

20th Icelandic HPC Community Workshop

Gróska, Bjargargötu 1, 102 Reykjavík – Entrance A, 1st Floor, Room Fenjamýri
2nd of April 2025 – 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 (number/order of speakers & timing subject to change):

5:00 – 5:10	Informal Welcome – Participant Introduction & Discussions (Coffee/Tea/Refreshments, Snacks, and Sandwiches available)	All
-----	Welcome Address - 20th IHPC Workshop & Overview	Prof. Dr. Morris Riedel (University of Iceland)
5:10 - 5:25	Remote sensing (TBC)	Rector Jón Atli Benediktsson (University of Iceland)
5:25 - 5:30	Q & A	All
5:30 - 5:45	Performance Aware Programming & Just In Time Compiler presentation	Smári McCarthy (Ecosophy)
5:45 - 5:50	Q & A	All
5:50 - 6:05	DataLab presentation / ARI	Brynjólfur Borgar Jónsson (DataLab)
6:05 - 6:10	Q & A	All
6:10 - 6:25	The importance of Runtime Security As organizations increasingly adopt cloud-native architectures, securing applications at runtime has become a critical component of modern cybersecurity strategies. Unlike pre-deployment security measures, runtime security focuses on protecting workloads while they are actively executing, detecting and mitigating threats in real time.	Arnar Páll Arnarson (Upwind)
6:25 - 6:30	Q & A	All
6:30 - 6:45	Vitar Games update	Baldvin Albertsson (Vitar Games)
6:45 - 6:50	Q & A	All
6:50 - 7:00	IRISS introduction.	Daniel Leeb (Iceland Space Agency)
7:00 - 7:05	Q & A	All



EuroHPC
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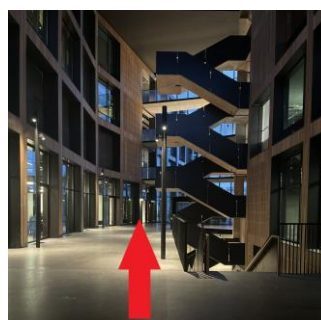
Workshop Location

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/>

