

## **Expression of Interest for hosting a research FEA engineer at TVP Solar SA – Geneva, Switzerland**

We are looking for a PhD holder who considers applying for the Marie Curie Individual Fellowship 2020 call (deadline 09 September 2020). The selected candidate will receive support from our innovation funding manager to prepare and submit the proposal.

## **FEA engineer for the design of next-gen high vacuum solar thermal panels**

Finite element analysis (FEA) support all aspects of high vacuum solar thermal panel structural designing. They ensure that the structure designs and models are developed accordingly and tested under specified test condition. It is the FEA engineer responsibility to make sure that the developed model meets all essential standards and regulations.

### **Key responsibilities**

The FEA engineer responsibilities comprise structural designing, development, and testing of finite element models designed for engineering purposes. He/she verifies the structured models and validates its representation of structural behaviour. He/she also must determine the internal stress and extract interface load of the models, especially near the structural joints. Along with this, he/she also must monitor other engineering activities and provide technical solution based on analysis results for developing an optimal design.

The key responsibilities comprise:

- Creating finite element models for: structural, thermal, electro-magnetic and multi-physics analysis.
- Creating 3D CAD models of various mechanical parts based on the analysis results.
- Interpreting analysis with respect to experimental results obtained by lab testing procedures, converting these results into practical design templates and providing support to designing and certification activities.
- Writing reports for summarizing the analysis results and reviewing all project-related results for ensuring the accuracy of such reports.
- Accelerating product development processes for meeting customer requirements.

### **Required qualifications and skills**

The basic qualification required to be eligible for obtaining this job is a graduate / postgraduate degree in mechanical engineering, mathematical engineering, or other relevant degree in the field of FEA, plus a PhD degree. Apart from this, the candidate also needs to have some relevant experience in lab testing procedures. Candidates with experience in product development process are preferred.

Along with required educational qualification and professional expertise, one should also possess certain skills that are essential in the field of engineering. The skills comprise:

- Significant experience in using FEA tools like Ansys, Fluent and COMSOL.
- Good knowledge of engineering tools like, MATLAB, MathCAD, Excel, etc.
- Knowledge of Pro-E
- Knowledge of advanced FEA skills like transient, fatigue, and non-linear analysis
- Knowledge in technical writing for writing test plans and reports
- Organizational and time management skills
- Ability to work solitary or in a team

### **Additional eligibility criteria of the applicants**

- Meet the eligibility requirements for the MSCA-IF fellowships
- English language proficiency (written and oral) is mandatory

### **About TVP Solar SA (Host Institution)**

TVP Solar S.A. ([www.tvpsolar.com](http://www.tvpsolar.com)) is an award-winning Swiss SME which designs, develops, manufactures and markets innovative high-vacuum mirrorless solar thermal collectors. TVP's super-performing flat panels are based on patented technology (10 patent families; 165 patents granted) and are SolarKeyMark certified to deliver heat at temperatures up to 200C. Our technology is a game-changer for the thermal industry, establishing solar as a new paradigm in energy supply, beating liquid fuels with a cheaper, carbon-free alternative. In volume production since 2017 TVP's solar systems have been installed across 9 countries and 3 continents under pilot and demonstration projects.

**Applications:** Candidates should send a CV to Vittorio Palmieri, CTO; [palmieri@tvpsolar.com](mailto:palmieri@tvpsolar.com)

**Deadline for receiving applications:** 03 August 2020