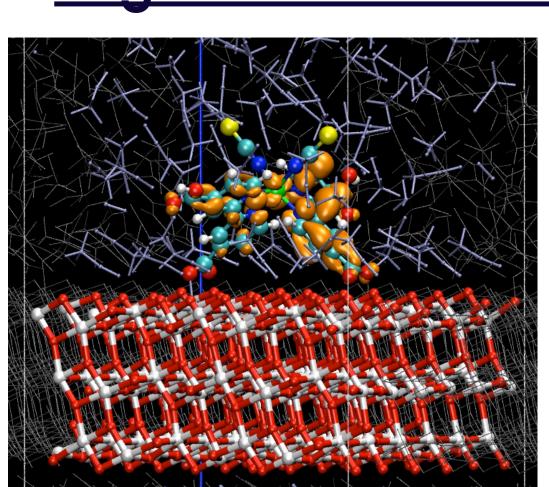
High Performance Computing



• CP2K: Materials Science on 10,000s of CPU cores (image J. VandeVondele, Dye-Sensitised Solar Cell)

- Focus on users UK academics and Scottish SMEs
- Scientific application optimisation on multicore HPC systems
- Training and outreach
- EU collaborative research



OPENMP UNIVERSITY EXASCALE COMMERCIAL TEACHING CLUSTERS PROGRAMMING CLUSTERS EDUCATION FORTRAN THREADS VOLUNTEER CP2K PRIMEGRID APPLICATIONS EXASCALE QUANTUM LLR CASTEP MATERIALS 05 MAG SCIENCE PARALLEL EUROPE

HPC C++ PHYSICS USERS DEVELOPMENT FORTRAN

CHEMISTRY DEVELOPMENT

MATERIALS DUTREACH

CHEMISTRY OPENMP

SUPERCOMPUTING EDUCATION

MULTICORE SCOTLAND

USERS CONSULTANT

EUROPE OUTREACH

Distributed Computing

- Developer for PrimeGrid, world's largest volunteer computing project
- 2 PFLOP/s (two million, billion operations per second) of computing power finding large prime numbers
- Maintainer of Mac OS X and Linux applications
- Combining interest in THE number theory with skills in HPC application development



MATHEMATICS CONSULTANT

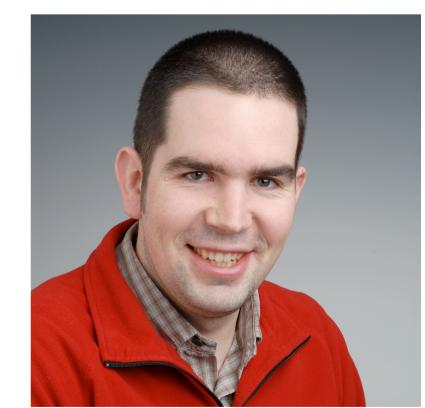
LLR PROGRAMMING VOLUNTEER

SCOTLAND EDINBURGH OPENMP

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About Me

• 2005: BSc. (Hons) 1st class Computer Science & Physics at Edinburgh University



2005-2008:

Software Test Team Leader, IBM

 2008-present: HPC Applications Consultant, EPCC, Edinburgh University

Interests: Space Exploration, Kayaking, Mac OS X game development

Goals for the HW Crucible

believe science should...

- Inform
- Inspire
- Impact

