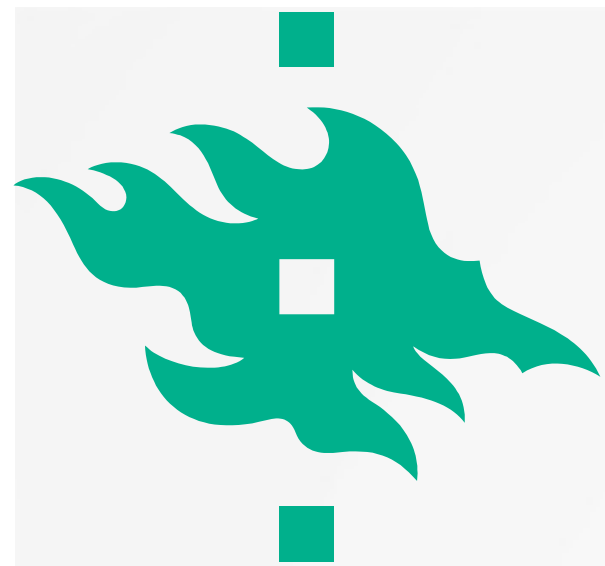


# BASIC USAGE OF COMPUTING SERVICES AT CSC



# CSC - IT CENTRE FOR SCIENCE

ICT expert services for universities & research institutes

Owned by the Finnish state and higher education institutes

Services:

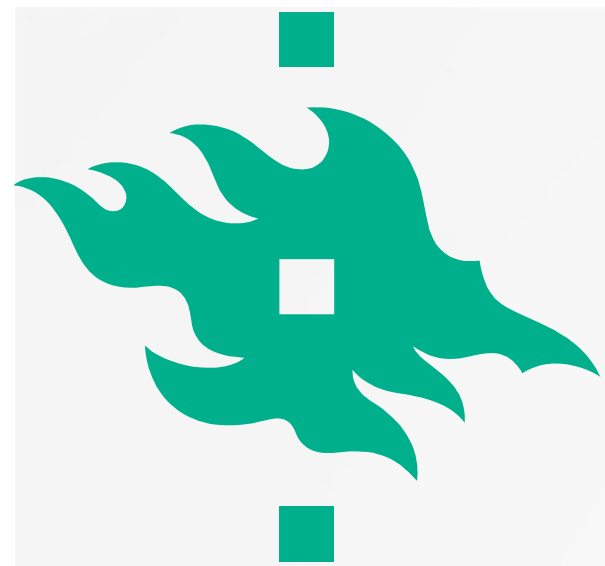
**High-Performance Computing, HPC**

**Data storage**

**Training**

- *CSC Winter School in Bioinformatics*
- *CSC Summer School in HPC*

**Support**



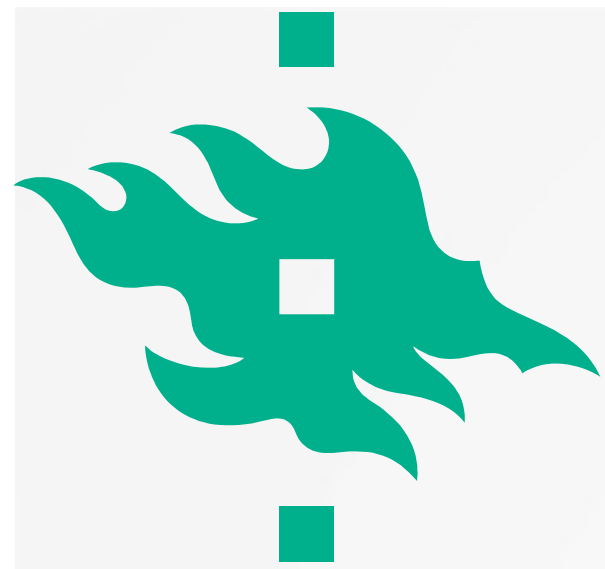
# HPC resources: Puhti & Mahti

## Puhti

Serial and parallel jobs  
Huge memory jobs  
Lots of preinstalled programs  
Interactive use

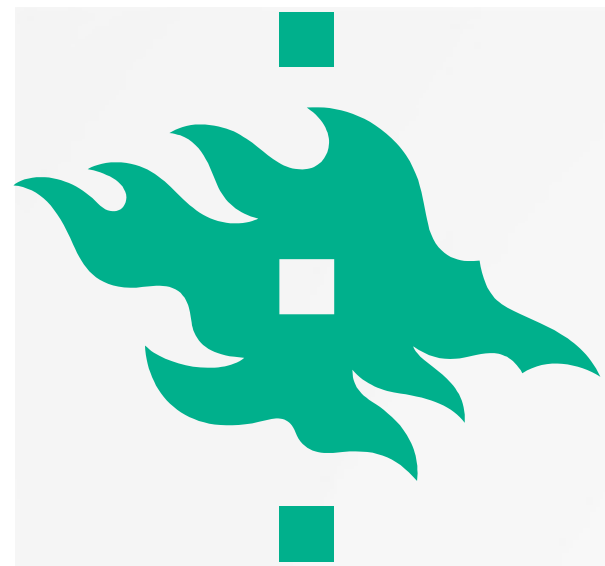
## Mahti

Massive parallel jobs



# IMPORTANT CONCEPTS

- Login node – computing node
- CSC projects and folders
- Quotas – size and file number
- Billing units
- Running jobs in SLURM
  - Interactive use
  - Serial batch job
  - Array jobs



# Further reading and links

CSC webpages for research: <https://research.csc.fi/>

CSC user guides: <https://docs.csc.fi/>

Learning materials from CSC: <https://www.csc.fi/oppimateriaalit>

Support and training: <https://research.csc.fi/support-and-training>

Puhti web interface: [www.puhti.csc.fi](http://www.puhti.csc.fi)

Project management: <https://my.csc.fi>