# Job Title: ITER Plant Simulator Officer IO1037

Requisition ID **3805** - Posted **27/04/2021** - (France, 13067 St Paul Lez Durance Cedex) - **Machine Operations** - **New Posting**

The ITER Organization brings together people from all over the world to be part of a thrilling human adventure in southern France—building the ITER Tokamak. We require the best people in every domain.

We offer challenging full-time assignments in a wide range of areas and encourage applications from candidates with all levels of experience, from recent graduates to experienced professionals. Applications from under-represented ITER Members and from female candidates are strongly encouraged as the ITER Organization supports diversity and gender equality in the workplace.

Our working environment is truly multi-cultural, with 29 different nationalities represented among staff. The ITER Organization Code of Conduct gives guidance in matters of professional ethics to all staff and serves as a reference for the public with regards to the standards of conduct that third parties are entitled to expect when dealing with the ITER Organization.

The south of France is blessed with a very privileged living environment and a mild and sunny climate. The ITER Project is based in Saint Paul-lez-Durance, located between the southern Alps and the Mediterranean Sea—an area offering every conceivable sporting, leisure, and cultural opportunity.

To see why ITER is a great place to work, please look at this video

**Application deadline:** 06/06/2021
**Domain:** Science & Operation
**Department:** Science,Controls & Operation
**Division:** Operations
**Job Family:** Project Engineering
**Job Role:** Engineer - 2
**Job Grade:** P3
**Language requirements:** Fluent in English (written & spoken)
**Contract duration:** Up to 5 years

## Purpose

As ITER Plant Simulator Officer within the Operations Division, you will support the development of the plant simulator in order to validate the operating procedures, and to monitor and validate the plant behaviours during normal and abnormal situations.
In this role you will be in charge of the production of ITER behaviour model, operation sequences, and operating procedures for normal and abnormal conditions.

## Background

The Operations Division is responsible for developing plans and procedures, and for implementation of commissioning, operation and maintenance of the ITER Tokamak and plant systems.

## Major Duties/Roles & Responsibilities

- Produces ITER behavior model, including the operation sequence diagram, and state machine diagram at facility level, with specification of the control variables and the operating boundaries;
- Collaborates autonomously with Controls Division staff, operation and science officers, and other IO stakeholders, to identify, gather, and collect the input needed, including operating conditions, control variables, and boundaries, to consolidate the operating scenarios;
- Supervises delivery of sub-tasks executed by contractors and the IO team, for the integration and the verification of the system modeling and the control logic simulation within the ITER Plant Simulator (IPSi);

- Prepares the facility operating procedures and control logic specifications, and implements them in the ITER Plant Simulator;
- Develops the input data for the development of the Human Machine Interface interacting with Control Division and supervise the implementation in the IPSi;
- Produces operator training exercises and sessions aligned with the ITER operating procedures;
- Ensures the consistency of the interfaces among the divers elements of the IPSi, such as several system models, simulation of control logic, IPSi platform;
- Disseminates the methods for behavior model and drives IO stakeholders for joint production;
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;
- May be required to work outside ITER Organization reference working hours, including nights, week-ends and public holidays.

**Measure of Effectiveness**

- Produces high quality deliverables, such as the facility operating procedures, the operation sequence diagrams, the state machine diagrams;
- Implements the operating procedures and the relevant control logic within the IPSi platform requirements;
- Provides accurate analysis of the deliverables produced by the ITER Organization stakeholders or by the external contractors;
- Ensures the timely reply to the requests for information from ITER stakeholders and the external contractors;
- Ensures the full traceability of the input used for the IPSi and the versioning of it issuing regular configuration reports;
- Meets the schedule for the development and deployment of the IPSi in alignment with the overall commissioning and operation priorities.

**Experience & Profile**

- ***Professional Experience:***
  - At least 8 years' experience working as engineer in the field of complex project operations.
- ***Education:***
  - Master's degree or equivalent in mechanical, nuclear, chemical engineering or other relevant discipline;
  - The required education degree may be substituted by extensive professional experience involving similar work responsibilities and/or additional training certificates in relevant domains.
- ***Language requirements:***
  - Fluent in English (written and spoken).
- ***Technical Competencies and demonstrated experience in:***
  - Plant simulators, systems engineering and production of system diagrams and behavior model;
  - Analyzing system design documentation to produce input for operation, such as operating procedure;
  - Analyzing system diagrams and developing behavior model, including sequence diagram, state machine diagram and use case diagram;
  - Managing processes in place for operations phase;
  - Systems engineering: planning input, change control, development, interface control, verification and validation;
  - Software control and model development: analysis and calculations to understand planning needs for ongoing operations;
  - Production of behavior model in fusion, energy or high technology and international project is considered as an advantage;
  - Knowledge of SysML or similar software for the production of behavior model is considered an advantage.
- ***Behavioral Competencies:***
  - Collaborate: Ability to dialogue with a wide variety of contributors and stakeholders;

- Communicate Effectively: Ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment;
- Drive results: Ability to persist in the face of challenges to meet deadlines with high standards;
- Manage Complexity: Ability to analyze multiple and diverse sources of information to define problems accurately before moving to solutions;
- Instill trust: Ability to model high standards of team mindset, trust, excellence, loyalty and integrity.

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***The following important information shall apply to all jobs at ITER Organization:***

- Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, ITER Values (Trust; Loyalty; Integrity; Excellence; Team mind set; Diversity and Inclusiveness) and Code of Conduct;
- ITER Core technical competencies of 1) Nuclear Safety, environment, radioprotection and pressured equipment 2) Occupational Health, safety & security 3) Quality assurance processes. Knowledge of these competencies may be acquired through on-board training at basic understanding level for all ITER staff members;
- Implements the technical control of the Protection Important Activities, as well as their propagation to the entire supply chain;
- May be requested to work on beryllium-containing components. In this case, you will be required to follow the established ITER Beryllium Management Program for working safely with beryllium. Training and support will be provided by the ITER Organization;
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;
- Informs the IO Director-General, Domain Head, or Department/Office Head of any important and urgent issues that cannot be handled by line management and that may jeopardize the achievement of the Project’s objectives.