

Jeremy Yates



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Bio

The Research Computing Division at UCL co-ordinates the delivery of high end computing services to UCL's research community and helps to co-ordinate research activity across the whole of UCL that requires access to high end computing resources. This has meant my having to work closely with researchers from the Life Sciences, Computer Science and Engineering, as well as related fields such as Chemistry, Spectroscopy and Condensed Matter Physics. I also was the technical lead on UCL's just completed HPC project, Legion.

The recently renewed Miracle HPC Astrophysics programme (I am a co-PI), brings together research activities in CFD, Radiative Transfer, Condensed Matter Physics and Quantum Mechanics, as they relate to astrophysical phenomena, at UCL and the Universities of Hertfordshire, Imperial and Manchester. My own interests are in combining radiative transfer and magneto-hydro-dynamical codes that incorporate gas and surface chemistry, to understand how UV flux can drive the evolution of dynamic systems, such as star forming regions and starburst galaxies which are both threaded by powerful magnetic fields. These problems don't parallelise particularly well! I'm still a working observational astrophysicist and I am involved in radio interferometry projects such as eMERLIN, LOFAR and the Square Kilometre Array.

With colleagues, such as Mike Ashworth and Neil Geddes from Daresbury Labs, I am developing the networking and workflow models that are required to have *working* campus and inter-campus grids (or *clouds*) to allow researchers to get their particular tasks carried out in a timely fashion. This has to bring together hitherto disparate activities such as data management, network management and visualisation, as well as familiar activities such as job submission and cpu, interconnect and local disk usage.