James Clark

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Work Experience

2016–Present **High Performance Software Engineer**, *STFC – Hartree Centre*, Daresbury.

I am currently working as part of the High Performance Software Engineering group in a range of different projects. I have hands on experience with the latest technology, including: D-Wave 2000Q, Intel Xeon Phi (Knights Landing), Power8 CPUs, and Nvidia P100 GPUs. Some of my achievements include:

- Worked with a UK commercial partner to explore quantum annealing
- Added distributed memory parallelism (MPI) to a shared memory parallelism (OpenMP) Lattice Boltzmann code.
- Implemented a new chemistry and physics in to a parallel (MPI) DSMC code.
- Worked as part of PRACE-4IP to introduce some HPC kernel examples to the CodeVault project.

Open Source Contributions

GitLab Fixed a privacy issue where the file listing for a private repository is visible to "guest" users of a project. Merged in v9.3.

Education

2015–2016 **MSc High Performance Computing**, *University of Edinburgh*, *Merit*.

2011–2015 **BSc (Honours) Physics**, *University of Aberdeen*, *First Class*.

Masters Thesis

Title *Accelerating GADGET on Modern Accelerator Architectures*

Supervisors Xu Guo (EPCC), Konstantinos Mouzakitis (Boston Ltd.)

Programming Skills

Languages C/C++, Bash, Python, JavaScript, Fortran, Co-array Fortran, Ruby

HPC MPI, OpenMP, OpenACC, CUDA, Xeon Phi (KNL)

Backend Node.js, Redis, MongoDB, systemd, Docker

Miscellaneous Build Automation (CMake, Make), Version Control (Git, SVN)

References

Available on request