Zsombor Szilágyi – Curriculum Vitae

Born: 1990.04.01.
Budapest, Hungary

Phone: +36 30 461 4240
Email: zsombor.szilagyi@gmail.com
Webpage: anal.math.bme.hu/szilagyi-zsombor

Work experience

2023–	Quantum Information National Laboratory, Budapest, Hungary
2020–	MTA-BME Quantum Information Theory Research Group. *link*
2021–2022	Morgan Stanley (internship), Budapest, Hungary

Education

† *Indicates expected*

2020–2024 †	PhD in Mathematics, Department of Analysis and Operations Research, Institute of Mathematics, Budapest University of Technology and Economics (BME)
2018–2020	MSc in Theoretical Physics, Budapest University of Technology and Economics (BME)
2009–2017	MSc in Architecture, Budapest University of Technology and Economics (BME)
2004–2008	Karinthy Frigyes High School, Budapest

Teaching (instructor)

2023	Functional analysis for maths students
2022	Analysis 1,2 for computer scientists
2022	Probability theory / Statistics for chemical engineers
2021	Analysis 1,2 for computer scientists
2021	Calculus 1 for Informaticians
2020	Mathematics for electrical engineers
2019	Advanced engineering mathematics
2019	Functional analysis for physics students
2018	Analysis for physics students

Publications

Articles

[1] M. Naszódi, **Zs. Szilágyi** and M. Weiner. (2023). "Higher rank antipodality". *eprint: https://arxiv.org/abs/2307.16857*

[2] M. Mosonyi, **Zs. Szilágyi** and M. Weiner. (2022). "On the error exponents of binary state discrimination with composite hypotheses". In: *IEEE Transactions on Information Theory*. DOI: https://doi.org/10.1109/TIT.2021.3125683. *eprint: https://arxiv.org/abs/2011.04645*

[3] **Zs. Szilágyi**, S. Nietert, and M. Weiner. (2020). "Rigidity and a common framework for mutually unbiased bases and k-nets". In: *Journal of Combinatorial Designs*. DOI: https://doi.org/10.1002/jcd.21750. *eprint: https://arxiv.org/abs/1907.02469*

Diploma Thesis

[1] **Zs. Szilagyi**. (2020). "On a conjecture regarding quantum hypothesis testing. MSc in Physics. Budapest University of Technology and Economics" *https://arxiv.org/abs/2011.03342*

Posters

[1] M. Naszódi, **Zs. Szilágyi** and M. Weiner. (2023). "Higher rank antipodality". Quantum Information Theory and Mathematical Physics 2023, Budapest, Hungary *link*.

[2] M. Mosonyi, **Zs. Szilágyi** and M. Weiner. (2022). "On the error exponents of binary state discrimination with composite hypotheses". Quantum Information Theory and Mathematical Physics 2022, Budapest, Hungary *link*.

[3] **Zs. Szilagyi**., S. Nietert, & M. Weiner. (2019). "Rigidity and a common framework for mutually unbiased bases and k-nets". YQIS 2019: 5th International Conference for Young Quantum Information Scientists, University of Gdansk, Sopot, Poland *link*.

[4] **Zs. Szilagyi**, S. Nietert, & M. Weiner. (2019). "Rigidity and a common framework for mutually unbiased bases and k-nets". Quantum Information Theory and Mathematical Physics 2019, Budapest, Hungary *link*.

Conferences (participation)

[1] (2023) Quantum Information Theory and Mathematical Physics 2023, BME, Budapest, Hungary

[2] (2022) Quantum Information Theory and Mathematical Physics 2022, BME, Budapest, Hungary

[3] (2022) QIP, California Institute of Technology, Pasadena, CA, USA

[4] (2019) Quantum Information workshop, Centro de Ciencias de Benasque Pedro Pascual Benasque, Spain

[5] (2019) QMATH Masterclass, University of Copenhagen, Denmark

[6] (2019) Quantum Information Theory and Mathematical Physics 2019, BME, Budapest, Hungary

[7] (2019) Lectures on Modern Scientific Programming, KFKI, Budapest, Hungary

Language skills

Hungarian - native English - intermediate German - elementary

Computer skills

Wolfram Mathematica · Python · LaTeX · MATLAB · C · Bash · AutoCAD · GIMP · HTML · CSS

Awards (in high school)

2008	2nd Prize · OKTV National Physics Competition
2007	1st Prize · Vermes Miklós International Physics Competition
2007	Metropolis-award · KöMaL National Physics Contest
2006	2nd Prize · Mikola Sándor National Physics Competition
2004–2007	2nd Prize · KöMaL National Physics Contest