Mgr. Tomáš Hammerbauer

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Charles University | Faculty of Mathematics and Physics (MFF UK)

Education

2024–Present **PhD in Numerical and Computational Mathematics** | MFF UK
Topic: Domain decomposition methods for solving nonlinear partial differential equations

2022–2024 **Master of Science in Numerical and Computational Mathematics** | MFF UK
Thesis: Domain decomposition methods for solving PDEs using the discontinuous Galerkin method
Award: 2nd place in SVOČ 2024 competition

2019–2022 **Bachelor of Science in General Mathematics** | MFF UK
Thesis: Algebraic view of the PCA method in selected applications
Specialization in numerical mathematics.

2011–2019 **Gymnázium Christiana Dopplera**
Eight-year grammar school with an extended curriculum in Mathematics, Physics, and Informatics.

Publications

- **Dolejší, V. and Hammerbauer, T.** (2025). Hybrid Schwarz preconditioners for linear systems arising from hp-discontinuous Galerkin method. arXiv:2502.06405 (preprint).
- **Hammerbauer, T. and Dolejší, V.** (2025). Numerical study of two-level additive Schwarz preconditioner for discontinuous Galerkin method solving elliptic problems. Programs and Algorithms of Numerical Mathematics (PANM22), pp. 61-71. DOI: 10.21136/panm.2024.06.

Programming Skills

Languages Python, C++, MATLAB, Typst, LaTeX

Tools Git, Slurm, Linux (Bash)

Libraries NumPy, SciPy, pandas, Matplotlib, Deal.II

More on my [GitHub](https://github.com/Hammerbauert) page.

Conferences & Awards

2024 **PANM22 Conference Presentation**
Domain decomposition method for discontinuous Galerkin method solving symmetric linear elliptic problem

2024 **SVOČ 2024**
2nd place in the national student research competition.