

Short curriculum vitae

Born in Kroměříž, Czech Republic

Academic qualification

- 2017 **Ph.D.** degree in Computational and Applied Mathematics, Faculty of Electrical Engineering and Computer Science, VŠB - Technical University of Ostrava. Second place in the international Prof. Babuska Prize for PhD thesis.
- 2011 Master degree (**Ing.**) in Computational and Applied Mathematics, Faculty of Electrical Engineering and Computer Science, VŠB - Technical University of Ostrava. Dean's Award for thesis.

Work experience

- 2012 - now Department of Applied Mathematics and Computational Sciences, Institute of Geonics of the Czech Academy of Sciences, researcher.

Fellowship

- 2023 University of Las Palmas, Spain

Professional interests

- **Mathematical modeling of engineered barrier systems in future nuclear waste disposal** – development and analysis of mathematical models to describe the behavior and long-term stability of engineered barriers in deep geological repositories for nuclear waste.
- **Preconditioning techniques for matrices with jumps in coefficients** – design and evaluation of advanced preconditioning methods to improve the efficiency and robustness of numerical solvers for problems with jump in coefficients.
- **Computer vision** – research and implementation of algorithms for image analysis, object detection, and pattern recognition in various engineering and scientific applications.
- **Applications of machine learning methods** – integration and deployment of machine learning techniques for data-driven modeling, prediction, and analysis across multidisciplinary domains.