# NAIS

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# What is NAIS?

- £7M+ Research Centre funded for 5 years by EPSRC (Science and Innovation), Scottish Funding Council Edinburgh, Heriot Watt and Strathclyde Universities

- Involves Mathematicians (numerical analysts), Computer Scientists and HPC Experts

- Focus on automated approaches (e.g. adaptive compilation) and better high level algorithms for multiple scales simulation, adaptive finite elements, molecular dynamics and computational optimization

# Why NAIS?

- Increasing gap between numerical analysts and the type of algorithms they develop and the types of methods being used in practice (e.g. asynchronous/event-driven methods)

- New challenges due to diverse system architectures and components like GPUs, multicore chips, caches

- Need to bring both computer scientists and mathematicians into direct collaboration with HPC specialists and also the users of HPC software

# Who does it involve?

Academic staff at the universities in Mathematics and Informatics Schools, as well as in other departments (e.g. Biology, Physics, Chemistry, Geosciences, Engineering)

7 lecturing staff to be hired (4 already in post)

Staff at the Edinburgh Parallel Computing Centre

Partners in Cambridge, Warwick, Wales, RAL and other places
Postdoctoral researchers and PhD Students

# How will it work?

Programme of scientific activities (workshops, conferences, visitors, seminars)

Training Events

Research Projects nucleated by newly hired staff and existing staff at the three institutions, often working with partners

Emphasis on linking the three institutions (HWU, UoE, UoS) and the three communities (CS, Maths, and HPC)

# More info

http://www.nais.org.uk