CV of Máté Vigh

Personal data

Name:	Máté Vigh, PhD
Position:	Assistant professor
Current institution:	Department of Physics, Budapest University of Technology and Economics (BUTE) H-1111 Budapest, Budafoki út 8, Hungary
e-mail:	vighmate@mail.bme.hu
Date of birth:	17 July 1985

Education

2010	Master degree in Physics, Eötvös Loránd University (ELTE), Budapest (*diploma thesis:* "Novel experimental methods for the investigation of atomic and molecular contacts")
2018	PhD in Theoretical Physics, Eötvös Loránd University (ELTE), Budapest (*PhD thesis:* "Transport processes in two-dimensional nanostructures")

Employment

2018-	Assistant professor	Department of Physics, BUTE
2013-2017	Junior research fellow	Eötvös University, Budapest

Awards and prizes

2011	1st WoPhO (World Physics Olympiad) problem competition – *gold prize*
2010	Rudolf Ortvay International Competition in Physics – *1. prize*
2009	Rudolf Ortvay International Competition in Physics – *1. prize*
2005	Scholarship of the Prime Minister of Hungary
2004	35th International Physics Olympiad (Pohang, South-Korea) – *silver medal*
2004	National Physics Competition – *1. prize*
2004	Scholarship of the Prime Minister of Hungary
2003	Rudolf Ortvay International Competition in Physics – *1. prize*
2003	34th International Physics Olympiad (Taipei, Taiwan) – *bronze medal*

Research interest

- Condensed matter physics, exotic 2D materials
- Teaching of physics, physics competitions, talent care

Memberships and professional service

2017-	member of the Scientific Committee of European Physics Olympiad
2011-	trainer of the Hungarian Physics Olympiad Team
2010-	member of the committee of Eötvös Physics Competition
2007-	member of the Editorial Board of KöMaL (`http://komal.hu`)

Teaching activity

2018	lecture in Physics 2i *(Electromagnetism for IT engineers)* (BUTE)
2018	problem solving seminar in Physics 2i *(Electromagnetism for IT engineers)* (BUTE)
2018	advanced physics laboratory for physics students (BUTE)
2017	problem solving seminar in *Analytical mechanics* (ELTE)
2017	problem solving seminar in *Electromagnetism* (advanced level, ELTE)
2016-2017	problem solving seminar in *Optics and relativity* (ELTE)
2015-2017	problem solving seminar in *Condensed matter physics* (ELTE)
2014	problem solving seminar in *Statistical physics* (in English, ELTE)
2009-2010	undergraduate teaching assistant (general physics trainings for freshmen and classical physics laboratory for B.Sc. physics students at BUTE)

Languages

Hungarian (mother tongue), English (master), German (intermediate)

Five selected publications

1. Gnädig P. – Honyek Gy. – Vigh M.:, *333+ Furfangos Feladat Fizikából* (book, Hungarian), TypoTeX, (2017).
2. P. Gnädig – G. Honyek – M. Vigh: *200 More Puzzling Physics Problems* (book), Cambridge University Press (2016).
3. G. Széchenyi, M. Vigh, A. Kormányos, J. Cserti: *Transfer matrix approach for the Kerr and Faraday rotation in layered nanostructures*, Journ. of Phys. Cond. Mat. **28**, 375802 (2016).
4. P. Rakyta, M. Vigh, A. Csordás, J. Cserti: *Protected edge states in silicene antidots and dots in magnetic field*, Phys. Rev. B **91**, 125412 (2015).
5. M. Vigh, L. Oroszlány, S. Vajna, P. San-Jose, G. Dávid, J. Cserti, B. Dóra: *Diverging dc conductivity due to a flat band in disordered pseudospin-1 Dirac-Weyl fermions*, Phys. Rev. B **88**, 161413 (2013).