

## **Vacancy: HPC/IT/CFD Engineer**

CFS are looking for an Engineer with cross-disciplinary interests in High Performance Computing (cpu clusters, GPU, Phi) and the associated IT (Linux) challenges combined with a strong application interest in CFD. The successful candidate will participate in the development of both RANS and higher order LES for industrial application with particular emphasis on developing efficient parallel algorithms. You will have good personal organizational skills together with the ability to collaborate with and motivate others, plus project planning experience.

The ideal candidate will be PhD qualified with the following required skills:

1. CFD solver developing experience (Finite Volume or Flux Reconstruction methods)
2. Programming skills: Fortran, C, C++ and Python and development tools as CMake, SVN, Mantis...
3. Parallel programming (MPI and OpenMP) and HPC experience (cpu and/or GPU)
4. Expertise and motivation to assist with Linux systems administration, including workstation and clusters installation and maintenance (in support of our existing part time system administration role)

The following would be desirable:

1. Experience on virtual machines, networking, VPN and security
2. Meshing operations and/or meshing software development
3. HPC in industry (as well as academia)
4. Familiarity with commercial software packages

### **About Cambridge Flow Solutions:**

Cambridge Flow Solutions Ltd (CFS) was founded in 1999, as a spin out from Cambridge University Engineering Department, to provide state-of-the-art software tools and consulting for engineers at the leading edge of Computational Fluid Dynamics. CFS has since developed into a provider of proprietary software and services to support engineering simulation. CFS' approach centers on providing practical software for real-world applications.

The company's highly-integrated software is built on novel algorithms that provide a step improvement in reliability and performance, leveraging the power of high-performance computing and delivering advanced capability. The company's focus is on continuing to research & develop, *BOXER*, an end-to-end parallel engineering simulation environment with the vision to integrate geometry editing, meshing, solving and post-processing, specifically tailored to highly scalable distributed computing platforms. *BOXER* imports geometry from a variety of sources – including those widely used in Computer-Aided Engineering (CAE) systems - and then uses our novel algorithms to construct a hybrid mesh (consisting of hexahedral, tetrahedral, prismatic & pyramidal elements) which is then exported to support a variety of Computational Fluid Dynamics (CFD) and/or Finite Element Analysis (FEA) simulation tools. The resulting simulations are central to both research & development and design activities in many industries: turbomachinery (aero-engines, land-based power generation (both gas & steam turbines), turbocharging), marine, automotive & environmental.

Our main area of business is tightly coupled collaboration with a small number of blue-chip clients in what we call "Development Partnerships". We act as "capability providers" in the mid TRL (Technology Readiness Level) range pulling promising new ideas & software technology from lower to higher TRL such that application can start on real, relevant engineering problems within the Partners. Looking ahead, some of the software is maturing to commercial standard and we are starting to develop and grow a more conventional licensing business.

With offices in UK and Japan (and soon the USA) with possible secondment opportunities, we are continually looking for exceptional talent, particularly in the areas of CFD/CAE engineering, consulting, sales and support. We offer stimulating work in a young and dynamic company with exciting prospects.

**Salary is £35,000 - £55,000 pa. negotiable depending on experience.**

Cambridge Flow Solutions Ltd is committed to equality of opportunity.

Location: The Bradfield Centre, Cambridge Science Park, Cambridge, CB4 0GA

Closing date: 30 November 2018

Successful candidates will be asked to come for interview at a mutually convenient time.

Please forward all applications to [careers@cambridgeflowsolutions.com](mailto:careers@cambridgeflowsolutions.com)