IO1201 Stability & Control Section Leader POP-028

General information

Job category	Standard
Status	Draft
Department	DIP/Directorate for Plasma Operation
Section	POP / SD / Stability and Control

Job description

Main job	Science - Plasma physics
Title of the position	Stability & Control Section Leader POP-028
Job family	Section Leader
Grade	P5
Direct employment	Required
Purpose	To lead and manage the activities of the Stability & Control Section (SCS) within Plasma Operation Directorate relating to the analysis of Magnetohydrodynamic (MHD) instabilities and their control in ITER, development of the Plasma Control System (PCS) for ITER and development of integrated plasma scenarios for ITER operation; To play a significant role in the definition of the physics design and R&D activities associated with these areas of ITER physics; To manage the activities of the SCS to ensure that the required support to ITER construction and the preparation for ITER operation; To interact with relevant operating units of the ITER Organization and with the ITER Members in the identification of priorities and in the specification, implementation and monitoring of relevant activities. Manages the activities of the SCS within the Plasma Operation Directorate relating to the analysis of MHD instabilities and their control, the characterization of disruptions and the provision of physics support to the development of the ITER Disruption Mitigation System (DMS), the development of the ITER Plasma Control System and the development of integrated plasma scenarios for ITER; Provides overall leadership in the definition of the ITER R&D programs relating to MHD stability in ITER, the development of control techniques for MHD instabilities, the development of plasma scenario control for ITER and the development and validation of plasma operating scenarios for ITER;
Main duties / Responsibilities	Ensures that the SCS's activities support the achievement of the goals of the Strategic Management Plan and, in particular, that the development of the PCS satisfies the agreed Detailed Work Schedule; Guides the development of improved in-house modelling capabilities in the areas of MHD stability analysis, plasma scenarios and plasma control; Leads the integration of R&D results and analysis from the ITER Members' fusion programs in these areas of fusion physics and provides assessments of their implications for ITER design and operation; Interacts with, and co-ordinates experts, in the ITER Members' fusion communities in the definition, implementation and monitoring of relevant activities in these areas; Plays a significant role in the planning for ITER plasma commissioning and operation; Supervises visiting researchers and students contributing to studies in these areas of ITER physics; Makes major contributions to documentation integrating assessments of R&D results on MHD stability, plasma control and plasma operating scenarios in ITER-relevant plasmas, and specifying performance requirements for ITER operation; Performs other duties in support of the project schedule as described in the Detailed Work Breakdown Structure Schedule or Strategic Management Plan; Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, values and ethics. Defines a comprehensive work program for SCS in support of ITER construction activities and the preparations for ITER operation Manages the activities of SCS effectively in providing timely support to the ITER construction

Measures of effectiveness	activities and the planning for ITER operation; Ensures that the development of the ITER Plasma Control System progresses as defined within the agreed DWS; Leads the definition and implementation of the necessary program of R&D activities in collaboration with the Members' fusion programs to advance the understanding of MHD stability in ITER, to improve the understanding of disruption behaviour and loads, to validate MHD stability control techniques and disruption mitigation methods, to confirm plasma control concepts and to validate plasma operating scenarios; Establishes effective international collaborations with experts in the Members' fusion communities in support of ITER's physics R&D priorities; Ensures timely preparation of necessary documentation relating to SCS's areas of responsibility which integrates R&D results, specifies ITER performance requirements or defines operational scenarios. Reports to the Plasma Operation Directorate Director; Interacts with project divisions responsible for the design and procurement of ITER components and sub-systems, in particular in the areas of superconducting magnets, power supplies, fuel cycle, diagnostics, heating and current drive and control; Interacts with project divisions contributing to of ITER commissioning and operations planning. Liaises with experts in the international fusion community in the areas of fusion physics R&D relating to the responsibilities of SCS. In response to requests from the Director-General (DG) and/or Department for ITER Project Director (DIP), or proactively, informs the DG/ Director for DIP of any important and urgent issues that cannot be handled by the concerned line management and may jeopardize the achievement of the Project's objectives. SAP ID : 5-806 Project Construction Phase

Applicant criteria

Level of study	PhD or equivalent degree
Diploma	fusion plasma physics
Level of experience	At least 10 years
Technical experience	Expertise in experimental and/or modelling aspects of fusion physics, with extensive experience relating to MHD stability of fusion plasmas and/or plasma control; Extensive list of publications in recognized scientific journals.
Social skills	Ability to work effectively in a multi-cultural environment , Ability to work in a team and to promote team spirit
General skills	Ability to develop plasma simulation and analysis codes in one or more scientific programming languages (e.g. Fortran) would be advantageous.
Languages	English (Working)
Specific skills	MS Office standard (Word, Excel, PowerPoint, Outlook)
Free criteria	Experience of a project-oriented working environment would be advantageous.