PERSONAL INFORMATION

RNDr. Dr. Pavel Baláž

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balaz@karlov.mff.cuni.cz

Sex male | Date of birth 16/07/1983 | Nationality slovak

WORKING POSITION

Postdoctoral researcher

WORKING EXPERIENCES

from March/2015 — Postdoctoral research
Faculty of Mathematics and Physics, Charles University in Prague, Czechia
and
National Supercomputing Center IT4Innovations in Ostrava, Czechia

Feb/2012 – March/2015 — Postdoctoral researcher
Intitute of Molecular Physics, Polish Academy of Sciences, Poznań, Poland
(Polish-Swiss Research Programme 'Nanospin')

Feb/2012 – Jan/2015 — Scientific researcher
Faculty of Physics, A. Mickiewicz University in Poznań, Poland

Jun/2007 - Jun/2010 — Early stage researcher
Faculty of Physics, A. Mickiewicz University in Poznań, Poland
(Marie Curie Research Training Network 'Spinswitch')

July/2006 - Aug/2006 — Researcher
Faculty of Natural Sciences, P. J. Šafárik University in Košice, Slovakia
(European research network 'KnowARC')

EDUCATION

Jan/2012 — Ph.D. in Physics
Faculty of Physics, A. Mickiewicz University in Poznań, Poland

June/2006 — M.Sc. in General Physics
Faculty of Natural Sciences, P. J. Šafárik University in Košice, Slovakia

PUBLICATION RECORD (July 2016)

Number of publications (WoS): 25
Number of citations (WoS): 77, H-index (WoS): 5

10 most relevant publications (2013-2018):

1. Baláž P., Žonda M., Carva K., Maldonado P., Oppeneer P. M., Transport theory for femtosecond laser-induced spin-transfer torques, J. Phys.: Cond. Matter **30**, 115801 (2018).
2. Carva K., Baláž P., Radu I., Chapter 2 - Laser-Induced Ultrafast Magnetic Phenomena, in book “Handbook of Magnetic Materials, vol. 26”, pages 291 – 463 (2017).
3. Máca F., Kudrnovský J., Drchal V., Carva K., Baláž P., Turek I., Physical properties of the tetragonal CuMnAs: A first-principles study, Phys. Rev. B **96**, 094406 (2017)
4. Carva K., Kudrnovský J., Máca F., Drchal V., Turek I., Baláž P., Tkáč V., Holý V., Sechovský V., Honolka J., Electronic and transport properties of the Mn-doped topological insulator : A first-principles study, Physical Review B 93, 214409 (2016).
5. Van de Wiele B., Hämäläinen S. J., Baláž P., Montoncello F., Van Dijken S., Tunable short-wavelength spin wave excitation from pinned magnetic domain walls, Sci. Rep. **6**, 21330 (2016).
6. Barnaś J., Baláž P., Dyrdał A., Dugaev V. K., Electrical and thermal control of magnetic moments in Symmetry, Spin Dynamics and the Properties of Nanostructures, edited by V. K. Dugaev, A. Wal, J. Barnaś, World Scientific (2016).
7. Baláž P., Barnaś J., Spin waves in exchange-coupled double layers in the presence of spin torques, Phys. Rev. B **91**, 104415

(2015).
8. Baláž P., Zwierzycki M., Barnaś J., Spin-transfer torque and current-induced switching in metallic spin valves with perpendicular polarizers, Physical Review B **88**, 094422 (2013).
9. Baláž P., Barnaś J., Current-induced instability of a composite free layer with antiferromagnetic interlayer coupling. Physical Review B **88**, 014406 (2013).
10. Baláž P., Barnaś J., Ansermet J.-Ph., Transverse spin penetration length in metallic spin valves, Journal of Applied Physics **113**, 193905 (2013).

PROJECT SKILLS

• member of research team: Grant Agency of the Czech Republic, No. GJ15-08740Y: Spin current generation on a femtosecond timescale; 2015-2017

• member of research team: Joint research project under the framework of Polish-Swiss research programme No. PSPB-045/2010: Nanoscale spin torque devices for spin electronics “NanoSpin”; 2012-2015

• PhD research project funded by Polish Ministry of Science and Higher Education No. N N202 489539: Current-induced magnetization dynamics in metallic spin vavles, 2010-2011

• member of research team: Marie Curie research training network: Spin current induced ultrafast switching “Spinswitch”; 2007-2010

• member of research team: European research network, Grid-enabled Know-how Sharing Technology Based on ARC Services and Open Standards “KnowARC”; 2006

• member of research team: Slovak Grant Agency VEGA 1/0128/08, Theoretical studies of quantum and classical spin systems; 2008-2010

PEDAGOGICAL SKILLS

• Teaching: Physics for students of biotechnology, Theory of quantum measurement, Computational physics, Basic physical practice

• Co-supervising of two master theses (A. Mickiewicz University in Poznań, Poland)

COMPUTER SKILLS

Confident user of operation systems Unix/Linux and Microsoft Windows
Good knowledge of C/C++, Python, Awk, Unix Bash
Good knowledge of HTML, PHP and MySQL
Experiences with Fortran 95, object oriented micromagnetic framework (OOMMF)
Independent user of Wolfram Mathematica, Gnuplot, Microcal Origin etc

Native language slovak

Other language

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken communication	
English	C1	C1	C1	C1	C1
Polish	B2	B2	B2	B1	A2
German	A2	A2	A1	A2	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Language certificates: Cambridge Certificate in Advanced English (CAE)