



DAMSS

DATA ANALYSIS
METHODS FOR SOFTWARE
SYSTEMS



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<https://www.mii.lt/DAMSS>

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Contacts:

Dr. Jolita Bernatavičienė

jolita.bernatavicienne@mif.vu.lt

Tel. (+370 5) 2109 315

Prof. Olga Kurasova

olga.kurasova@mif.vu.lt

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High-Performance Computing in Science

Eduardas Kutka¹, Jolita Bernatavičienė²

¹ Information Technology Research Center

Vilnius University

² Institute of Data Science and Digital Technologies

Vilnius University

eduardas.kutka@mif.vu.lt

High-Performance Computing (HPC) is the foundation of modern scientific research. HPC enables the solution of complex computations in parallel. Solving these problems on a personal computer can be time-consuming, but the parallel processing power of HPC significantly reduces the computation time. Here, we'll explore the Vilnius University Faculty of Mathematics and Informatics (VU MIF) HPC computational facilities, which serve scientific needs. We'll outline the procedures for obtaining access, ensuring researchers can efficiently use this powerful technology.

Additionally, we'll delve into the opportunities provided by the European Union for large-scale projects. European HPC infrastructures, such as those coordinated under the EuroHPC Joint Undertaking, offer substantial computational power to tackle grand scientific and industrial challenges. These resources are particularly invaluable for researchers working on projects that require extensive computational capacity beyond local capabilities.

Preparing and running calculations on HPC systems is a complex task. European-level HPC training initiatives are organized into HPC competence centres to address this challenge. These centers are crucial in providing specialized training and support to researchers and professionals. Through these initiatives, individuals can access various levels of training, from introductory courses to advanced technical workshops, ensuring that users can effectively utilize HPC resources.

In conclusion, the availability of HPC facilities at Vilnius University MIF, combined with EuroHPC JU HPC resources and comprehensive training initiatives, provides a robust ecosystem for advancing scientific research. Researchers can accelerate their computational projects by leveraging these assets, contributing to significant scientific breakthroughs and innovations.