Introduction to High-performance Computing with Python

June 11, 2025

Speakers:

Giannis Koutsou, Associate Professor, The Cyprus Institute (CyI)

Christodoulos Stylianou, Research Engineer, CyI

- Research Engineer at CaSToRC, PhD
- *Training and Skills Development* Task Leader for EuroCC2
- Area of expertise in High Performance Computing (HPC)
- HPC x AI: Sparsification During Training
- Contact & Info:
    - Email: c.stylianou@cyi.ac.cy
    - Website: cstyl.github.io

- EuroCC is a part of the pan-European project **EuroHPC Joint Undertaking**, involving >30 countries

- Aims:
  - identify and address the skills gaps in the European HPC and HPDA ecosystem
  - coordinate cooperation across Europe to ensure a consistent skills base

- CaSToRC: **National Competence Centre** (NCC) in HPC
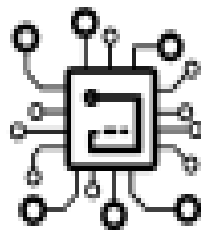
- NCC since 2020, now in its second 3-year phase.

Activities of **EuroCC2** for Cyprus NCC:

- Liaise with local computational communities

- Identify main needs in computational communities

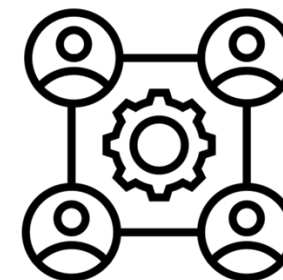- Provide tailored training activities

Consultation

- **Short-term** collaboration (1-2 months)
- **Code inspection**
- **Suggestion** of parallelization strategies
- **Suggestion** of potential machine learning models applicable to your problem

Resource provision

- You can apply for a competitive project to use CyI's HPC facility.
- Your team usually working on your projects
- The centre can support you on the infrastructure

Training

- Monthly events open to Public, Academia and Industry.
- Tailored training events to industry about tools & technologies.

Title	Presenter	Time
Hands-on Setup	-	09:30 – 10:00
Practical aspects of HPC	Prof Giannis Koutsou	10:00 – 10:45
OK, I Got Access, Now What?" – Accessing, Navigating and Running Jobs	Dr Christodoulos Stylianou	10:45 – 12:00
BREAK		12:00 – 12:30
Introduction to distributed memory parallel computing – Examples with mpi4py		12:30 – 14:00

- Discord Channel: https://discord.gg/PVsjadFX
- GitHub Repo: https://github.com/CaSToRC-CyI/EuroCC-HPC-with-Python-2025

More information:

https://eurocc.cyi.ac.cy/
https://www.linkedin.com/company/eurocc2

Contact us at:

eurocc-contact@cyi.ac.cy