TITLE: Computational Support Specialist, Integrated Modeling Fusion Science and Technology / Science	FST-017
REPORTS TO LINE MANAGER: Assistant Deputy Director General (ADDG) / Deputy Director General (DDG) for Fusion Science and Technology (FS&T)	
DIRECT EMPLOYMENT: REQUIRED	**GRADE RANGE:** G4-G5
DATE WRITTEN: May 2008	**DATE REVISED:**	**DATE REVISED:**

Purpose:

Provides support to the computational physics activities in Fusion Science and Technology, in particular in relation to the programme of integrated modelling of fusion plasmas. Specific activities will include production runs of modelling codes, provision of maintenance and support for the development of coding, data and documentation standards, provision of major support for the adaptation of integrated modelling codes to ITER standards, support to the definition of data mining and visualization needs and to the development of user applications, support to the development of a technical website for FS&T Department relating to its physics and technology R&D programmes implemented in the ITER Members' fusion communities.

Major Duties/Responsibilities:

- Organizes production runs for physics modeling codes used within the FS&T Dept to analyzes and predict ITER plasma performance.
- Provides major support for the development and maintenance of a set of coding, verification, validation and documentation standards for a suite of integrated modeling codes.
- Provides substantial support for the adaptation of integrated modeling codes to ITER standards.
- Supports the development of an integrated modeling code infrastructure for both internal and external users.
- Assists in the definition of data mining and visualization needs, identification of the relevant software, and support of user applications.
- Implements a plan for the development of synthetic diagnostics and adapts relevant software supplied by diagnostic development teams to the integrated modeling infrastructure.
- Develops and maintains a technical website for FS&T Department and the Integrated Modeling programme.
- Assists in the identification of computer resource requirements.
- Interacts with experts in the ITER Members in the definition, implementation and monitoring of activities in this area.
- Contributes to the preparation of documentation relating to these activities.
- Provides computational support to FS&T staff and visiting researchers.
- Shows strong commitment to the ITER safety programme and enforces it through his/ her individual behaviour.
- Maintains a strong commitment to the implementation and perpetuation of ITER safety programme, values and ethics.

Qualifications Required:

- Bachelor's Degree in a relevant area.
- Several years of experience in some of the following areas.
  - Website, web server and server programme development;
  - A range of visualization software;
  - Plasma physics modeling codes and solution techniques;
  - High performance computing, parallel processing, MPI, computing networks;
  - Design, development and maintenance of computational infrastructures for use by a large number of external and internal users;
  - An ability to work in a variety of software languages and familiarity with modern scientific data analysis and visualization tools would be an asset;
  - Good communication skills in written and spoken English.

Work Direction and Interfaces:

- Reports to the ADDG/DDG for Fusion Science and Technology.
- Provides computational support to all staff of FS&T Department.
- Liaises with experts in the international fusion community in relation to the development of the ITER integrated modelling capability.

Authority/Approval Levels:

Has authority and approval levels defined by the ADDG/DDG for Fusion Science and Technology.

Measures of Effectiveness:

- Successfully implements necessary software developments in support of ITER physics modelling activities.
- Successfully supports ITER physics modelling activities.
- Contributes effectively to the team activity in these areas of ITER physics.
- Contributes effectively to the development of the ITER integrated modelling programme.