

Chair's Report for HPC-SIG meeting 9 February 2017

Alan Real gave a Chair's report. The main items are summarised as:

- Due to currency changes after the Brexit vote, prices are increasing from the traditional vendors
- New suppliers such as Inspur and Huawei appear to be buying business, which is in danger of leading an unsustainable race to the bottom
- Some comments from SC 16 (November 2016):
 - Deep Learning/Machine Learning was a strong theme
 - Toni Collins gave a workshop on Women in HPC. The HPC community appears to be recognising the lack of diversity. Toni is doing a set of interviews; all were urged to participate
- Some comments from Computing Insights (December 2016)
 - The venue (Manchester Central) was very well received
 - There was a strong community feel to this conference; it felt less like an STFC showcase than in previous years
- There has been some movement in staff between sites recently, but there is little sign of new people coming into HPC, at least amongst the sites represented in the SIG
- Research Software Engineers (RSEs) are gaining recognition. Career paths are being developed, although there is still much to be done
- Some comments from the RCUK Cloud Working Group:
 - HPC in the Cloud is gathering interest, at least for some types of HPC
 - Tools and datasets for HPC in the Cloud are being developed
 - There is a great deal of complementarity between traditional HPC and HPC in the Cloud – there will continue to be a need for both
 - The traditional and Cloud HPC communities are still separate to some extent; Research Computing encompasses both needs
- Alan emphasised that the days of HPC clusters in isolation are coming to an end
- Alan asked if anyone had experience around Cryo-electron microscopy (cryo-EM) which started a lively discussion:
 - Cryo-EM is becoming present at several sites
 - A typical run can generate 10 TB of data per day
 - Computational workflow should be designed into the experiment
 - A close collaboration between compute specialists and experimenters is essential, not least in defining the data analysis pipeline
 - Genomics and Life Sciences are making use of cryo-EM
 - There is much in common between cryo-EM and previous and existing data-intensive disciplines such as GridPP and astronomy, however the data generators are now on our campuses.
- BBSRC have a call out for machine learning to develop suitable well described and annotated datasets, at a scale sufficient to train algorithms (<http://www.bbsrc.ac.uk/funding/filter/machine-learning-to-generate-new-biological-understanding/>) . This call encourages applicants to include costs for a Research Software Engineer
- The MRC-funded UK Institute for Health and Biomedical Informatics Research also recognises the value of Research Software Engineers
- Jeremy Yates briefly discussed the National e-Infrastructure outlook:
 - Discussion is still ongoing
 - More clarity is expected in about 2 weeks
 - One year's funding is expected to tide over some existing projects
 - About 90% of project proposals didn't have a business case; these are unlikely to be funded.