Curriculum Vitae

Tomáš Jungwirth

Born: October 23, 1967, Praha, Czech Republic
Home page: http://www.fzu.cz/∼jungw

Education and professional career:

2007-present	Head of the Department of Spintronics and Nanoelectronics, Institute of Physics, Academy of Sciences of the Czech Republic (ASCR)
2004-present	Professor, University of Nottingham, UK
2001-2007	Senior Research Scientist, Institute of Physics ASCR
2000-2002	Research Fellow, University of Texas, USA
1997-1999	Postdoctoral Fellow, Indiana University, USA
1997	PhD. degree in condensed matter physics, Charles University, Czech Republic
1991	M.S. degree in physics, Charles University, Czech Republic

Professional experience:
condensed matter physics; materials science; collective phenomena; electronic properties of semiconductor heterostructures, low-dimensional systems, and nanostructures; quantum Hall effects; carrier-mediated ferromagnetism in diluted magnetic semiconductors; magnetic, magneto-transport and magneto-optical properties of ferromagnetic semiconductors; spin-orbit coupling phenomena; anisotropic magnetoresistace in magnetic bulk and nano-devices; anomalous and spin Hall effects; non-magnetic, ferromagnetic, and antiferromagnetic metal and semiconductor spintronics

Accomplishments, awards, memberships:

- 225 publications, including 4 in Reviews of Modern Physics, 29 in Physical Review Letters, 30 in Nature/Science family journals; h-index 54 (WoS); $\sim 12,000$ citations ($\sim 1,500$ in 2017); $\sim$ 150 invited talks at international conferences and colloquia since year 2000
- Member of the Scientific Council of the European Research Council, 2015-
- Member of the Academy of Europe (Academia Europaea), 2014-
- European Research Council Advanced Grant, 2011-2016
- Member of the Research and Development Council of the Government of the Czech Republic, 2011-
- Member of the Scientific Council of the Grant Agency of the Czech Republic, 2010-2014
- Member of the European Research Council Evaluation Panel, 2009-2015
- Member of the Learned Society of the Czech Republic, 2009-
- Praemium Academiae, 2008-2014

- Academy of Sciences of the Czech Republic Prize, 2005
- Otto Wichterle Prize of the Academy of Sciences of the Czech Republic, 2002
- NATO-NSF Advanced Fellowship, 2000
- Bolzano Foundation Prize of the European Physical Society, 1996
- Josef Hlávka Prize, 1996
- Milan Odehnal Prize of the Union of Czech Mathematicians and Physicists, 1996

Patents:

1. J. Wunderlich, D. Williams, T. Jungwirth, A. Irvine, B. Gallagher, Single-charge tunneling device, 24.2.2006, Publ. No. EP1830410, CN101026188, US2007200156, JP2007227879; granted in the U.S. under US7893426 on 22.02.2011
2. J. Wunderlich, C. Chappert, T. Jungwirth, J. Zemen, B. Gallagher, T. Devolder, Method of controlling a magnetoresistive device using an electric field pulse, 13.7.2007, Publ. No. EP2015307, KR20090007201, US2009016098, JP2009021586, CN101345079; granted in the U.S. under US8138758 on 20.3.2012
3. J. Wunderlich, B.-G. Park, A. Shick, T. Jungwirth, F. Máca, Magnetoresistive device, 27.11.2007, Publ. No. EP2065886, US2009146232, JP2009130371; granted in the U.S. under US7939870 on 10.5.2011
4. J. Wunderlich, T. Jungwirth, A. Irwine, J. Sinova, Spin-polarized charge carrier device, 20.11.2008, Publ. No. EP2190022, US2010123133, KR20100056960, JP2010122211; granted in the EU under EP2190022 on 2.1.2013, granted in the US under US 9000433 on 7.4. 2015
5. J. Wunderlich, J. Zemen, C. Chappert, B. Gallagher, T. Devolder, D. Williams, T. Jungwirth, Magnetoresistive memory, 14.1.2009, Publ. No. EP2209123, JP2010166054
6. J. Wunderlich, K. Olejnik, T. Jungwirth, J. Sinova, Spin-based device, 20.02.2012, Appl. No. EP20110196194, US201213721668
7. J. Wunderlich, A. Ferguson, T. Jungwirth, C. Ciccarelli, Field-effect transistor, 10.08.2012, Appl. No. EP20120157109
8. J. Wunderlich, X. Marti, T. Jungwirth, Memory device, 06.02.2013, Appl. No. EP12197333
9. J. Wunderlich, X. Marti, T. Jungwirth, Antiferromagnetic memory device, 06.12.2013, Appl. No. EP13196118, US311200012
10. J. Wunderlich, X. Marti, T. Jungwirth, Antiferromagnetic solid state memory, 30.9.2014, Appl. No. EP14186900

Grants

- EU Horizon 2020 FET Open RIA Grant #766566 ASPIN, "Antiferromagnetic spintropnics", 2017-2021
- Czech Science Foundation Excellence Program Grant #14-37427G, "Center for spintronics", 2014-2018
- EU Horizon 2020 ERC Advanced Grant #268066 0MSPIN, "Zero-moment spintronics based on spin-orbit coupling effects", 2011-2016
- EU FP 7 ITN Grant #215368-2 SemiSpinNet, "Initial Training Network in Nanoscale Semiconductor Spintronics" 2008-2012
- EU FP 7 NMP Grant #214499, "Nanostructured Magnetic Materials for Nanospintronics (NAMASTE)", 2008-2011
- EU ESF Eurocores Grant SpiCo"Spin coherent transport in quantum nanostructures (SpiCo)", 2006-2009
- EU FP 6 IST Grant #015728-2 NANOSPIN, "Semiconductor Nanospintronics", 2006–2008,
- Czech Science Foundation Standard Grant #202/05/0575, "Theoretical research in semiconductor spintronics ", 2005–2007
- U.S. Department of Energy Grant #FG03-02ER45958, "Theoretical research of ferromagnetic semiconductors" 2002–2004
- U.S. NATO – National Science Foundation Grant, "Theoretical study of ferromagnetic semiconductors",
- U.S. National Science Foundation – Czech Ministry of Education Grant #ME-104, "Collective phenomena in bilayer two-dimensional electron systems", 1996–1998

Joint publications with groups from:

Columbia University, USA, Princeton University, USA, California Institute of Technology, USA, Harward University, USA, University of Notre Dame, USA, Univeristy of Buffalo, USA, University of Texas, USA, Texas A&M University, USA, University of California, USA, Yale University, USA, Oak Ridge National Laboratory, USA, Trent University, Canada, University of Wellington, New Zealand, University of Tokyo, Japan, Osaka University, Tohoku University, Japan, Atomic Energy Agency, Japan, Hitachi Ltd. Tokyo, Japan, Korea University, South Korea, Scuola Normale Superiore, Italy, Politecnico di Milano, Italy, University of Mainz, Germany, Forschungzentrum Jülich, University of Regensburg, Germany, University of Wuerzburg, Germany, University of Bochum, Germany; University of Dresden, Germany, University Linz, Austria, University of Nottingham, UK, University of Lancaster, UK, Hitachi Cambridge Laboratory, UK, University of Cambridge, UK, University College London, UK, University Paris Sud, France, CNRS-Ecole Centrale Paris, France, Eindhoven University of Technology, Netherlands, Academy of Sciences, Poland, ICMAB-CSIC Barcelona, Spain, Universitat Autnoma de Barcelona, Spain, Universidad Complutense de Madrid, Spain, University of Cyprus, Cyprus, etc.