

10/02/2020



ESR3: PhD Student Position at Sorbonne Université within EU MSCA-ITN-ETN NewFrac

Where to apply

Application Deadline: 31/05/2020 00:00 - Europe/Brussels

Contact Details

Where to send your application.

COMPANY

Sorbonne Université

WEBSITE

<https://www.newfrac.eu/application-form>

Hiring/Funding Organisation/Institute

ORGANISATION/COMPANY

Sorbonne Université

COUNTRY

France

DEPARTMENT

Institut Jean Le Rond d'Alembert –
CNRS Paris UMR 7190

CITY

Paris

ORGANISATION TYPE

Higher Education Institute

POSTAL CODE

75005

WEBSITE

<https://www.sorbonne-universite.fr/>

ORGANISATION/COMPANY

Sorbonne Université

RESEARCH FIELDEngineering › Materials engineering
Engineering › Mechanical engineering**RESEARCHER PROFILE**

First Stage Researcher (R1)

APPLICATION DEADLINE

31/05/2020 00:00 - Europe/Brussels

LOCATION

France › Paris

TYPE OF CONTRACT

Temporary

JOB STATUS

Full-time

HOURS PER WEEK

35

OFFER STARTING DATE

01/11/2020

EU RESEARCH FRAMEWORK PROGRAMMEH2020 / Marie Skłodowska-Curie
Actions**REFERENCE NUMBER**

NEWFRAC

MARIE CURIE GRANT AGREEMENT NUMBER

861061

The Marie Skłodowska-Curie Innovative Training Network "**NEWFRAC**" (www.newfrac.eu) is a high-level training of a new generation of creative, entrepreneurial and innovative early-stage researchers (ESRs) through the development and engineering applications of a new modeling framework focused on the prediction and analysis of multi-field fracture phenomena in heterogeneous engineering systems at different scales. NEWFRAC in its mission of training students capable of solving the current problems of multi-field fracture phenomena in heterogeneous engineering systems, offers **13 PhD positions** for early stage researchers (**ESRs**) distributed in a network of 5 European countries (**France, Germany, Italy, Portugal and Spain**) and 2 countries associated (**Israel and Switzerland**), with the participation of prestigious academic and industrial institutions that will allow researchers to grow and develop their technical skills in a multisectoral environment.

Besides working on their project at their home institutions, the researchers will participate in network-wide training events like summer schools. Moreover, they will conduct secondments at other network partners combining academic and industrial experiences.

The following position and project is available at **Sorbone Université** in **Paris, France**:

ESR 3: *Fracture analysis of advanced layered ceramics*

Objectives: Advanced layered ceramics are extensively applied in different engineering fields with high economic and societal impacts ranging from biomedicine, automotive engineering, aeronautic and aerospace industries, electronics, and renewable energy systems. The principal aim of this ESR project will regard the consistent extension of both Phase Field approach and Finite Fracture Mechanics modeling as tools for predicting crack nucleation and growth in layered ceramics and thin films. This methodology will allow the robust analysis of the influence of flaws and grain sizes and will focus in particular on the role of residual stresses of various origins (thermal, chemical...) on the onset and growth of cracks. Since both methods rely on a characteristic length, which should interact with the already mentioned sizes, it is expected to provide plausible explanations for relationships between the microstructure and fracture properties at the macro-scale. Special attention will be paid to natural structures such as mother-of-pearl, which has exceptional fracture properties. Extensions to other materials with a different microstructure (amorphous: polymers, glass) could be considered. **For more information about this position please go to <https://www.newfrac.eu/phd-positions/esr3>**

Contract signing and incorporation dates are orientative and have yet to be defined. For **more information** about the call and application process visit www.newfrac.eu

ADDITIONAL INFORMATION

Benefits

A full-time fixed-term contract is offered. Marie Curie ITNs provide competitive financial support to the ESR including: a competitive monthly living and mobility allowance and salary, coverage of the expenses related to the participation of the ESR in research and training activities (contribution to research-related costs, meetings, conference attendance, training actions, etc.). The recruited researchers will have a regular contract with the same rights and obligations as any other staff member of the institution.

Eligibility criteria

Applicants must at the time of recruitment: **1)** Be in the first four years (full-time equivalent) of their research careers. The four years start to count from the date when a researcher obtained the degree (e.g. Master's degree) which would formally entitle him/her to embark on a doctorate.

2) Candidates could be of any nationality but have not resided in the host country for more than 12 months in the last 3 years **3)** Have NOT been awarded a doctoral degree.

Selection process

Applicants are evaluated by a selection committee on the basis of past academic performance (grades) and background, scientific relevance and aptitude to research, and any other additional pertinent data submitted in the application (such as scientific publications, if any). The candidates that pass the initial assessment of the applications will be invited for an interview with the selection committee, either in person at the campus, or via standard internet videoconference. Equal opportunities are ensured to all candidates throughout the evaluation process.

REQUIREMENTS

Offer Requirements

REQUIRED EDUCATION LEVEL

Engineering: Master Degree or equivalent

REQUIRED LANGUAGES

ENGLISH: Excellent

Skills/Qualifications

- Master's degree in Mechanical/Aeronautical/Civil Engineering/ Physics/ Applied Mathematics, **earned before September 2020**
- Excellent undergraduated and Master's degree grades
- High level of written and spoken English
- Teamwork ability

Specific Requirements

- Focus on Computational Solid Mechanics and Fracture Mechanics

Map Information



Job Work Location



Personal Assistance locations

WORK LOCATION(S)

1 position(s) available at

Sorbone Université

France

Paris

4, Place Jussieu

EURAXESS offer ID: 491111

Disclaimer:

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