NAME: Dávid Szász-Schagrin

CURRENT AFFILIATION: BME Momentum Statistical Field Theory

Research Group, Budapest University of Technology and Economics

E-MAIL ADDRESS: szaszdavid@gmail.com

EDUCATION

2020 – 2024	**PhD in theoretical physics, Budapest University of Technology and Economics** PhD thesis titled *'Non-perturbative dynamics of strongly correlated quantum systems'* Supervised by Gábor Takács
2018 – 2020	**MSc in Physics, Budapest University of Technology and Economics** MSc thesis titled *'Non-equilibrium dynamics in quantum field theories'* Supervised by Gábor Takács
2015 – 2018	**BSc in Physics, Budapest University of Technology and Economics** BSc thesis titled *'Truncated Hamiltonian approach in quantum mechanics'* Supervised by Gábor Takács

TEACHNIG EXPERIENCE

2023 fall semester	**Modern mathematical methods in physics** practical course for Physics BSc
2022 spring semester	**Computational methods in physics 2** practical course for Physics BSc
2022 fall semester	**Modern mathematical methods in physics** practical course for Physics BSc
2021 spring semester	**Physics 2** practical course for Physics BSc
2021 fall semester	**Modern mathematical methods in physics** practical course for Physics BSc
2020 spring semester	**Experimental physics** practical course for Computer Science Engineering BSc
2020 fall semester	**Calculus 1** practical course for Computer Science Engineering BSc

2018 – 2020 **Calculus 1** practical course for Civil Engineering BSc

ACADEMIC SERVICE

2022 – Present Organizing the Group Seminar and Journal Club for the BME Momentum Statistical Field Theory Research Group

2018 – 2020 Organizing and holding 'Talent management seminars' for first-year BSc students hosted by Eugene Wigner College of Advanced Studies

COLLABORATIONS

2022 – Present Joint work on the theoretical and experimental study of the sine-Gordon model together with the Atomchip Group at the Atominstitut, Vienna Technical University

SCHOLARSHIPS

2023 Awarded scholarship 'UNKP-23-3-II-BME-182' by the National Research Development and Innovation Office of Hungary

2022 Awarded scholarship ´UNKP-22-3-II-BME-30' by the National Research Development and Innovation Office of Hungary

PUBLICATIONS

- **Non-equilibrium time evolution in the sine-Gordon model revisited**,
  D. Szász-Schagrin, I. Lovas and G. Takács, Phys. Rev. B 109 (2024) 014308
- **False vacuum decay in the 1+1 dimensional φ^4 theory**,
  D. Szász-Schagrin and G. Takács, Phys. Rev. D 106 (2022) 025008
- **Quantum quenches in an interacting field theory: Full quantum evolution versus semiclassical approximations**,
  D. Szász-Schagrin, I. Lovas and G. Takács, Phys. Rev. B 105 (2022) 014305
- **Weak integrability breaking and level spacing distribution**,
  D. Szász-Schagrin, B. Pozsgay and G. Takács, SciPost Physics 11 (2021) 037

CONFERENCES

- 10th Bologna Workshop on Conformal Field Theory and Integrable Models, Sep 4 – 7, 2023, Dept. of Physics and Astronomy - University of Bologna

Poster presentation and gong talk titled '*Relaxation and energy transfer in the (double) sine-Gordon model*'

- Student workshop on integrability, 2022. March 27-31, Hannover, Germany

  30 min. talk titled '*Weak integrability breaking and level spacing distribution*'

- 1st Workshop on Low Dimensional Quantum Many body Systems,

  2021. July 12-16, Internationales Wissenschaftsforum Heidelberg (IWH), Germany

  Poster presentation titled '*Weak integrability breaking and level spacing distribution*'

SCHOOLS

- SFT 2023 - Lectures on Statistical Field Theories, 2023 Feb 06-17, Galileo Galilei Institute, Firenze
- SFT 2022 - Lectures on Statistical Field Theories, 2022 Feb 07-18, Galileo Galilei Institute, online

REFERENCES

- **Dr. Gábor Takács**, Budapest University of Technology and Economics, takacs.gabor@ttk.bme.hu

- **Dr. Márton Kormos**, Budapest University of Technology and Economics, kormos.marton@ttk.bme.hu