

Call for proposals to be supported by the High Level Support Team

Deadline for responses: 15th November 2014

Managing and supporting the codes and workflows which support the Horizon 2020 activities requires dedicated hardware and small teams of Software Developers and Computational Physicists. The WPISA work package co-ordinates the preparation and execution of the activities in these teams which comprise the Core Programming Team, the Gateway (team) and the High Level Support Team. It will provide a link between these supporting teams and Code Development projects run under WPCD and activities within WPJET1, WPMST1 and WPMST2. The activities are foreseen throughout the whole period 2015-2018. The High Level Support Team (HLST) provides support to users who perform massively parallel computational work in support of the European fusion physics programme.

In 2015, the HLST effort is expected to total 8 professional person years (96 professional person months). The HLST is charged with the following tasks:

- Parallelise codes using e.g. Open MP and/or MPI standards for massively parallel computers;
- Improve the performance of existing parallel codes both at the single node and inter node levels;
- Support the transfer of codes to new multiprocessors architectures;
- Choose and if necessary adapt algorithms and/or mathematical library routines to improve applications for the targeted computer architectures;
- Give feedback to the community based on experience gained from specific project work;
- Provide guidance for young scientists on available training activities in HPC and towards upcoming new computer architectures;
- Provide consultancy to scientists within the Research Units working on HPC
- Exploit developments made by the WPCD, especially in the field of standards, graphical user interfaces, common data bases and parallel visualization, for the benefit of the IFERC-CSC users.

In this Call for Proposals we invite your Research Unit or Third Party staff to propose project(s) aimed at the improvement of existing codes and/or at development of new numerical tools which require support from the HLST. The proposal should detail the scientific objectives of the project, the numerical tools used and the anticipated needs for high-level support and the expected ppm requirements following the attached **“Template_for_proposals.doc”**.

In particular, the proposal should include relevant information on

- Current status of the code
- Currently supported architectures

- Typical Use Cases/Problem sizes
- Technical improvement or adaptation work done so far by other institutions
- Requested support activity and /or support need (not necessarily restricted to the above categories)
- Any matching commitments from code owner
- Source code distributions for preliminary needs analysis
- Estimation of the effort (in ppm) of the projects proponents to be given (in parallel to the HLST work) to the execution of the project
- Expected usage of the IFERC Helios architecture

Applications will be selected according to a selection process defined by a panel, taking into account the potential impact on the European fusion research programme and the technical soundness of the proposals. The selected projects will be allocated to HLST starting from 1st January 2015. The selection will cover the whole of 2015, but, where appropriate, multi-year projects may be proposed and selected.

Proposals should be sent via e-mail to Irina Voitsekhovitch (irina.voitsekhovitch@euro-fusion.org) with copy to jennie.humphreys@euro-fusion.org through the GA Member no later than **15th November 2014**.