

## Arm SVE Hackathon 2022

### Objectives

This hackathon is aimed at application developers interested in learning about the impact of the latest Arm processor features on their High Performance Computing and Machine Learning applications. Arm researchers and engineers will describe the company's HPC tools (including compilers, math libraries, debugging and profiling tools) to explore what benefits this processor can bring.

During the hackathon, the MN4 CTE-ARM cluster will be used and various applications developed at BSC will be optimized to be executed on this type of hardware.

This activity is organized in collaboration with the Arm company, within the framework of the Arm-BSC Center of Excellence and the European EPI project.

### AGENDA (tentative)

**09:00-09:20:** Welcome and setting access to the machines (A64FX and AWS Graviton3). [BSC]

**09:20-10:00:** Arm HPC Ecosystem, introduction to SVE and Arm HPC compiler. [Arm]

**10:00-10:40:** NVIDIA's Grace Superchip. [NVIDIA]

**10:40-11:00:** Q&A. [BSC, Arm, NVIDIA]

**11:00-13:00:** Hacking. Bring your own codes!

**13:00-15:00:** Lunch break.

**15:00-17:00:** Hacking. Bring your own codes!

**17:00-17:30:** Wrap up and Q&A. [BSC, Arm, NVIDIA]

### Organization

Co-organizers of the Arm SVE Hackathon: Conrad Hillairet (Arm), Andrea Kells (Arm), Filippo Spiga (NVIDIA), Brendan Bouffler (AWS), Adrià Armejach (UPC/BSC) and Miquel Moreto (UPC/BSC).

### Target group

This hackathon targets application developers that are interested in investigating the impact of novel SVE

extensions in their HPC applications.



Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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