundation
Journal of Chemical Physics
Journal of Chemical Theory and Computation
Journal of Physical Chemistry
Chemical Physics
Molecular Physics
International Journal of Quantum Chemistry
Advances in Physical Chemistry
Journal of Molecular Modeling
Chimia
Physical Review Letters
Physical Review A, Physical Review E
Journal of Physics A: Mathematical and General
Journal of Physics B: Atomic, Molecular, and Optical
Journal of Physics C: Condensed Matter
New Journal of Physics
Bioinformatics
BMC Bioinformatics

Fellowships, prizes, and honors

Sponsored Membership, AAAS/Science Program for Excellence in Science (2006-8)
Fellowship, School of Natural Sciences, Institute for Advanced Study, Princeton (2005-7)
Fellowship in Semiclassical Analysis, Mathematical Sciences Research Institute, Berkeley (2003)
Gertrude and Maurice Goldhaber Prize (for best Ph.D. qual. exam in theor. phys.), Harvard U. (2002)
Whiting Fellowship (for highest GPA in physics, covers tuition), Harvard U. (1999)
David J. Robbins Prize (for academic achievement), Harvard U. (1999)
John Van Vleck Scholarship (for promising graduate student, prize), Harvard U. (1998)
Jack T. Sanderson Prize (for highest GPA in physics), Harvard U. (1997)
Phi Beta Kappa, Harvard U. (1996)
National Undergraduate Fellowship in Plasma Physics and Fusion Research, U. of Texas in Austin (program organized by DOD and Princeton Plasma Physics Laboratory) (1995)
John Harvard Scholarship (for acad. achievement, honorary), Harvard U., all semesters (1994-7)
Charles University Scholarship (for acad. achievement, stipend), Charles U., Prague (1993-4)
5th International Olympiad in Informatics, member of the Czech team, Mendoza, Argentina (1993)
24th International Physics Olympiad, silver medal, Williamsburg, VA (1993)
Chemistry Olympiad, 2nd place in the Czechoslovak final (1993)

23rd International Physics Olympiad, bronze medal, Helsinki, Finland (1992)
5th International Young Physicists' Tournament (1st place), Serpuchow, Russia (1992)

Patents
J. Vanicek, E. Murphy, H. Robins, T. Shenk, and A. J. Levine: "microRNAs for modulating herpes virus gene expression," Patent application No. 20090156535 filed in the US Patent and Trademark Office (2008).

Professional society memberships
American Chemical Society, American Physical Society, Swiss Chemical Society, Swiss Association of Computational Chemistry

Academic committee memberships
Informatics Committee of the Faculty of Basic Sciences – member (since 2011)
Committee of the Doctoral School of Chemistry and Chemical Engineering – deputy member (since 2008)
Teaching Committee of the Section of Chemistry and Chemical Engineering – member (2008-2009), deputy member (since 2009)

Teaching experience
Chemical kinetics (bachelor level, lecture): 2008, 2009, 2010, 2011
Project in computational chemistry (bachelor level): 2010, 2011, 2012
Molecular quantum dynamics (master level): 2009, 2010, 2011, 2012
Teaching fellow in various undergraduate and graduate physics courses, 1996-1997, 1998-2002
Non-resident tutor for Harvard undergraduate students in Leverett House, 1998-2003

Grants received
Swiss National Science Foundation Grant No. 200021-124936: "Efficient methods for real and imaginary time quantum dynamics of large systems", P.I. (2009-2012)
National Center of Competence in Research (NCCR) "Molecular Ultrafast Science and Technology (MUST)", one of P.I.s (2010-1014)

Coworkers
Ph.D. students: Marius Wehrle, Ray Marin, Cesare Mollica
Postdoctoral associates: Tomas Zimmermann, Miroslav Sulc
Past postdoctoral associates: Baiqing Li, Marcin Buchowiecki
Past master thesis students: Marius Wehrle
Past master interns: Julien Ruppen

Organization of scientific meetings
CUSO Summer School on Computational Chemistry: "*Solving the Schrödinger Equation - from Electronic Structure to Quantum Dynamics*," Villars sur Ollon, 2011, http://cuso2011.epfl.ch/
Main organizer of the *3me cycle lecture tours* of William H. Miller (2009) and Todd J. Martinez (2010)
Workshop on *Complexity of classical simulations of many-body quantum dynamics*, Cuernavaca, Mexico, 2008, http://www.cicc.unam.mx/activities/2008/complexity.html

CONTRIBUTIONS AT SCIENTIFIC MEETINGS

Quantum Molecular Dynamics, Conference in Honor of William. H. Miller, Berkeley, 2012

Invited talk, *37th Congress of Theoretical Chemists of Latin Expression*, Mexico, 2011

Invited talk, *World Congress of Small RNAs*, Shenzhen, China, 2011

Invited talk, *MicroRNAs Europe 2011 meeting on 'MicroRNAs: Biology to Development & Disease'*, U. of Cambridge, United Kingdom, 2011

Invited talk, *Madrid Workshop on Open Quantum Systems*, Madrid, Spain, 2011

7th Congress of the International Society for Theoretical Chemical Physics, Tokyo, Japan, 2011

9th Congress of the World Association of Theoretically Oriented Chemists, Santiago de la Compostella, Spain, 2011

RNA Society Conference, Kyoto, Japan, 2011

Invited talk, *Theoretical Chemistry Seminar*, Institute of Organic Chemistry, Prague, 2011

Invited talk, *RNAi and miRNA World Congress*, Boston, 2011

Invited talk, *International Workshop on Atomic Physics*, Dresden, Germany, 2010

Invited talk, *CECAM Workshop on Adiabatic and Non-adiabatic Methods in Quantum Dynamics*, Lausanne, 2010

Invited talk, *ITAMP Workshop on Wavepackets, Chaos, and Scattering: From Chemistry to Physics and Back*, Harvard U., MA, 2010

Invited talk, *4th Workshop on Quantum Chaos: Theory and Applications*, Castro Urdiales, Spain, 2010

GRC Computational Chemistry, Les Diablerets, 2010

8th European Conference on Computational Chemistry, Lund, Sweden, 2010

Quantum Chemistry beyond the Polar Circle, Sommaroy, Norway, 2010

CECAM Workshop on Coherent Quantum Dynamics in Complex Many-Body Systems, Dublin, Ireland, 2010

Invited talk, *Spring Meeting of the Swiss Association of Computational Chemistry*, Bern, 2010

Invited talk, *35th Congress of Theoretical Chemists of Latin Expression*, San Andres, Colombia, 2009

Invited talk, *Modeling Interactions in Biomolecules IV*, Hruba Skala, Czech Republic, 2009

13th International Congress of Quantum Chemistry, Helsinki, Finland, 2009

Workshop on molecular dynamics, University of Warwick, UK, 2009

Organizer, *Complexity of Classical Simulations of Many Body Quantum Dynamics*, Cuernavaca, Mexico, 2008

Invited talk, *Workshop on Genes, Genomes, and Evolution*, Geiranger, Norway, 2008

Invited talk, *Swiss Numerical Colloquium*, Fribourg, 2008

Invited talk, *The Simons Center for Systems Biology Symposium*, Princeton, NJ, 2008

Workshop on Quantum Chaos: Routes to RMT, Banff, Canada, 2008

USGEB Conference: Biology meets engineering, EPFL, Lausanne, 2008

Zing Computational Chemistry Conference, Antigua, 2008

Invited talk, *Mathematical Physics Colloquium*, University of Ljubljana, Slovenia, 2008

Invited talk, *Chemical Physics Seminar*, Charles University, Prague, Czech Rep., 2007

Invited talk, *Decoherence: Measures, models and semi-classics*, Cuernavaca, Mexico, 2007

March meeting of the American Physical Society, Denver, CO, 2007

Invited talks, *AMBER development meetings on inclusion of quantum effects in molecular dynamics*, Berkeley, CA, Salt Lake City, UT, San Diego, CA, 2006-2007

Invited talk, *Chaos, Decoherence, and Fidelity Decay*, Cuernavaca, Mexico, 2005

American Conference on Theoretical Chemistry, Los Angeles, CA, 2005

Invited talk, *8th International Conference: Path Integrals from Quantum Information to Cosmology*, Prague, Czech Rep., 2005

International Conference on Statistical Physics, Bangalore, India, 2004

General Conference of the Condensed Matter Division of the European Physical Society, Prague, Czech Rep., 2004

Invited talk, *March meeting of the American Physical Society*, Montreal, Canada, 2004
Gordon Research Conference on Isotopes in Chemical and Biological Sciences, Ventura, CA, 2004

Euroconference on Spin and Charge Transport in Nanostructures, Braga, Portugal, 2003

Summer School "Chaotic Dynamics and Transport," Cargese, Corsica, France, 2003

International Conference on Dynamical Chaos in Classical and Quantum Physics, Novosibirsk, Russia, 2003

Workshop on Semiclassical Analysis, Mathematical Sciences Research Institute, Berkeley, CA, 2003

March meeting of the American Physical Society, Austin, TX, 2003

IUPAP International Conference on Quantum Entanglement, Complexity and the Physical Basis for Quantum Computation, Rio de Janeiro, Brazil, 2002

International Conference on Theoretical Physics, Paris, France, 2002

International Summer School Enrico Fermi, Course CLI: Quantum Phenomena in Mesoscopic Systems, Varenna, Italy, 2002

Annual Meeting of Division of Atomic, Molecular, and Optical Physics of American Physical Society, Williamsburg, VA, 2002

38th Winter School of Theoretical Physics, Dynamical Semigroups: Dissipation, Chaos, Quanta, Ladek Zdroj, Poland, 2002

International Conference on Quantum Chaos, Cocoyoc, Mexico, 2001

33rd Latin American School of Physics, Classical and Quantum Chaos, Mexico City, Mexico, 2001

Pan American Advanced Study Institute on Chaos, Decoherence and Quantum Entanglement, Ushuaia, Argentina, 2000

Colloquium talk: "*Wavelet analysis of electron temperature fluctuations during the sawtooth crash*," Institute for Fusion Research, University of Texas in Austin, TX, 1995