

Curriculum Vitae

András Pályi

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Education

- PhD in Physics, 2008, Eötvös Loránd University (ELTE), Budapest, Hungary
- MSc in Physics, 2004, ELTE

Employment

2015/09 - associate professor ("egyetemi docens"), BUTE
2011/01-2015/08 assistant professor ("egyetemi adjunktus"), ELTE
2011/04-2015/08 part-time research fellow, BUTE
2008/11-2010/12 postdoctoral researcher, Universität Konstanz, Germany (supervisor: Guido Burkard)
2007/10-2008/10 research assistant, ELTE (supervisor: Gábor Vattay)
2006/09-2007/03 internship as a PhD student, Lancaster University (UK) & QinetiQ (Great Malvern, UK)
(supervisors: Colin Lambert and John Jefferson)
2004/09-2007/08 PhD student, ELTE (supervisor: József Cserti)

Research area

Condensed matter theory; more specifically: (i) electronic transport and quantum control of electronic states in low-dimensional systems, (ii) interplay of electronic, mechanical and magnetic properties of nanostructures, (iii) condensed-matter realization of quantum information processing schemes.

Teaching

- *Quantum bits in solids*, lecture for physics MSc and PhD students, (2011 Fall, 2012 Fall, 2013 Fall)
- *Topological insulators I. (Band-structure topology and edge states in 1D and 2D)*, lecture for physics MSc and PhD students (2012 Fall, 2013 Fall, 2015 Fall)
- *Topological insulators II. (Topological superconductivity in 1D)*, lecture for physics MSc and PhD students (2014 Spring)
- *Solid-state physics* lecture for materials science MSc students (2013 Fall, 2014 Fall)
- *Solid-state theory* lecture for physics MSc and PhD students (2013 Fall)
- various problem-solving classes for physics BSc students, (2004-)

Longer research visits

- Universität Konstanz (Prof. Guido Burkard), Germany, 2011. (3 weeks)
- University of Science and Technology of China (Prof. Dimitrie Culcer), Hefei, China, 2011. (3 weeks)
- Kavli Institute of Theoretical Physics, Beijing, China, 2014. (3 weeks)

Grants

- Postdoctoral grant of the Hungarian NSF (OTKA), *Spin dynamics in nanomechanical systems*, EUR ~ 20,000, 2012-2015.
- Marie Curie Career Integration Grant of the European Union, *Quantum bits in carbon nanostructures*, 2011-2015, EUR 100,000

Honors, awards

- János Bolyai Scholarship of the Hungarian Academy of Sciences, 2012-2015.
- Pál Gombás Prize of the Hungarian Physical Society (Eötvös Loránd Physical Society), for contributions to applied quantum theory, 2015.

Further professional activities

- supervision of postdocs: Dr. Judit Romhányi (2012/09-2012/12), Dr. Gábor Csiszár (2012/09-2014/08)
- supervision of PhD students: Gábor Széchenyi (2012/02-, co-supervised with J. Cserti), Péter Boross (2012/09-).
- MSc thesis supervision: Zoltán Kórádi (2015)
- BSc thesis supervision: Zoltán Kórádi (2013), Réka Tuza (2015), Máté Tibor Veszeli (2015).
- co-organizer, with J. Cserti and C. Beenakker, *International School on the Fundamentals of Nanoelectronics*, Keszthely, Hungary, 2006.
- co-organizer, Nanophysics Session, *Mafthe Balaton Summer School*, Balatonalmádi, Hungary, 2012.
- main organizer of the weekly Nanophysics Seminar at Eötvös Loránd University, 2012 Spring – 2015 Fall.
- reviewer for Physical Review Letters, Physical Review B, Journal of Applied Physics
- grant reviewer for the European Research Council and the Hungarian NSF (OTKA).
- opponent of 10 PhD theses, PhD defense committee member on 3 occasions.
- member of the German Physical Society (2009-).