

## CV of Balázs Hetényi

### Personal data

Name Balázs Hetényi  
Position  
Current institution Department of Theoretical Physics, Budapest University of Technology and Economics H-1111 Budapest, Budafoki út 8, Hungary  
e-mail hetenyi@phy.bme.hu  
Phone +36 1 463 41 09  
Fax +36 1 643 35 67  
Date of birth 1971

### Education

1996 M.A. in Chemistry, Boston University  
2000 PhD in Chemical Physics ("Orientational Phase Transitions in the Quantum Anisotropic Planar Rotor Model") Columbia University in the City of New York, U.S.A.

### Employment

2018-	Research Associate	Department of Theoretical Physics, BME
2011-	Assistant Professor	Bilkent University, Ankara, Turkey
2005-2011	Universitätsassistent/Principal Investigator	Graz University of Technology, Austria
2002-2005	Research Associate	SISSA-ISAS (International School of Advanced Studies), Trieste, Italy
1999-2002	Research Associate	Princeton University, U. S. A.

### Research interest

- Condensed Matter Physics (Topological Insulators)
- Statistical Physics

### Teaching activity

- Introductory Quantum Mechanics
- Advanced Quantum Mechanics
- Numerical Methods for Physicists

- Introduction to Physics
- Statistical Physics (B.Sc.)
- Statistical Physics (M.Sc.)
- Electrodynamics (B.Sc.)

### **Students supervised**

- PhD students: Mohammad Yahyavi (2019)
- MSc students: Luqman Saleem (2018), Sina Gholizadeh (2017), Seher Karakuzu (2014)
- BSc students: Nurlan Avazlı (2019), Berkay Yılmaz (2018), Ömer Hamza Acıköz (2016), Şeyma Torun (2016)

### **Memberships and professional service**

- Referee of Physical Review Letters
- Referee of Journal of Physics: Condensed Matter
- Referee of Oxford University Press
- Referee of European Physical Journal B

### **Grants, fellowships, projects**

2013-2014	TÜBİTAK 112T176 Co-Principal investigator
2014-2016	TÜBİTAK 113F334 Principal investigator

### **Invited talks**

2019	Seminars and mini-course at IMBM, Istanbul, Turkey
2019	Seminar at Mimar Sinan Fine Arts University, Istanbul, Turkey
2018	Seminar at University of Porto, Portugal
2018	Seminar at Middle East Technical University, Ankara, Turkey
2016	Seminar at University Augsburg, Germany
2016	Invited talk at “Entanglement in Quantum Systems”, Simons Center for Geometry and Physics, Stony Brook University, U.S.A.
2016	Invited talk at “Entanglement in Dynamical Systems”, Simons Center for Geometry and Physics, Stony Brook University, U.S.A.
2015	Joint ICTP/SISSA Statistical Physics Seminar, SISSA-ISAS International School of Advances Studies, Trieste, Italy
2015	Mathematics Seminar, SISSA-ISAS International School of Advances Studies, Trieste, Italy
2015	Invited talk at the Asia-Pacific Consortium on Computational Material Science, National Taiwan University of Science and Technology, Taipei, Taiwan

## Languages

English (master), French (master), German (intermediate)

## Scientific impact (as of 25/03/2015)

35 papers in refereed journals

Total number of citations: 658

H-index: 12

Complete list of publications: <https://vm.mtmt.hu//search/slist.php?AuthorID=XXXXXXX>

## Five selected publications

1. B. Hetényi and B. Dóra, *Quantum phase transitions from analysis of the polarization amplitude*, Phys. Rev. B **99**, 085126 (2018).
2. B. Dóra, B. Hetényi and P. Moca, *Statistics and Dynamics of the Center-of-Mass Coordinate in a Quantum Liquid*, Phys. Rev. Lett. **121**, 056803 (2018).
3. M. Yahyavi and B. Hetényi, *Reconstruction of the polarization distribution of the Rice-Mele model*, Phys. Rev. A **95**, 062104 (2017).
4. F. Nur Ünal, B. Hetényi, and M.Ö. Oktel, *Impurity coupled to an artificial magnetic field in a Fermi gas in a ring trap*, Phys. Rev. A **91**, 053625 (2015).

5. B. Hetényi, *dc conductivity as a geometric phase*, Phys. Rev. B **87**, 235123 (2013).