About me

- Postdoctoral researcher in High Performance Computing (2019-)
  - ↪ Responsibility: PRACE-6IP coordinator from Luxembourg University
  - ↪ Research interest: Applied Mathematics and High Performance Computing.
- Ph.D. in Computer Science (1^{st} class with honours)(2019)
  - ↪ **PhD Theses:** High Performance Scientific Computing in Applications with Direct Finite Element Simulation
  - ↪ Basque Center for Applied Mathematics, Bilbao, Spain & KTH, Royal Institute of Technology, Stockholm, Sweden
- Master's degree (2014)
  - ↪ Applied mechanics
  - ↪ **Master thesis:** Hybrid CPU-GPU Parallel Simulations of 3D Front Propagation
  - ↪ Linkoping University, Linkoping, Sweden & Simula Research Laboratory, Oslo, Norway

PRACE (Partnership for Advanced Computing in Europe)

- PRACE:
  - ↪ is to enable high-impact scientific discovery and engineering research and development across all disciplines to enhance European competitiveness for the benefit of society.
- PRACE-6IP (a few of the core ideas):
  - ↪ Support a functional European HPC Ecosystem.
  - ↪ Provide and develop tailored training and skills development programmes.
  - ↪ Support the strategic development of a rich HPC environment.
  - ↪ Support new user needs, new user communities, and new applications.
- Luxembourg 25th country to join PRACE in 2017

Activities in ongoing PRACE6-IP

- WP4
  - ↪ Preparing MOOC GPU course (ongoing) and carpentry courses.
  - ↪ Supervised (in parallel programming and CFD) 4 students in the summer (for two months) in 2020 (other partners, Mathi and Sebastien)
- WP5.
  - ↪ Edge Computing white paper is submitted (Mathi, Sebastien and other partners).
  - ↪ Pre-exascale machine installation white paper preparation (ongoing).
- WP6
  - ↪ Providing some operational support (ongoing) to PARCE.
  - ↪ Plus working with e-Infrastructure organization (ongoing) collaboration with LIST and LIH.
- WP7
  - ↪ SHAPE white paper(other partners and Frederic).
  - ↪ Modern processors white paper is published (Mathi and Sebastien).
  - ↪ Modern accelerators white paper is in the preparation stage.
  - ↪ Exascale machine (for LUMI) BPG is in the preparation stage.

Activities at the University

- Teaching assistant for Optimization and Parallel programming course
  - ↪ Supervised one project for optimization course in Spring (2020).
  - ↪ Presently supervising one project in MICS in Autumn (2020).
- Support the research questions in terms of HPC @ULHPC
  - ↪ software and parallel programming and website update
  - ↪ Easybuild software support
- External collaboration:
  - ↪ Collaboration with Prof. Xing Cai (Simula, Norway) for the Finite Element Methods simulation, in particular, GPU and CPU. More specifically, aim to achieve good performance for using the multiple GPU (Multiple MPI GPUs). This work just started in November 2020.
- Future work:
  - ↪ collaborate within the team for research topics
  - ↪ and participating in teaching activities