


CV of Szabolcs Csonka (Department of Physics, Budapest University of Technology)

	<p>Birth: 1978. Budapest, Hungary married, father of two boys, one girl (3, 5 and 8 years old)</p> <p>Associate Professor Department of Physics, Solid State Physics Laboratory Budapest University of Technology and Economics 1111 Budapest, Budafoki út 8 Hungary</p> <p>Email: csonka@mono.eik.bme.hu Webpage: http://nanoelectronics.physics.bme.hu/Quantum_intro Tel.: +36-1-4633056</p>
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Qualification

- 2001 MSc degree in physics ("Magnetic phase diagram of BaVS₃") Budapest University of Technology and Economics (BME)
- 2006 PhD degree in physics ("Electron transport in atomic and molecular junctions"), Department of Physics, BUTE

Employment

- 2003 - 2005 Hungarian Academy of Sciences, research assistant
- 2006 - 2009 Department of Physics, BUTE, scientific coworker
- 2006 - 2008 Marie Curie Fellow, Department of Physics, University Basel, CH, Group of Christian Schonenberger
- 2009 - 2011 Assistant professor, Department of Physics, BME
- 2011 - Associated professor, Department of Physics, BME

Interests

- Electron transport in nanostructures
- Hybrid Nanostructures: Semiconductor nanowires, graphene, spin transport, quantum dots, superconducting correlations
- Atomic & molecular junctions: transport through single molecules, Andreev spectroscopy

Important experiences abroad

- 1999 Erasmus Scholarship, University 'La Sapienza' Rome, Italy (1 semester)
- 2000 – 2003 Visitor researcher, University of Nijmegen, the Netherlands (4 months)
- 2004 Visitor researcher, Ecole Polytechnique Fédérale de Lausanne, Switzerland (1 month)
- 2006 – 2008 Post doc, group of C. Schönenberger, University of Basel, Switzerland
- 2009 – 2010 Visitor professor program "Quantum Coherence and Computation", Swiss Nanoscience Institute, Switzerland (4 months)
- 2017 - Visitor professor, QDev, Niels Bohr Institute, Copenhagen, DK

Awards

- 2000 BME Scholarship
- 2001 National competition for physics students, 1st prize in Solid state physics section
- 2005 Award of excellent youth scientist, Hungarian Academy of Sciences
- 2006 – 2008 Marie Curie Intra-European Fellowships
- 2009 – 2011 Bolyai János Research Fellowship, Hungarian Academy of Sciences
- 2010 – 2016 ERC Starting Grant
- 2011 Talentum Award, Central European Talent Support Foundation
- 2013 - 2015 Bolyai János Research Fellowship, Hungarian Academy of Sciences

2014 Supervisor of the Year Prize, Pro Progressio Foundation for Education and Research
2016 Gyulai Zoltán Prize, Roland Eötvös Physical Society
2017 - Momentum grant of Hungarian Academy of Science

Teaching experiences

Lectures

- Nanotechnology and Material Science - for undergrad. and master students (BME)
- New experiments in nanophysics - for undergraduate and master students
- Transport in complex nanostructures - for undergraduate and master students
- Applied solidstate physics – for MSc students
- Measurement techniques – for BSc students

Lab and exercise courses

- Nanophysics seminar (MSc students, phd students, BME)
- Condensed matter physics laboratory (4th-year physics students, BME)
- Solid state physics tutorial (3rd-year physics students, BME)
- Physics Laboratory IV (3rd-year physics students, BME)
- Experimental physics tutorial (for high school students)
- Condensed matter physics exercises (UniBasel),
- Condensed matter seminar for graduate and undergraduate students (UniBasel)

Supervision

Gergő Fülöp (BSc 2009, MSc 2011, PhD 2016), Endre Tóvari (MSc 2011, PhD), Zoltán Scherübl (MSc 2012, PhD), Attila Márton (BSc 2010, MSc 2013), Hodossy Szabolcs (BSc 2014), Fülöp Bálint (MSc 2014, PhD), Kovács Krausz Zoltán (PhD), István Gergő Gál (BSc 2016) at BME and additional 3 MSc project work at UniBasel

Founding ID

As principal investigator:

- Marie Curie Intra European Fellowship
“Exploring entanglement by noise measurements in nanoelectronic devices” EU FP6 2006-2008
- Norway-OTKA NNF 78841
“Fabrication and Electron Transport Study of Nanowire based Quantum Devices” OTKA 2009-2010, 78kEuro
- Marie Curie Reintegration Grant
“Fabrication and Electron Transport Study of Nanowire based Quantum Devices” EU FP7 2009-2011, 45kEuro
- ERC Starting Grant
“Cooper Pairs as a source of entanglement” ERC 2010-2015, 1496kEuro
- EU FP7 ICT Strep Network SE2ND
“ Source of Electron Entanglement in Nano Devices” EU FP7 2011-2014, 295.3kEuro for Budapest node
- Sciex “ Novel Cooper pair splitter nanodevices”, Swiss NMS, 2014, Home mentor
- Sciex “Developing ferromagnetic analyzer nanocircuits”, Swiss NMS, 2012, Home mentor
- Flag ERA iSpinText EU Network “Induced Spin Textures in Van Der Waals Heterostructures” 2016 -, Coordinator, 140kEuro/703kEuro (own/network budget)

Other scientific activity

2010 - 2013 Leader of the Nanoelectronics project of Research University grant of BME TÁMOP-4.2.1/B-09/1/KMR-2010-0002

2013 - Leader of the Nanoelectronics Joint Lab of BME&MFA, BME side

2014 - Member of the Physics Panel of Hungarian Scientific Research Fund, OTKA

2012 - Deputy head of the Department of Physics, BME

Main collaborations

Prof. Christian Schönenberger (Uni Basel, CH), Prof. Jesper Nygard (QDev, Niels Bohr, DK), Prof. Ireneusz Weymann (UAM, Poznan, PL), Prof. Christoph Strunk (Regensburg, DE), Prof. Alfredo Levy Yeyati (Madrid, Sp), Dr. Jan Martinek (Poznan, PL), J. Ye (Groningen), G. Burkard (Konstanz), S. Dash (Chalmers), J. Cserti (ELTE, HU), P. Rakyta (ELTE, HU), L. Oroszlany (ELTE, HU) L. Tapasztó (MFA, HU), J. Volk (MFA, HU), A. Geresdi (TU Delft, NL), G. Záránd (BME, HU).

Research ID

(see details: <https://vm.mtmt.hu/www/index.php?lang=1&AuthorID=10012461>)

Number of publications (peer reviewed journal papers): 38

Total number of citations: 1183, Independent citations: 991

Cumulated impact factor: >180

Hirsch-index: 17

Out of the 38 publications most of them appeared in high impact journals of the field: 1 in Nature, 8 in PRL, 1 in Nanoletters, 1 in ACS Nano, 5 in Nanoscale, 13 in PRB and 2 in APL.