

# WELCOME

## RAISE CoE Seminar:

# Accelerating Machine Learning with GraphCore

Prof. Dr. – Ing. Morris Riedel et al.

School of Engineering & Natural Sciences, University of Iceland, Iceland

National Competence Center (NCC) for HPC & AI in Iceland – IHPC

2021-11-23, RAISE CoE Seminar Accelerating Machine Learning with GraphCore



@ProfDrMorrisRiedel



@Morris Riedel



@MorrisRiedel



@MorrisRiedel



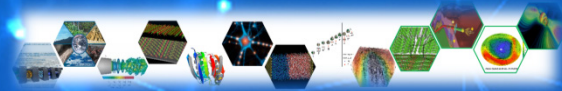
<https://www.youtube.com/channel/UCWC4VKHmL4NZgFfKoHtANKg>



morris@hi.is



IHPC National Competence Center  
(NCC) for HPC & AI in Iceland





# Seminar Welcome & Agenda



**RAISE**  
Center of Excellence

1. Welcome & Relevance of GraphCore IPU in CoE RAISE
  - (Prof. Dr.-Ing. Morris Riedel), ~20 Min
2. Introduction to Intelligence Processing Units (IPUs) from GraphCore
  - (Pawel Gepner, Alexander Titterton et al.), ~1:30
3. Q & A Session
  - (All), ~10 Min



<https://www.coe-raise.eu>





# Seminar Speakers – Short Introduction



## ➤ Prof. Dr. Pawel Gepner & Dr. Alexander Titterton

**GRAPHCORE**



- Hardware Field Specialists from GraphCore
- Pawel: Associated Professor Warsaw University of Technology
- Axel: Phd in Particle Physics
- Web Page: [https://www.linkedin.com/in/pawe%C5%82-gepner-822547153/?locale=en\\_US](https://www.linkedin.com/in/pawe%C5%82-gepner-822547153/?locale=en_US)

## ➤ Prof. Dr. – Ing. Morris Riedel

- Teaching High Performance Computing & Parallel/Scalable Machine Learning
- School of Engineering and Natural Sciences, University of Iceland
- Research Group Leader at Juelich Supercomputing Centre, Germany
- EuroHPC Joint Undertaking Governing Board Member of Iceland
- Web Page: <http://www.morrisriedel.de>





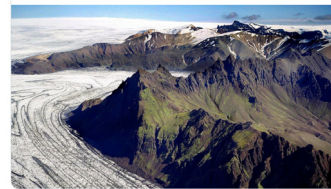
# University of Iceland – NCC IHPC Simulation & Data Labs



<http://www.hi.is>

Morris Riedel  
@MorrisRiedel  
The University of Iceland is one of the six best universities in the world in the field of remote sensing!

Háskóli Íslands @Haskoli\_Islands · Aug 14  
Háskóli Íslands er í 6. sæti yfir fremstu háskóla heims á sviði fjarfræðunar samkvæmt hinum virta Shanghai-lista. Skólinn er enn fremur í hópi hundraðs bestu háskólanna innan jarðvísinda. Frábærar fréttir fyrir starfsmenn, stúdenta og samfélagið allt!  
[hi.is/frettir/haskol...](https://www.hi.is/frettir/haskol...)



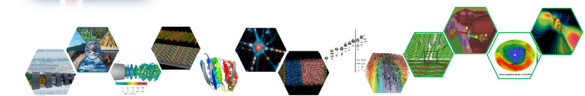
7:40 PM · Aug 15, 2019 · Twitter for iPhone



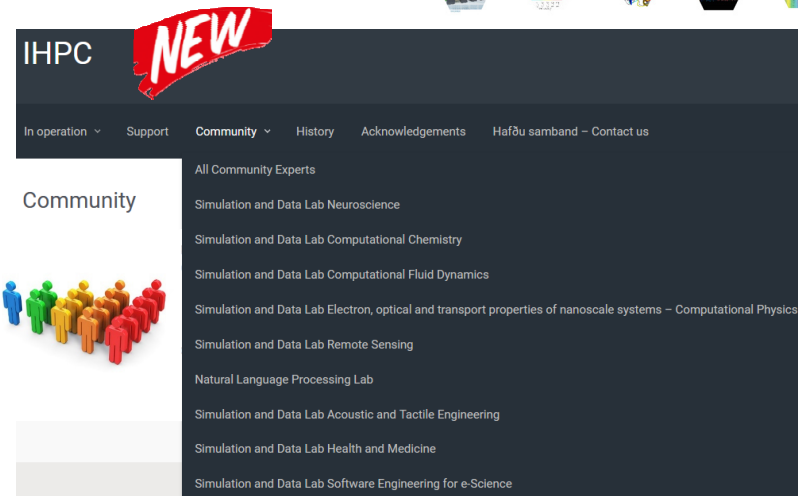
EuroHPC  
Joint Undertaking



IHPC National Competence Center (NCC) for HPC & AI in Iceland



<http://ihpc.is>



DEEP  
Projects

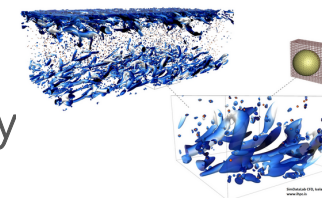
EOSC  
NORDIC

ADMIRE

EUPEX

- ~2900 students at the SENS school
- ~350 MS students and ~150 doctoral students
- Many foreign & Erasmus students; english courses
- Hosts national supercomputer of NCC IHPC community

Simulation and Data Lab Computational Fluid Dynamics



News  
People  
Research  
Funding  
Network  
Publication

Simulation and Data Lab Remote Sensing



General information

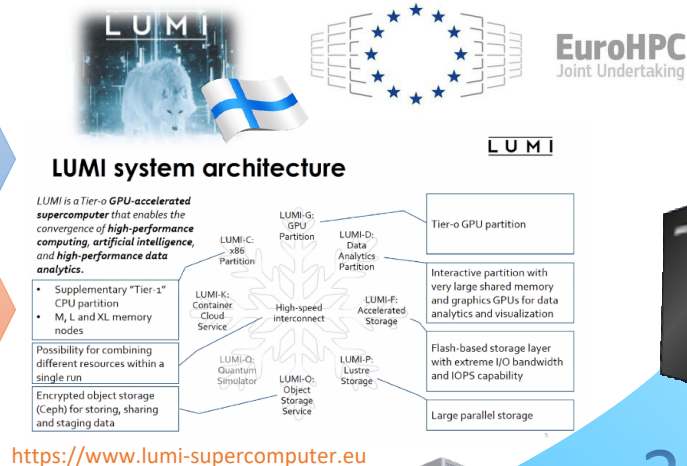
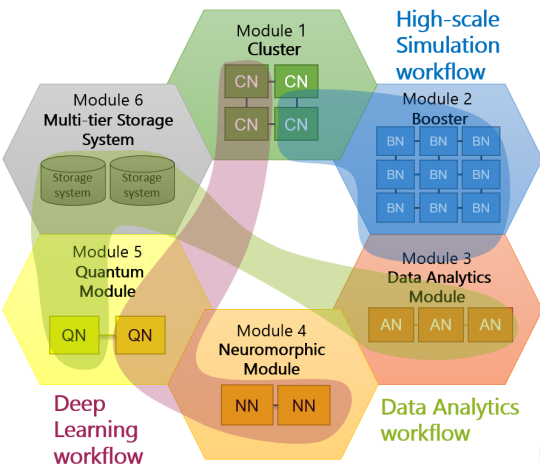
The Simulation and Data Lab Remote Sensing (SimDataLab RS) leads to increase the visibility on interdisciplinary research between remote sensing and advanced computing technologies and parallel programming. This includes high-performance and distributed computing, quantum computing and specialized hardware computing. The SimDataLab RS is based at the University of Iceland and works together with the High-performance and Disruptive Computing in Remote Sensing (HDCRS) working group of the Geoscience and Remote Sensing Society (IGRS). Together with HDCRS, the SimDataLab RS disseminates information and knowledge through educational events, special sessions and tutorials at conferences and publication activities.



2021-11-23 CoE RAISE WELCOME RAISE CoE Seminar: Accelerating Machine Learning with GraphCore



# NCC IHPC – Strategic Cooperations towards Exascale



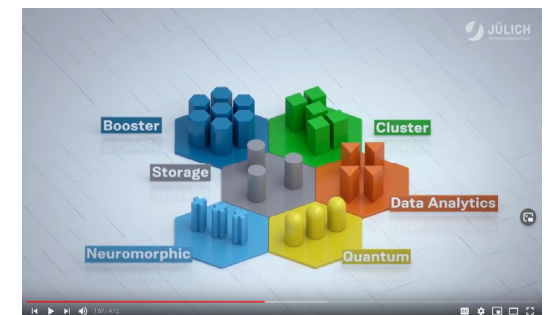
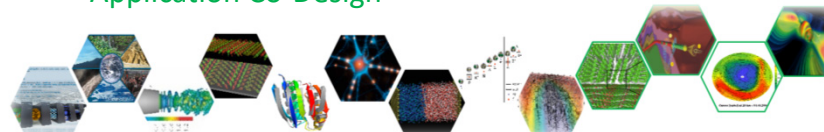
<https://www.deep-projects.eu/>

[https://www.fz-juelich.de/ias/jsc/EN/Home/home\\_node.html](https://www.fz-juelich.de/ias/jsc/EN/Home/home_node.html)



85 PF

Application Co-Design



YouTube, 'flexible and energy-efficient supercomputer: JUWELS is faster than 300 000 modern PCs'





# drive. enable. innovate.



The CoE RAISE project receives funding from the European Union's Horizon 2020 – Research and Innovation Framework Programme H2020-INFRAEDI-2019-1 under grant agreement no. 951733

Follow us:



R<sup>6</sup>