

Welcome to the first version of our workshop

Forests in HPC

Hauke Kirchner¹, Dorothea Sommer², Prof. Julian Kunkel³



AG Computing

GWDG

Gesellschaft für wissenschaftliche
Datenverarbeitung mbH Göttingen

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Agenda

09:00 → 09:05 **Welcome**

Prof. Dr. Julian Kunkel, Hauke Kirchner and Dorothea Sommer will welcome the attendees.

Speakers: Dorothea Sommer (GWDG), Hauke Kirchner (GWDG), Julian Kunkel (GWDG)

09:05 → 09:25 **Introduction**

Introduction to the workshop and get started with the HPC.

Speakers: Azat Khuziyakhmetov (GWDG), Dorothea Sommer (GWDG), Hauke Kirchner (GWDG)

09:30 → 11:00 **Hands-on: R-based workflow**

Speaker: Hauke Kirchner (GWDG)

11:15 → 12:45 **Hands-on: deep learning with Python**

Speaker: Dorothea Sommer (GWDG)

13:00 → 14:00 **Discussion**

Hauke Kirchner

- Data Scientist at AG Computing
- Experience
 - B.Sc. Biology (Göttingen)
 - M.Sc. Forest Information Technology (Eberswalde, Warschau)
 - Tree species classification from airborne LiDAR using individual crowndelineation and machine learning (Master Thesis, UFZ)
- Research Interest
 - Machine Learning
 - Remote sensing
 - Forest science
 - Data management



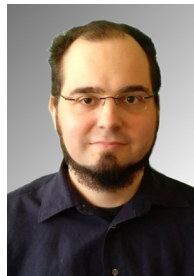
Dorothea Sommer

- Data Scientist at AG Computing
- Experience
 - M.Sc. Computational Neuroscience
 - Meta-Learning for Reinforcement Learning (Master Thesis)
 - Normative Modeling for Computer Vision (Charité)
- Research Interest
 - Machine Learning
 - Forest science
 - Research Software



Prof. Dr. Julian Kunkel

- Deputy head GWDG - Department HPC
- Group leader of working group Computing
- Professor at the University of Göttingen
 - Institute of Computer Science
 - Research group **High-Performance Storage**
- Research goals
 - Data-driven workflows
 - Storage & Parallel file systems
 - Performance analysis of parallel apps and I/O
 - Performance portability
 - Application of machine learning methods
 - Data reduction techniques
 - Management of cluster systems
 - Software engineering of scientific software
 - Personalized teaching



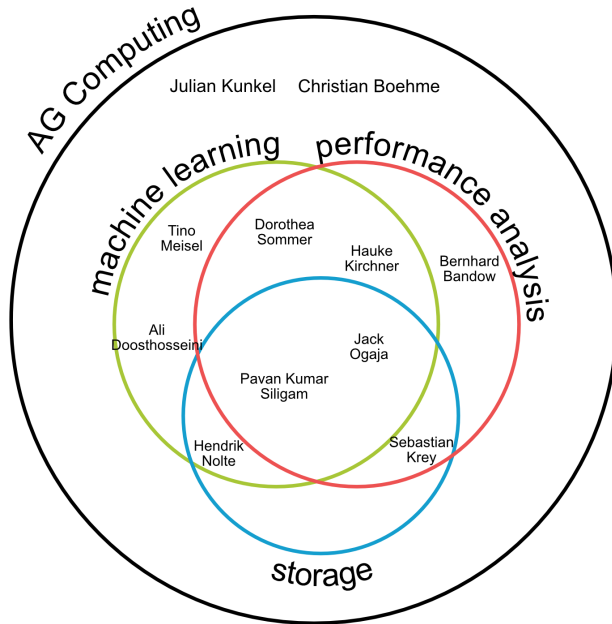
The Working Group Computing

Mission

AG-C provides scalable solutions for resource-intensive applications

Areas of responsibility

- Planning and operating the HPC systems
- Consultation for use
- Hosting and housing of HPC systems
- Research on a wide range of HPC-related topics
- Supervision of project work and theses
- Trainings around the use of the HPC systems



AG Computing



Prof. Dr. Julian Kunkel
Group Head, GF HPC



Dr. Christian Boehme
Deputy Group Leader



Dr. Stefanie Mühlhausen
Research, Teaching



Dr. Bernhard Badow
CIDBN



Dr. Tim Ehlers
Administration, Security



Dr. Vanessa End
NHR, Doku, Web



Alexander Goldmann
Community Manager, PR



Biermann, Johannes
NHR, Digital Humanities

AG Computing



Hauke Kirchner
ML/DL, ForestCare



Christoph Hottenroth
DLR



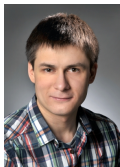
Hendrik Nolte
Data Lakes, Sec. Workflow



Dr. Nils Kanning
DLR, Administration



Ruben Kellner
Training



Azat Khuziyakhmetov
DLR, Administration



Dr. Christian Köhler
NHR, Physics



Sebastian Krey
NHR, Administration

AG Computing



Michael Langfermann
DLR, Administration



Tino Meisel
NHR, Data Science



Marcus Merz
NHR, Monitoring



Rosemarie Meuer
DLR



Dr. Martin Leandro Paleico
NHR, Bioinformatics



Pavan Kumar Siligam
NHR, Earth Sys. Science



Dorothea Sommer
ML/AI, ForestCare



Timon Vogt
NHR, Admin., Monitoring

The GWDG: service organization and data and IT service center

- works in conjunction with Universität Göttingen and Max Planck Society
- carries out independent research in the field of computer science
- provides support in preparing future professionals for a career in IT
- employs about 200 experts in 8 working groups



Forests in HPC

What is the GWDG doing in the field of forest science?

