

VACANCY NOTICE
F4E/TA/AD6/2012/0157
(Temporary Agent – AD6)

POSITION TITLE	ELECTRO-MECHANICAL TECHNICAL OFFICER (F/M)
GRADE	AD6
LOCATION	BARCELONA, SPAIN
CLOSING DATE FOR APPLICATIONS	29/11/2012

1. THE ORGANISATION

The European Joint Undertaking for ITER and the Development of Fusion Energy ('Fusion for Energy' or F4E) plays a key role in realising fusion as a possible future source of energy by providing the European contributions to the ITER International fusion energy project and the Broader Approach Agreement with Japan as well as by preparing for the construction of a demonstration fusion reactor.

In its role as the Euratom Domestic Agency for ITER, F4E:

- Oversees preparation of the ITER project site in Cadarache, France;
- Provides in kind components, equipment, materials and other resources to ITER;
- Manages procurement arrangements with ITER ;
- Coordinates Euratom's participation in the scientific exploitation of ITER;
- Provides for the implementation of R&D activities in support ITER;
- Provides Euratom's financial contribution to ITER;
- Provides arrangements to make human resources available for ITER.

In its role as the Implementing Agency for the Broader Approach Agreement with Japan, F4E:

- Provides components, equipment and other resources for the Broader Approach (BA);
- Coordinates Euratom's participation in the Broader Approach implementation ;
- Provides for the implementation of associated R&D activities;
- Provides the Euratom financial contribution to the Broader Approach;
- Arranges to make human resources available for the Broader Approach.

In preparation for the construction of a demonstration fusion reactor (DEMO) and related facilities including the International Fusion Materials Irradiation Facility (IFMIF), F4E will implement a programme of research, development and design activities.

For further information about the structure and tasks of F4E, please consult the website at <http://fusionforenergy.europa.eu>

2. JOB DESCRIPTION - RESPONSIBILITIES

As a member of the EU - ITER Department of 'Fusion for Energy', the Electro-Mechanical Technical Officer will work in the Analyses and Codes Group within the Technical Support Services Unit, reporting to the Analyses and Codes Group Leader. He / she will be responsible for carrying out and supervising analysis work to be realized by F4E in collaboration with the European Associations and Industries in the areas of mechanical and electro-magnetic analysis.

The successful candidate will, among other tasks:

- Make an assessment aiming at the comprehension of the key problem features, its correct statement (e.g. boundary conditions, element types used), and derive an approximate solution, for a wide range of electromagnetic problems (static, eddy currents, etc.) arising from the design and manufacturing of ITER components;
- Make an assessment aiming at the comprehension of the key problem features, its correct statement (e.g. boundary conditions, element types used), and derive an approximate solution (simplified geometry, analytical solutions, etc.) for a wide range of mechanical problems (plane stress/strain, 3D shells and solid, static and dynamics, etc.) arising from the design and manufacturing of ITER components;
- Develop finite element models for the electromagnetic analysis of ITER components starting from the appropriate Catia V5 models and carry out analyses including the presence of non-linear materials (e.g. ferro-magnetic steel), eddy currents and electro-mechanical coupling;
- Develop finite element models for the mechanical analysis of ITER components starting from the appropriate Catia V5 models and carry out analyses including the presence of non-linearities (e.g. geometrical gaps, plasticity effects, etc.), dynamic features (e.g. dynamic amplification), fatigue, etc., as well as the final structural assessments using state of the art codes such as ASME and/or RCC-MR;
- Define the technical specifications of study contracts with EU Universities, Research Laboratories and Industries and follow-up their implementation and final technical assessment in the area of computational mechanics and electromagnetic.

3. GENERAL CONDITIONS

A. ELIGIBILITY CRITERIA

A1. In order to be eligible the candidate must:

- Be a citizen of one of the Member States of the European Union or of a Third state fully associated with the Euratom fusion programme (Switzerland).
- Enjoy his/her full rights as a citizen.¹
- Have fulfilled the obligations imposed on them by the laws of their home country concerning military service.
- Meet the character requirements for the duties involved.
- Be physically fit to perform their duties².

¹ Prior to any appointment, the successful candidate will be asked to provide a certificate issued by the competent authority attesting the absence of any criminal record.

² Before his/her appointment, the candidate shall be medically examined in line with requirement of Article 12(2)(d) of the Conditions of employment of other servants of the European Communities.

A2. On the closing date for registration the candidate must possess:

At least a level of education which corresponds to completed university studies of at least 3 years attested by a diploma and, after having obtained the university degree, at least 3 years of proven professional experience;

Only study titles that have been awarded by the Members of the Joint Undertaking or that are subject to the equivalence certificates issued by the authorities in the said Member States shall be taken into consideration.

A3. The candidate must possess a thorough knowledge of one of the official languages of the European Union and a satisfactory knowledge of another language of the European Union to the extent necessary for the performance of his/her duties³.

B. QUALIFICATIONS AND EXPERIENCE REQUIRED

B1 Essential Selection Criteria

- University degree in engineering or equivalent;
- Minimum of 3 years of experience in at least two of the following four areas:
 - Electromagnetic analysis of 2D and 3D static and time-varying problems (both harmonic analysis as well as eddy currents) in presence of linear and non-linear materials;
 - Mechanical analysis of 2D (e.g. plane stress, plane strain, axi-symmetric) and 3D problems by using the main type of elements (beams, plates, shells, solid) in presence of linear and non-linear materials for both static and dynamic problems;
 - Development of complex 3D finite element models starting from the most common CAD software (e.g. Catia V5) for multi-physics application, in particular electro-mechanical coupled analysis;
 - Development of finite element procedures for the structural assessment of nuclear class-type components on the basis of RCC-MR or ASME-III code.
- Excellent knowledge of ANSYS software or of another Finite Element commercial package with equivalent electromagnetic and/or mechanical analysis features.
- Hands-on capability (e.g. customization for specific needs) in using ANSYS solvers or other commercial codes to user-specific problems;
- Excellent analytical, reporting and organisational skills;
- Good ability to work under pressure;
- Good interpersonal skills and ability to integrate into an international and multicultural environment;
- Good command of both written and spoken English, the working language of the ITER Project.

³ In addition, staff members are required to have a working knowledge of a third EU language, as described in the applicable Staff Regulations and Implementing Rules in order to be considered for their first promotion.

B2 Advantageous Selection Criteria

- Experience in defining the technical specifications of study contracts with EU Universities, Research Laboratories or Industries and following-up their implementation and final technical assessment in the area of computational mechanics and electromagnetic;
- Knowledge of Finite Element commercial packages with multi-physics analysis features others than those mentioned in B1 above;
- Knowledge of Catia V5 software (or equivalent) in relation to the handling of solid models to be eventually meshed and used with finite element analysis;
- Knowledge of the main ITER systems and their key features;
- Participation to ITER activities on specific electromagnetic problems;
- Working experience in a European or international setting.

4. CONDITIONS OF EMPLOYMENT

A contract offer will be made as a member of temporary staff, pursuant to Article 2(a) of the Conditions of Employment of other servants of the European Communities.

The successful candidate will be recruited in the grade AD6 on a contract with an initial duration of five years, with possibility of renewal.

The salaries of temporary agents are subject to a community tax deducted at source. They are exempt from national tax. The European institutions have their own social security and pension scheme. **As an indication, the basic monthly salary, before any deductions or allowances, for grade AD6 (step 1) is currently 4.921,28€.**

In addition to the basic salary, staff members may be entitled to various allowances, in particular a household allowance, expatriation allowance (16% of basic salary and household allowance), dependent child allowance and education allowance. The salary is subject to a reasonable Community tax deducted at source and staff members are exempt of national taxation.

Under certain circumstances, in particular where the jobholder is obliged to change his/her place of residence in order to take up employment, 'Fusion for Energy' may also reimburse various expenses incurred on recruitment, notably removal expenses.

The place of employment is **Barcelona, Spain.**

Given the needs of the organisation, the candidate may be offered an employment at any of the other F4E working places: Garching (Germany) or Cadarache (France).

For reasons related to the 'Fusion for Energy' operational requirements, the candidate will be required to be available at short notice.

5. SELECTION PROCEDURE

A Selection Committee will be set up for the selection process. The eligibility of candidates will be assessed by the Committee according to compliance with all formal requirements by the closing date for the submission of applications. Any applications which do not meet the requirements specified in a vacancy notice (i.e. incomplete applications, applications submitted after the deadline or which do not meet the detailed criteria listed under 'the eligibility criteria') will be rejected.

Eligible candidates who meet all essential selection criteria and have the best profiles for the specific needs will be invited for an interview, which will be held mainly in English. Candidates invited for an interview will be requested to present for verification all documents supporting every educational achievement and work experience they have referred to in the application.

The interview will focus in particular on the candidate's specialist knowledge in the field of the selection and his/her knowledge of the main developments in European integration and Community policies. The interview is also designed to evaluate his/her linguistic skills and ability to adjust to working in a multicultural environment.

The interview sessions will be held in **Barcelona, Spain**.

Please note that the Selection Committee's work and deliberations are strictly confidential and that any contact with its members is strictly forbidden.

After the interviews, the Selection Committee will draw up a reserve list with the most suitable candidates, which will be adopted by the Appointing Authority and will be valid until 31 December 2013 and may be extended. As soon as this decision is taken, successful candidates will be informed. However, candidates should note that inclusion in the reserve list does not guarantee recruitment.

Please note that a binding commitment can only be made after verification of all conditions and will take form of a contract signed by the Director of 'Fusion for Energy', on proposal by the Selection Committee. If at any stage of the procedure it is established that any of the information a candidate provided is incorrect, this candidate will be disqualified.

The present vacancy notice is subject to the availability of budget and posts in the establishment plan of the Joint Undertaking, as decided by the EU budgetary authority.

6. GENERAL INFORMATION

Commitment to promote equal opportunities

'Fusion for Energy' is an equal opportunities employer and strongly encourages applications from all candidates who fulfil the eligibility and selection criteria without any distinction whatsoever on grounds of nationality, age, race, political, philosophical or religious conviction, gender or sexual orientation and regardless of disabilities, marital status or other family situation.

Indicative timetable for selections

As a rough guide only, the selection procedure can take up to 6 months from the date on which it was published to establishment of a reserve list.

The different stages of the selection procedure are the following:

Publication of the Vacancy Notice

For Temporary Agents positions the publications should stay online at least 20 working days (4 weeks).

The screening of applications

From 3 to 5 weeks for the selections with less than 50 applications

From 6 to 8 weeks for the selections with more than 50 applications.

Invitation and rejection letters

The formal invitation letters are sent by email at least 3 weeks before the interview date.

Not invited candidates are informed on the same time on the outcome of the screening process.

Interviews and deliberations

From 2 to 3 weeks

Establishment of the Reserve list

From 1 to 2 weeks

Communication to candidates on the final outcome of the selection

From 1 to 2 weeks

Communication with applicants

Taking into account the nature of the duties, and in order to facilitate the selection process, all communications to candidates concerning the selection procedures will be by email and in English only. Applicants are advised to check their e-mail regularly to see whether they have received any communication and also update their profiles in the e-recruitment tool in the event of any change in their contact details. All enquiries or requests for information or documentation in relation to selection procedures should be addressed to 'Fusion for Energy' HR Selections Team by e-mail to:

hr-selections@f4e.europa.eu

Reimbursement of travel expenses

Travel expenses incurred for interviews will be reimbursed by 'Fusion for Energy' according to its rules for the reimbursement of travel expenses sent along with the letter inviting to an interview.

Protection of personal data - Privacy notice

'Fusion for Energy' as the body responsible for organizing the selection process, will ensure that applicants' personal data are processed as required by Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data. This applies in particular to the confidentiality and security of such data. Personal data shall be processed solely for the purpose of the selection procedure.

Applicants have the right to access and rectify their data. To update your CV and/or Motivation Letter and rectify any incorrect or inaccurate data, please login into your e-recruitment profile **before the deadline for submission of the applications elapses**.

After the deadline for applications has elapsed, this right will be limited to the rectification of identification details and contact information only.

Should the applicant have any query concerning the processing of his/her personal data, he/she shall address them to the following address: Resources-Controller@f4e.europa.eu

Appeal and Complaint procedures

Applicants that consider that he/she has been adversely affected by a particular decision regarding this selection can lodge a complaint. For further details on how to proceed, please consult the appropriate document published on our website.

7. SUBMISSION OF APPLICATIONS

The online application process starts upon clicking "**CLICK TO APPLY**" next to a vacancy of your interest on the Open Positions page:

<http://fusionforenergy.europa.eu/careers/vacancies/Default.aspx>

Applicants must register their applications online through the F4E E-recruitment tool by creating a valid F4E user account and submitting the documents mentioned below.

Please note that the online e-recruitment application tool is the only acceptable means of sending in job applications. Applicants are responsible for keeping their e-mail addresses and personal details up to date in their profile in F4E online application tool.

The mandatory fields in the profile marked with an asterisk should be duly filled in and the candidates are requested to submit the following 2 documents:

- A detailed Europass curriculum vitae in **English** (that can be obtained at the following address: <http://europass.cedefop.europa.eu/en/documents/curriculum-vitae>)
- A motivation letter of 2 pages maximum in English

Applications must be complete and validly submitted by the closing date for submission of applications

no later than 29/11/2012 at 12h00 noon, Barcelona GMT+1.

In case you encounter technical problems when trying to submit your application via the e-Recruitment tool, please make a screenshot and send it to:

e-recruitment@f4e.europa.eu

It is the responsibility of the applicant to inform 'Fusion for Energy' about any technical problem without delay within the deadline mentioned above.

Please, do not send any supporting documents (i.e.: copies of your ID-card, educational certificates, evidence of previous professional experience etc.) **with your application at this stage if not specified in the Vacancy Notice.**