

# Fire engineering position at CERTEC-UPC-BarcelonaTech

## FDS modeller for EU-funded project WUIVIEW

### *Wildland-Urban Interface Virtual Essays Workbench*

#### **The WUIVIEW project**

The WUIVIEW Project is an Action funded by European Commission's Union Civil Protection Mechanism (Prevention Projects in Civil Protection) 2018 Call - ECHO (Agreement Nº ECHO/2018/826522). ([www.wuiview.org](http://www.wuiview.org))

WUIVIEW is developed by the Consortium led by the Technical University of Catalonia (UPC) with the participation of Association for the Development of Industrial Aerodynamics (ADAI - Portugal), Laboratory of Industrial Environment Engineering (ARMINES - France), Pau Costa Foundation (PCF - Spain), Research Institutes of Sweden (RISE - Sweden) and University of Bologna (UNIBO - Italy).

The main aim of WUIVIEW project is to design, setup, test and operate a virtual workbench service for the performance-based analysis of fire environments in the surroundings of buildings at the wildland-urban interface. In line with the objectives of the Union's Civil Protection Mechanism and the present Call for proposals, the WUIVIEW action will develop and innovative risk management tool that will help WUI communities adapting to face the new generation of forest fires that have already arisen due to climate change. Once implemented, WUIVIEW will become a powerful platform to perform essays and simulation studies dealing with structures survivability, sheltering assessment, building subsystems hazard testing and fire protection systems evaluation. The development of the system will improve knowledge base on microscale fuels fire hazards and on building systems and materials vulnerability, which will be of help to develop better policies and standards to prevent WUI disasters.

#### **Position Summary**

The successful candidate will be responsible of analysing building systems survivability exposed to a WUI fire environment using FDS software. Main tasks will be designing, setting and analysing fire impact on building systems from burning residential fuels. Fire safety will be assessed following a performance-based approach. Guidelines, performance criteria and scenarios should be defined within the WUIVIEW working program.

#### **Required qualifications**

- University Degree in Fire Protection, Mechanical Engineering, Chemical Engineering, Civil Engineering, Architecture, Physics or other related technology discipline. Master's Degree within the field of fire engineering and PhD will be acknowledged.

- Demonstrated ability with FDS fire simulation tool.
- Demonstrated ability with engineering/scientific programming platforms (e.g. Matlab, Python, etc.).
- Demonstrated ability to maintain engineering based academic and applied knowledge and skills.
- Ability to collaborate with peers, and work directly with Research Engineers, Scientists and other team members.
- Excellent verbal and written English communication skills. Spanish will be also acknowledged.
- Self-starter, quick learner, and eager to be hands-on.
- European citizenship

### Starting date and salary

The candidate is offered a 2 years full-time position. Salary depending on applicant profile (graduate, master or PhD). Immediate hiring.

### Host research Centre: CERTEC at UPC-BarcelonaTech

The Universitat Politècnica de Catalunya· BarcelonaTech (UPC) [www.upc.edu](http://www.upc.edu) is a public institution dedicated to higher education and research, specialised in the fields of engineering, architecture and science. The activity that goes on at UPC campuses and schools has made the University a benchmark institution. The University harnesses the potential of basic and applied research, and transfers technology and knowledge to society. These actions make the UPC—in partnership with industry—an agent and driver of economic and social change. The UPC puts its scientific and technological infrastructure at the service of research groups and centres, researchers and students, professionals, companies and institutions.

The successful candidate will work at CERTEC (Center for Technological Risk Studies, [www.certec.upc.es](http://www.certec.upc.es)) located at the brand-new Diagonal Besòs Campus at Barcelona. The group exists of an enthusiastic, diverse and creative team, including scientific tenured staff members (full and associate professors), Post-Doc Research scientists, PhD and MS candidates and undergraduate students.

### Contact

Those interested please, send a letter of application and a CV to:

Prof. Elsa Pastor ([elsa.pastor@upc.edu](mailto:elsa.pastor@upc.edu)) and Prof. Eulàlia Planas ([eulalia.planas@upc.edu](mailto:eulalia.planas@upc.edu))

Barcelona, April 2019