University of Exeter

Engineering reproducible HPC code

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Why focus on reproducibility?

- There is a reproducibility crisis across all scientific research disciplines – the effects of this are far-reaching.

- RSE's have a responsibility to uphold reproducibility standards in the code we write for research projects.

- Portability an important goal to share working scientific models with community for validation.

Solutions or problems?

- Portability:
  - Containers
  - Custom build systems
  - Spack (or equivalent)
- Bit-reproducibility:
  - Can only be achieved with a consistent machine architecture and software stack

There are different kinds of reproducibility that each require their own solutions, no "one-size-fits-all" approach.