



Patras, 17/02/2021

Ref. No.: 47178

**Invitation for Expression of Interest:  
Postdoctoral/Research Assignment on “Characterization and study of mechanical and interfacial properties of carbon-based modified CFRPs for smart structures”**

The Institute of Chemical Engineering Sciences, Foundation of Research and Technology - Hellas, (FORTH/ICE-HT) is seeking applicants for one position of postdoctoral/research assignment in the context of the research project “Smart by Design and Intelligent by Architecture for turbine blade fan and structural components systems [Smartfan] – GA No 760779”, which is implemented under the Horizon 2020 Research and Innovation Action (RIA).

**Job Description**

To conduct research in the development, characterization and testing of modified composite materials with smart properties, focusing on the mechanical and the interfacial properties, including NDT methods (Raman spectroscopy), under the frame of the aforementioned project “Smart by Design and Intelligent by Architecture for turbine blade fan and structural components systems [Smartfan] – GA No 760779”.

Among other tasks that may arise during the project, the job consists mainly of the following tasks:

- a) Preparation and characterization of GRM-modified materials, using several techniques, such as mechanical testing, SEM, optical microscopy, Raman spectroscopy etc.
- b) Implementation of environmental aging, accompanied by pre- and post-aging testing
- c) Preparation of the corresponding reports (technical and economical) for project’s evaluation.
- d) Research activities related to the modification of material properties upon the addition of carbon-based inclusions or other relevant 2D entities.

The potential candidate should be also responsible for the following main tasks:

- a) Organization of activities and national and international meetings.
- b) Identification of requirements for the research and develop tactics for future challenges.
- c) Scientific supervision of potential master and/or PhD thesis.
- d) Production and characterization of GRMs and other 2D related materials, using techniques such as Raman spectroscopy, Atomic Force Microscopy, SEM etc in conjunction with mechanical testing.

**Location:** FORTH/ICE-HT, Patras, Greece

**Duration:** 9 months, with the potential of renewal

**Salary:** up to 2.500 € per month (total cost of the employer, including social security and taxes) depending on the qualifications

**Envisaged starting date:** 01/04/2021

**Requirements and Qualifications**

Candidates are required to hold a Degree in Material Science or a Diploma in Engineering and a PhD in Chemical Engineering, preferably focused on the evaluation of interfacial properties of materials,

with experience in reporting, in tandem with a strong expertise in mechanical testing, NDT Raman spectroscopy technique and/or other characterization methods, such as SEM, AFM, etc. Moreover, the candidates must be fluent in Greek and English in order to meet working conditions. The appropriate candidate should have:

- a) Strong expertise in the preparation and characterization of composite materials
- b) Scientific background in materials, especially in polymers and composites
- c) Strong know-how in the preparation and characterization of graphene (or related carbon based materials) and/or 2D related materials and/or nanomaterials
- d) Strong personality, good communication skills and reliability
- e) Be capable of autonomous working

The evaluation of the candidacies will be based on the following criteria and qualifications:

Qualifications	Weight	Evaluation criteria
Degree in Materials Science or Diploma in Engineering	10	Degree or Diploma Grade X 1
PhD in Chemical Engineering	25	PhD Dissertation relevant to composite materials and interfaces (weak relevance: 15, strong relevance: 25)
Experience in relevant projects (as postgraduate student or post-doctoral researcher)	15	Duration of proven experience in relevant projects (5/year, max. 15 pts)
Publications in refereed journals and conference proceedings	10	Number of relevant publications (2/publication, max 10pts)
Proven research and lab experience (minimum 4 years): (i) Mechanical characterization of materials (ii) Characterization techniques such as Raman spectroscopy and/or Atomic Force Microscope (iii) Study of graphene or other 2D related materials or nanomaterials (iv) Investigation of interfacial properties	20	Duration of proven research experience in research labs and projects (5/year, max 20 pts)
Interview	20	Presentation of related work and technical expertise to the related subject – max 10 pts Communication and other required skills – max 10 pts

### Application Submission

Interested candidates who meet the aforementioned requirements should submit their applications, no later than 4/3/2021, 16:00h., by email to Kleanthi Zacharopoulou: [kleanthi@iceht.forth.gr](mailto:kleanthi@iceht.forth.gr).

In order to be considered, the application must include:

- Application letter
- CV
- Scanned copies of academic titles

- Certificates of previous experience

**Any application received after the deadline will not be considered for the selection.**

### **Selection Procedure**

Applications that are received on time will be evaluated by a scientific committee using the criteria mentioned above. If necessary, certain candidates will be invited to a personal interview with the committee.

The outcome of the selection will be announced on the website of FORTH/ICE-HT as well as on the website of "DIAVGEIA".

### **Contact**

For information and questions regarding the application and selection procedure, candidates are asked to contact the FORTH/ICE-HT Research Secretariat, e-mail: [kleanthi@iceht.forth.gr](mailto:kleanthi@iceht.forth.gr), tel.: +30 2610 965278.

For information and questions about the advertised position and the research activity of the group or the Institute, candidates are asked to contact Professor Costas Galiotis, tel: +30 2610 965255, e-mail: [c.galiotis@iceht.forth.gr](mailto:c.galiotis@iceht.forth.gr).

### **General Protection Data Regulation**

FORTH is compliant with all legal procedures for the processing of personal data as defined by the Regulation EU/2016/679 on the protection of natural persons with regard to the processing of personal data.

FORTH processes the personal data and relevant supporting documents that you have submitted to us. Processing of that data is carried out exclusively for the needs and purposes of this specific call. Such data shall not be transmitted to or communicated to any third party unless required by law.

FORTH retains the above data up to the announcement of the final results of the call, unless further process and reservation is required by law or for purposes of exercise, enforcement, prosecution of certain one's legitimate legal rights' as defined in the Regulation EU/2016/679 and/or in national law.

We inform you that under the Regulation EU/2016/679 you have the rights to be informed about your personal data, access to, rectification and erasure, restrictions of process and objection to as provided by applicable regulation and national laws.

We acknowledge also to you, that you have the right to file a complaint to the national Data Protection Authority. For any further information regarding exercise of your personal data protection rights, you may contact the Data Protection Officer at FORTH at [dpo@admin.forth.gr](mailto:dpo@admin.forth.gr).

You have the right to withdraw your application and consent for the processing of your personal data at any time. We inform you that, in this case, FORTH shall destroy such documents and/or supporting documents submitted and shall delete the related personal data.

For FORTH/ICE-HT,  
Vasilis Burganos  
Director

