



EuroHPC
Joint Undertaking



Co-funded by
the European Union

16th Icelandic HPC Community Workshop

Gróska, Bjargargötu 1, 102 Reykjavík – Entrance A, 1st Floor, Room Fenjamýri

28th August 2024 – 5:00 – 7:00 p.m. GMT

Background

The Icelandic High-Performance Computing (IHPC) activities are increasing in academia and industry that also includes related areas such as Artificial Intelligence (AI), Machine Learning (ML), Data Analytics, and Data Sciences. As a result, the IHPC community members created Icelandic Simulation and Data Labs (SDLs)¹, including academic and industrial partners. They form together in a bottom-up fashion the IHPC National Competence Center for HPC & AI in Iceland partly funded by the EuroHPC Joint Undertaking EuroCC project. The IHPC community seeks more collaborations and new members. Based on our successful previous IHPC workshops, we continue with bi-monthly workshops.

Objectives

This workshop aims to bring together a diverse group of Icelandic and international stakeholders to discuss the role of HPC and related areas within Iceland without losing sight of its international links.

The specific objectives of the workshop are to:

- **Document competencies, achievements, activities, and lessons learnt** from participating stakeholders of Icelandic HPC efforts and associated international activities.
- **Perform community building** in developing new successful joint activities between academia and industry, potentially creating new joint Simulation and Data Labs or collaborations.
- **Identify best practices and core principles with a set of recommendations** for developing the future Icelandic HPC ecosystem, including necessary skills, funding opportunities, applications, Centre of Excellences, community events, and sustainable infrastructure developments.

Participants

Approximately 35-40 participants from Iceland, Germany, and the USA. Participants will include:

- Selected Icelandic companies and SMEs from different sectors with interest in HPC & AI
- Academic representatives from the University of Iceland and Simulation and Data Labs
- The Icelandic Center for Research (Rannís), Startup Iceland, and Icelandic Technology Clusters
- US company that forms government, industry, and academic cooperative research coalitions

Output

The following outputs are expected:

- A short synthesis paper that documents Icelandic competencies, field experiences and achievements in using and/or offerings HPC & AI solutions and consideration of 'best practices'
- Update on a strategy paper responding to HPC & AI issues and challenges identified during the workshop, including potential options for jointly engaging in EuroHPC funding opportunities
 - Strengthened informal networks and transfer of experiences and lessons learnt

¹ Icelandic HPC (IHPC) Community Web page, Online: <https://www.ihpc.is/>



Agenda draft:

5:00 – 5:15	Informal Welcome – Participant Introduction & Discussions (Coffee/Tea/Refreshments, Snacks, and Sandwiches available)	All
5:15 – 5:25	Welcome Address - 16th IHPC Workshop & Overview Current Simulation and Data Labs with Industry Collaborations	Prof. Dr. Morris Riedel (University of Iceland)
5:25 – 5:30	Q & A	All
5:30 – 5:40	Using Earth observation data at scale for machine learning. „At GreenFish, we develop models to predict fishing locations at sea. We use a lot of earth observation (EO) data, which requires a lot of computing power – which is why HPC is a key part in our development. We’ve made great progress, and have some exciting Dask workflows to present along with some mo outputs and accuracies. All big data enthusiasts welcome to listen!“	Sigurður Bjartmar Magnússon (SME Green Fish) [Remote]
5:40 – 5:45	Q & A	All
5:45 – 5:55	Enterprise Europe Network – Support for ambitious SMEs in Innovation and International growth. “EEN is the world’s largest support Network for innovative SMEs with international ambitions. In Iceland Rannís hosts the EEN office which gives us the opportunity to connect with hundreds of experts around the world. Our main focus is on SMEs but we also service other businesses, public bodies and researchers.“	Sigprúður Guðnadóttir (Rannís – The Icelandic Centre for Research)
5:55 – 6:00	Q & A	All
6:00 – 6:10	Modernisation of statistical production as a foundation for innovation „Statistics Iceland has made large scale changes to its organizational structure and is currently implementing a new data flow model for data processing and production of official statistics. The data flow model is aimed at increasing the harmonization and standardization of data processing and data storage with the ultimate goals of increasing the timeliness of statistics, ensuring accuracy and reliability of statistics, ensuring the coherence and comparability of official statistics, and increasing the efficiency of production. Furthermore, these changes will create a platform for more innovation in the production of official statistics, enable the use of AI in production and increase the usability of published figures for users. The presentation will provide an overview of the work currently underway at Statistics Iceland with a focus on geospatial data and high-value datasets, both of which are a part of a project aligned with the changes being made.“	Anton Örn Karlsson (Hagstofa/ Statistics Íslands)
6:10 – 6:15	Q & A	All
6:15 – 6:25	Supporting seismic data survey design through the integration of satellite-based Land Cover Maps	Liang Tien (University of Iceland)

5:00 – 5:15	Informal Welcome – Participant Introduction & Discussions (Coffee/Tea/Refreshments, Snacks, and Sandwiches available)	All
5:15 – 5:25	Welcome Address - 16th IHPC Workshop & Overview Current Simulation and Data Labs with Industry Collaborations	Prof. Dr. Morris Riedel (University of Iceland)
5:25 – 5:30	Q & A	All
5:30 – 5:40	Using Earth observation data at scale for machine learning. „At GreenFish, we develop models to predict fishing locations at sea. We use a lot of earth observation (EO) data, which requires a lot of computing power – which is why HPC is a key part in our development. We’ve made great progress, and have some exciting Dask workflows to present along with some model outputs and accuracies. All big data enthusiasts welcome to listen!“	Sigurður Bjartmar Magnússon (SME Green Fish) [Remote]
5:40 – 5:45	Q & A	All
5:45 – 5:55	Enterprise Europe Network – Support for ambitious SMEs in Innovation and International growth. “EEN is the world’s largest support Network for innovative SMEs with international ambitions. In Iceland Rannís hosts the EEN office which gives us the opportunity to connect with hundreds of experts around the world. Our main focus is on SMEs but we also service other businesses, public bodies and researchers.“	Sigprúður Guðnadóttir (Rannís – The Icelandic Centre for Research)
6:25 – 6:30	Q & A	All
6:30 – 6:40	Initial Results from the European Digital Innovation Hub of Iceland (EDIH-IS) Review by the European Commission	Einar Mantyla/Sverrir Geirdal (Audna - Technology Transfer Office Iceland)
6:40 – 6:45	Q & A	All



EuroHPC
Joint Undertaking



Co-funded by
the European Union

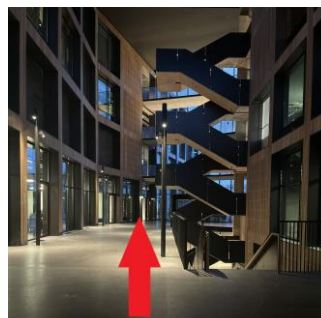
Workshop Location

Address: Gróska, Bjargargötu 1, 102 Reykjavik, Iceland²
Entrance A, 1st Floor, Room Fenjamýri

Gróska Outside



Gróska 1st Floor



Online Event Information & Previous IHPC Events:

Check out our IHPC Community Web page, Online: <https://www.ihpc.is/>

Workshop Organization:

Prof. Dr. -Ing. Morris Riedel, IHPC National Competence Center for HPC & AI (morris@hi.is)

Sigríður Daney Sigurðardóttir, Assistant to Prof. Dr. – ing. M. Riedel (sdaney@his.is)

² Gróska Building in the Science park, Online: <https://groska.is/en/home/>

