Call for support from High Level Support Team

Deadline for answers: 31st December 2009

At its meeting in Culham on 6th October 2008, the EFDA Steering Committee approved the HPC Implementing Agreement (EFDA (08) 39/4.1), enabling operation and exploitation by the European fusion community of the HPC for Fusion (HPC-FF), a dedicated European high performance computer for fusion applications which has been built at the Forschung-Zentrum Jülich Supercomputing Centre (JSC). The HPC-FF started its operation on 6th August 2009.

The EFDA Associates have under the HPC-FF structure access to high level support for the improvement of existing codes or High Performance Computing support in new developments. This work is coordinated under the High Level Support Team (HLST) which consist of 5 ppy per year located at IPP-Garching and an additional 4 ppy per year located in the Associations. The HLST has been charged with the following tasks:

- Parallelise and optimise codes, including single node optimisation, Open MP and MPI parallelisation, for massively parallel computers;
- Improve the performance of existing codes already designed for parallel platforms;
- Initiate the transfer of other codes to multiprocessors platforms;
- Include Check-point/Restart functionality in the most CPU time consuming codes;
- Make existing codes into community tools and merge codes if needed;
- Choose algorithms, mathematical library routine to adapt applications to the computer architectures and to specific geometries;
- Train young scientists to the use of HPC systems and towards upcoming new computer architectures;
- Provide consultancy to existing HPC specialists in the Associations;
- Exploit the developments and choices made by the ITM Task Force and progress achieved under the EUFORIA Project, especially in the fields of standards, graphical users interfaces, common data bases and parallel visualisation, for the benefit of the HPC-FF users.

In this Call we invite you 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 support.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
- Requested Support activity, support need (not necessarily restricted to the above categories)

- Any matching commitments from code owner
- Source Code distributions for preliminary needs analysis.

Applications will be selected according to a selection process defined by the HPC Board, taking into account the scientific merits and technical soundness of the proposals and only the best projects will be awarded. The selected projects will be allocated to HLST starting from 1st March 2010.

In order to assure the efficient work on the codes improvements/developments, I would like to ask you to send your proposals to the HPC Board Secretary Roman Zagórski (Roman.Zagorski@efda.org) with copy to the HPC Board Chairperson Sibylle Günter (Sibylle.Guenter@ipp.mpg.de) and to the CSU Secretariat (Anne.Graebner@efda.org) through the Head of Research Unit no later than **31st December 2009.**