Adam Dvořák

Student of Mathematical Modeling at Charles University

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🌐 adamdvo.github.io/WebPage/

Education

- **Charles University, Prague** *2024 – Present*
  Master's student in Mathematical Modeling in Physics and Technology, Faculty of Mathematics and Physics

- **Charles University, Prague** *2021 – 2024*
  Bacherol's student in Mathematical Modeling, Faculty of Mathematics and Physics

- **Gymnázium Christiana Dopplera, Prague** *2012 – 2021*
  Specialized high school program focused on mathematics and physic

Experience

- **Numerical Simulations in Firedrake** — *2023–2025*
  Developed and tested FEM-based simulations: Continuum mechanics, FSI (monolithic ALE), turbulence models (LES, WALE), and level-set methods.
- **Stochastic Modeling** — *2023*
  Focused on stochastic differential equations, portfolio optimization based on SDE.
- **Faculty Research (MFF UK)** — *2022*
  Student Faculty Grant: Stochastic thermodynamics for diffusion processes in parabolic potential.

Technical Strengths

- **Languages & Tools**: Python (Firedrake, FEniCS), MATLAB (Simulink), Wolfram Mathematica
- **Topics**: Continuum Mechanics, Thermodynamics, Mixture theory, Non-Newtonian fluids, Thermodynamics of Solid, Phase-field modeling of metastable alloys, Finite Element Method.

Languages

- Czech — Native
- English — Advanced (C1)

About Me

- I enjoy studying mathematics, developing simulations, and hiking in my free time.
- Web portfolio: adamdvo.github.io/WebPage/