

# Curriculum vitae - Zoltán Guba

Date of birth: 1999.06.18, Szeged, Hungary

Nationality: Hungarian

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## Education

- 2023- PhD in Condensed Matter Theory, University of Zurich, Switzerland
- 2021-2023 Research Physics MSc, Budapest University of Technology and Economics, Hungary  
grade: excellent with highest honours
- 2018-2021 Physics BSc, Budapest University of Technology and Economics, Hungary  
grade: excellent with highest honours
- 2014-2018 University of Szeged Secondary Practicing Grammar School, Hungary  
specialization in physics and mathematics

## Activities

- 2023 (organizer, mentor) QBronze 2023 workshop, Budapest ([link](#))
- 2022 (organizer, mentor) Quantum computing workshop for high school students, Budapest
- 2021 QIntern 2021 (online), project: Theory of qubit readout, "best results" 1st prize, "best presentation" 3rd prize ([link](#))
- 2020 Scientific Students' Conference (online), BME, Faculty of Natural Sciences, "Robust quantum communication in distributed systems", 1st prize ([link](#))
- 2020 (mentor) Quantum Computing School (online), Eugene Wigner College of Advanced Studies, BME, Faculty of Natural Sciences
- 2020 QIntern 2020 (online), project: Quantum Byzantine Agreement, "best results" 1st prize, "best presentation" 2nd prize ([link](#))
- 2019 GPU Days, Wigner Research Centre for Physics
- 2019 QDrive, Eötvös Loránd University ([link](#))
- 2018-2022 member of Eugene Wigner College of Advanced Studies, BME, Faculty of Natural Sciences
- 2018 Particle Physics Workshop, Wigner Research Centre for Physics ([link](#))

## Conferences

- 2021 (presentation) Quantum Science Days, QWorld, title of presentation: Resource analysis for quantum-aided Byzantine agreement ([link](#))
- 2021 (poster) QCrypt, title of poster: Resource analysis for quantum-aided Byzantine agreement ([link](#))
- 2021 (presentation) SAMOP 2021, German Physical Society, title of presentation: Resource analysis for quantum-aided Byzantine agreement ([link](#))

## Publications

1. Zoltán Guba, György Frank, Gergő Pintér, and András Pályi. Weyl points in ball-and-spring mechanical systems, 2023 (under revision)
2. Filip K. Malinowski, R. K. Rupesh, Luka Pavešić, Zoltán Guba, Damaz de Jong, Lin Han, Christian G. Prosko, Michael Chan, Yu Liu, Peter Krogstrup, András Pályi, Rok Žitko, and Jonne V. Koski. Quantum capacitance of a superconducting subgap state in an electrostatically floating dot-island, 2022 (under revision)
3. Zoltán Guba, István Finta, Ákos Budai, Lóránt Farkas, Zoltán Zimborás, and András Pályi. Resource analysis for quantum-aided byzantine agreement with the four-qubit singlet state, 2022 (submitted)

## Links

[arXiv](#)  
[Github](#)

## Interests

condensed matter physics, topological phases of matter, quantum computing, quantum communication