Daniel Gromada

Czech Technical University, Faculty of Electrical Engineering, Department of Mathematics
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EDUCATION

2017 – 2020 **Doctoral degree in Mathematics**

Saarland University, Saarbrücken, Germany
Thesis: Compact matrix quantum groups and their representation categories
Supervisor: Prof. Dr. Moritz Weber

2015 – 2017 **Master's degree in Mathematical Physics**

Czech Technical University, Faculty of Nuclear Sciences and Physical Engineering, Prague, Czechia
Thesis: Classification of realizations of low-dimensional Lie algebras
Supervisor: Doc. Ing. Severin Pošta, PhD.

2012 – 2015 **Bachelor's degree in Mathematical Engineering**

Czech Technical University, Faculty of Nuclear Sciences and Physical Engineering, Prague, Czechia
Thesis: Orthogonal polynomials and Askey–Wilson algebra
Supervisor: Doc. Ing. Severin Pošta, PhD.

EMPLOYMENT

2021 – now **Assistant Professor**

Czech Technical University in Prague, Faculty of Electrical Engineering, Department of Mathematics

2017 – 2020 **Research Assistant**

Saarland University, Department of Mathematics, Saarbrücken, Germany

CAREER BREAKS

2023   Part time parental leave (for 11 months)

TEACHING AND SUPERVISION

2022 – now **Lecturer** (FEE, CTU, Prague)
Discrete mathematics and graphs

2021 – now **Tutorial instructor** (FEE, CTU, Prague)
Differential equations and numerics, Linear algebra

Summer 2019 **Supervising an internship** within the RISE programme (funded by DAAD)
Chase Vogeli (BSc. student of MIT, USA) stayed for 11 weeks in Saarbrücken

WS 2018/19 **Teaching assistant** (UdS, Saarbrücken)
Reading seminar on quantum groups and Hopf algebras

PUBLICATIONS (SINCE 2021)

- **Quantum association schemes**. arXiv:2404.06157, 33 pages (2024)
- **Quantum symmetries of Hadamard matrices**, *Trans. Am. Math. Soc.* 377(9), 6341–6377 (2024)
- **Some examples of quantum graphs**, *Lett. Math. Phys.* 112, 121 (2022)
- **Presentations of projective quantum groups**, *Comptes Rendus Math.* 360, 899–907 (2022)
- **Quantum symmetries of Cayley graphs of abelian groups**, *Glasgow Math. J.*, 65(3), 655–686 (2023)

RESEARCH TALKS (SINCE 2021)

Oct 2024 **QIC Seminar**, U. Delaware, USA *(online)*
Talk: Quantum symmetries of Hadamard matrices

Oct 2024 **Combinatorics seminar**, U. Winsconsin–Madison, USA, *(online)*
Talk: Quantum association schemes

Jun 2024 **QGS: Quantum Groups Seminar** *(online)*
Talk: Cayley graphs: Symmetries, quantizations, duality

Mar 2024 **Non-local games seminar**, Copenhagen, Denmark *(online)*
  Talk: Quantum symmetries of quantum channels

Jan 2024 **Seminar Geometric Methods in Mathematics**, Dresden, Germany
  Talk: Quantum symmetries and diagrammatic categories

Oct 2023 **German-Polish Workshop on Quantum groups, graphs and symmetries**, Warsaw, Poland
  Talk: Quantum symmetries and diagrammatic categories

Sep 2023 **Virtual Algebraic Graph Theory Seminar**, Waterloo, Canada *(online)*
  Talk: Quantum symmetries of Hadamard matrices

Sep 2023 **Quantum Groups and Noncommutative Geometry in Prague**, Czechia
  Talk: Quantum symmetries of things

Jan 2023 **Combinatorics seminar**, U. Winsconsin–Madison, USA, *(online)*
  Talk: Quantum symmetries of graphs

Nov 2022 **Mini workshop on quantum groups, graphs and symmetries via representation theory**, Saarbrücken, Germany
  Talk: Quantum symmetries of Hadamard matrices

Sep 2022 **Polish-German seminar on quantum groups, graphs and symmetries via representation theory**, *(on-line)*
  Talk: Constructing simple and non-simple quantum graphs

Aug 2022 **Masterclass The mathematics of quantum entanglement via nonlocal games**, Copenhagen, Denmark
  Talk: Quantum isomorphisms of graphs and quantum groups

May 2022 **Summer school Topological Quantum Groups, C*-Tensor Categories, and Subfactors**, Waterloo, Canada
  Talk: Quantum symmetries and deformations of Cayley graphs of abelian groups

Feb 2022 Visiting **Moritz Weber** at Saarland University, Saarbrücken, Germany
  Talk: New examples of quantum graphs

Nov 2021 **South Atlantic Non-Commutative Seminar**, Buenos Aires, Argentina, *(online)*
  Talk: Some examples of quantum graphs

Jul 2021 Visiting **István Heckenberger** at the Philipps University of Marburg, Germany
  Talk: Quantum symmetries of Cayley graphs of abelian groups

Apr 2021 **Seminar of the Noncommutative Geometry and Topology Group**, Prague, Czechia, *(on-line)*
  Talk: Diagrammatic categories and free quantum D_4^+