

Dr Benjamin Béri PhD

Birmingham Fellow and Royal Society University Research Fellow

[School of Physics and Astronomy \(/schools/physics/index.aspx\)](/schools/physics/index.aspx)

Contact details

Telephone **+44 (0) 121 414 4693** (tel: [+44 121 414 4693](tel:+44 121 414 4693))

Email b.beri@bham.ac.uk (mailto: b.beri@bham.ac.uk)

School of Physics and Astronomy
University of Birmingham
Edgbaston
Birmingham
B15 2TT
UK



About

Benjamin Béri is a condensed matter theorist interested in novel forms and properties of quantum matter. In particular, he seeks to discover new physical phenomena in strongly correlated electronic materials, nanoscale devices, superconductors, and ultracold atomic gases. His current research focuses on topological phases, including the physics of topological insulators and Majorana fermions.

Qualifications

- PhD in Physics, Eötvös Loránd University, 2008
- MSc in Physics, Eötvös Loránd University, 2004

Biography

Benjamin Béri obtained his PhD from the Eötvös Loránd University for work on chaotic quantum dots with strong spin-orbit coupling. After graduating in 2008, he held postdoctoral positions at the University of Leiden (2008-2010) and the University of Cambridge (2010-2013), where he was a Marie Curie Fellow from 2012. His postdoctoral research addressed transport, band structure and strong correlation aspects of various topological phases in the solid state, and proposed topological insulator implementations in ultracold atomic gases.

He joined the University of Birmingham as a Birmingham Fellow and Royal Society University Research Fellow in 2013.

Research

Research themes:

- Topological phases
- Mesoscopic physics
- Strongly correlated systems

Publications

Selected publications:

- B. Béri, "Majorana-Klein hybridization in topological superconductor junctions", Phys. Rev. Lett. 110, 216803 (2013)
- B. Béri, N. R. Cooper, "Topological Kondo effect with Majorana fermions", Phys. Rev. Lett. 109, 156803 (2012)
- B. Béri, N. R. Cooper, "Z₂ Topological Insulators in Ultracold Atomic Gases", Phys. Rev. Lett. 107, 145301 (2011)
- B. Béri, N. R. Cooper, "Local tensor network for strongly correlated projective states", Phys. Rev. Lett. 106, 156401 (2011)
- I. Serban, B. Béri, A. R. Akhmerov, C. W. J. Beenakker, "Domain wall in a chiral p-wave superconductor: a pathway for electrical current", Phys. Rev. Lett. 104, 147001 (2010)
- B. Béri, "Topologically stable gapless phases of time-reversal invariant superconductors", Phys. Rev. B 81, 134515 (2010)