ITER Scientist Fellow (Diagnostics)

Purpose

Diagnostics covers a wide area of physics and engineering disciplines. To realise the true performance of the device, all the relevant systems need to be developed effectively and with robustness. The demands of ITER on diagnostics are such that the best scientists and engineers are needed to support this development. The aim of this fellowship is to support the ITER Project and, in particular, the ITER Organization Central Team (IO-CT) through contributions to the ITER Diagnostics. The ITER Science Fellow would use and align where appropriate his/her current research, development and management areas to be able to add value to the already running and future diagnostic missions. This will be through interaction with the ITER technical team and arranged visit periods to address specific issues. The work also involves close collaboration with the relevant ITPA activities. Assistance with ITER exploitation and operations planning is also a key objective.

Major Activities

- The candidate would be expected to be an expert in one or more of the following areas and able to partake in supporting the ITER mission to develop a suite of Nuclear grade relevant and optimised diagnostic systems
  - Diagnostic Component Development
  - Neutron Systems development and analysis
  - Magnetic Systems development and analysis
  - Impurity Modelling and Prediction
  - Passive Spectroscopy development and analysis (visible)
  - Passive Spectroscopy development and analysis (X-ray and VUV)
  - Active Spectroscopy development and analysis
  - First Mirror Recovery Systems development and Modelling
  - Reflectometry Systems development and analysis
  - Thomson Scattering systems development and analysis
  - Collective Thomson Scattering systems development and analysis
  - Dust/Tritium/Erosion systems development and analysis
  - Interferometer/Polarimeter Systems development and analysis
  - Visible/Infrared systems development and analysis
  - Pressure Gauge systems development and analysis
  - Bolometer systems development and analysis
  - Synthetic Data analysis
  - Requirements Analysis
  - Commissioning and Operation Planning

- The candidate would be attached to a group of systems or transverse area depending on the skills.

Qualifications and Experience

- **Education/ Know-How:**
  - PhD or equivalent experience in Engineering, Physics or Applied Physics/Engineering
- **Technical experience:**
  - Extensive experience in the development of diagnostics or diagnostics modelling or analysis software
  - Proven experience in the design of diagnostics or associated systems;
  - Experience in fusion experimental operations or equivalent;
Experience of working in complex environments;

- **Social skills:**
  - Ability to communicate effectively;
  - Ability to work effectively in a multi-cultural environment;
  - Ability to work within a team and to promote teamwork.

- **Language requirements:**
  - Fluent in English (written and spoken).

- **Computer and IT skills:**
  - Skills relevant to specific role expected