# 3rd Call for Projects for Performance Engineering

## Background: hpc.bw - High Performance Computing (HPC) in Research

In the digital era, High Performance Computing (HPC) is an essential building block for research and development. Combinatorial optimisation problems in logistics and production, numerical simulations in engineering or image processing and machine learning methods with real-time requirements are only three examples with high HPC relevance. For optimal support of your research projects, the Container-based High Performance Computing Center (CBRZ) HSUper at HSU is available.

The aim of the project hpc.bw is to strengthen innovative cross-location HPC research at the Universities of the Armed Forces and to foster the transfer of HPC know-how into the various disciplines in order to

- sustainably strengthen research and development in the respective disciplines,
- promote interdisciplinary exchange between HPC-related problems, and
- to explore and answer new HPC research questions from discipline-specific problem settings.

Further information: https://dtecbw.de/home/forschung/hsu/projekt-hpcbw

## Call for projects for performance engineering at the Universities of the Armed Forces

Projects for performance engineering are meant to enable computer-aided research, assessment of discipline-specific questions with the help of fast algorithms, implementations and software parallelization.

Project funding includes dedicated support in software implementation by research assistants (WMAs) within the framework of the hpc.bw project. Depending on the project, short visits (2-3 days) of the hpc.bw WMA to the applicant group in Munich/Hamburg are possible. **Projects must not exceed an anticipated duration until the end of December 2024 and 50% of the work time of the supporting hpc.bw WMA (or equivalently 4.5 full person months, respectively). If the volume of work is exceeded, the application can be rejected. The earliest project start date is 01.04.2024.**

Note: Competent WMAs, who are already responsible for the hpc.bw project, will support your project. You cannot apply for other funds or WMA positions in this call!

We cordially invite ALL departments at the Universities of the Armed Forces to apply with HPC-relevant research proposals. In addition to outlines of individual research interests, there is also the possibility of submitting proposals for planned or existing research projects.

**Please fill in the application form and submit it by 16.02.2024 via e-mail to info-hpc-bw@hsu-hh.de.** Please direct any queries to the same address or to Prof. Philipp Neumann, Tel. 040/6541-2723. We look forward to your applications!

## Anticipated procedure 2023

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| Until 16.02.24: | **Submission of project outlines (see application form)** |
| 19.02.24 – 14.03.24: | **Review of the outlines** with regard to scientific relevance, sustainability, impact and feasibility by a panel (hpc.bw multiplicators, project coordinator); **selection of approx. 2-3 proposals** for support by hpc.bw |
| Until 15.03.24: | **Notification of all projects** on the outcome of the review |
| Until 29.03.24: | **Submission of title, abstract and points of contact** from positively evaluated projects for publication on the hpc.bw website |
| 01.04.24 – 31.12.24: | **Implementation of the projects**: Support of the applying group by a WMA of the hpc.bw project to achieve the Performance Engineering targets |

## Conditions associated with funding

- Willingness of the applicant group to provide material (slides, graphics, illustrative material, etc.) on their supported project at hpc.bw-relevant events
- Adequate consideration of hpc.bw in project-relevant scientific publications, lectures, etc. (acknowledgement, co-authorship, etc.)
- Until 3 months after project completion: preparation of a short summary (approx. 0.5 DIN A4 page) on the achieved project goals, current or expected impact (incl. abstract for the website of hpc.bw)