



2022-IPR-E1-FGIV-020870

**FG IV - Scientific Project Officer – Coastal Flood Modelling**

**POSITION FOR:**

Member of the contract staff FG IV – art. 3b of the Conditions of Employment of Other Servants

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1962R0031:20110101:EN:PDF>

**WE ARE:**

As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.

The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: <https://ec.europa.eu/jrc/>

The current vacancy is in the Disaster Risk Management Unit of the Directorate for Space, Security and Migration which provides scientific and technical support to EU policies addressing global security and crisis management.

Coastal flood risk assessment is crucial in mitigating and adapting to sea level rise and climate change driven extreme events. Near real time, dynamic analysis of compound flooding will provide valuable information to emergency response decision makers while long term forecasting capabilities will inform prevention and risk mitigation.

The JRC has been developing a global-to-local coastal/compound flood hazard and risk assessment workflow in order to support the evolution of the Copernicus Emergency Management Service. It is based on open-source software and is supported by a community of researchers representing various organisations.

**WE PROPOSE:**

A position as contract agent/modeller that will contribute to the continuous research and development of the coastal/compound flood hazard and risk assessment. Primarily s/he will contribute to the evolution of the current workflow including integration/optimization of numerical solvers, compound coastal inundation studies and exposure/impact evaluation. s/he will be part of the team that is responsible for policy support in the field of flood risk management as well as the management and further evolution of the Copernicus Emergency Management Service.

Main tasks will include:

- Further improve the coastal flood component (e.g. improvements in the hydrodynamic model and workflow), address shortcomings (e.g. lack of data) and develop new approaches (e.g. usage of machine learning)
- Contribute to open source and community supported development.
- Contribute to the assessment of the impacts of climate change on future coastal flood risk in Europe and globally.
- Contribute to the scientific output through peer reviewed publications

**WE LOOK FOR:**

The ideal candidate has a university degree (M.Sc. or comparable) in a relevant scientific area (atmospheric/geo/hydrodynamic/natural sciences, environmental engineering) together with a minimum of 3 years of research experience or a PhD in the relevant scientific area.

The following skills are essential:

- Advanced experience in using unstructured mesh hydrodynamic models (e.g. SCHISM, ADCIRC, MPAS-Ocean, D-FLOW FM, etc.);
- Experience in geophysical numerical modelling;

- Experience in code management, e.g git, conda, Jupyter, Docker, etc.;
- Experience in handling and analysing large-scale spatially distributed datasets;
- Excellent programming skills, in particular Python.

The candidate should have a proven track record of peer reviewed scientific publications.

Any of the following skills are an advantage:

Experience in statistical analysis and time-series analysis

- Basic experience in machine learning methods and its applications
- Experience in remote sensing

Personal attributes:

- Good communication skills (verbal and written) in English (minimum B2)
- Good interpersonal skills with demonstrated ability to work in a team and be willing to learn and adapt to new tasks
- Ability to work to deadlines and pay attention to detail even under time pressure

**INDICATIVE CONTRACT’S DURATION:**

36 months initial contract with possible renewals up to maximum 6 years.

**PLACE OF WORK:**

Ispra (IT)

**RULES AND ELIGIBILITY:**

To be eligible for the position, the candidate must be on a valid EPSO reserve list for Function Group IV contract staff.

You can be added to an EPSO reserve list if you complete successfully an EPSO selection procedure.

Candidates who are on a valid EPSO reserve list or have applied to an EPSO selection procedure can apply to this specific position through <http://recruitment.jrc.ec.europa.eu/?type=AX>.

**How to apply to an EPSO selection procedure?**

Apply either to the permanent EPSO call (CAST Permanent) [https://epso.europa.eu/documents/2240\\_en](https://epso.europa.eu/documents/2240_en) or a specialised call for researchers <https://ec.europa.eu/jrc/en/working-with-us/jobs/vacancies/function-group-IV-researchers>

The CAST Permanent reserve list is used by a wide range of organisations (institutions, bodies, offices and agencies of the European Union), whereas the specialised reserve list for researchers (JRC Call COM/1/2015/GFIV – Research) is mainly used by the JRC.

**RECRUITMENT POLICY:**

The JRC

- Cultivates a workplace based on respect for other people and the environment.
- Embraces non-discriminatory practices and equality of opportunity. In case of equal merit, preference will be given to the gender in minority.