



European weather Extremes: Drivers, Predictability and Impacts

Guide for Applicants

This document provides information on the application process and assessment procedure for prospective Ph.D. candidates within EDIPI (hereafter referred to as ESRs, or Early-Stage Researchers). Please visit the website www.edipi-itn.eu for more information on the project and the available positions. The EDIPI network had made every effort to ensure that the information provided in this document is accurate, but provides no explicit nor implicit warranty as to its correctness.



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Introduction

EDIPI (european weather Extremes: Drivers, Predictability and Impacts) is an Innovative Training Network (ITN) supported by the European Commission through the Horizon 2020 Marie Skłodowska-Curie Action programme, providing 14 Ph.D. positions for Early-Stage Researchers (ESRs).

The recruitment process is conducted in an open, efficient, transparent, impartial, equitable, merit-based and internationally comparable way, according to the [European Charter and Code of Conduct for the Recruitment of Researchers](#) (Annex, Section 2).

About EDIPI

EDIPI is an international consortium of universities, research centres and private companies aiming to further our holistic understanding of temperature, precipitation and surface wind extremes over Europe and the Mediterranean.

Weather-related natural disasters exact a heavy socio-economic toll on humankind. Moreover, the number and cost of natural disasters in the new millennium have systematically exceeded the levels seen in the 1990s, and anthropogenic climate change may further aggravate the situation. This has led to a growing scientific and societal awareness of the importance of understanding extreme weather, mirrored in European and global policy. The European Commission recognises climate change, including changes in the frequency and characteristics of extreme events, as a transnational problem. Similarly, the United Nation's World Climate Research Programme has listed understanding current and future weather extremes as a grand challenge of climate science.

EDIPI is a timely effort to enhance our ability to face present and future weather extremes. To provide focussed results, the bulk of the project will address temperature (including heat and cold stress), precipitation (including drought) and surface wind extremes over Europe and the Mediterranean. These are high-impact events, which affect a densely populated and economically highly productive region. The three overarching scientific questions we will tackle are: 1) Why does a specific type of weather extreme occur? 2) How can we use this knowledge to better predict when it will occur? and, 3) What are the likely impacts once it does occur?

In parallel with scientific excellence, EDIPI seeks to train a cohort of early-career *Weather Extreme Experts*, who combine a physical understanding of high-impact weather extremes with a practical knowledge of predictability tools and an appreciation of user-relevant information required by the private sector.

Participating Host Organisations

The selected ESRs will enroll in 14 Ph.D. positions offered by the 9 host organization part of the EDIPI Network.

- Uppsala University (Sweden, coordinator)
- Stockholm University (Sweden)
- CNRS (France)
- Tel Aviv University (Israel)
- Karlsruhe Institute of Technology (Germany)
- The Royal Meteorological Institute (Belgium)
- Barcelona Institute for Global Health (Spain)
- ETH Zürich (Switzerland)
- Imperial College London (U. K.)

Why apply for an ESR position with EDIPI?

ITNs are financially supported by the European Commission because they provide excellent research, training and career aspects. As an ESR in the EDIPI network:

- You will work in a **stimulating and creative learning environment** and in an **interdisciplinary** research training programme.
- You can immediately move forward with your **individual career** via training towards goals set in a Personal Career Development Plan.
- You will acquire experience in **transdisciplinarity** through targeted secondments to operational weather forecasting centres, research centres, prestigious universities and world-leading private companies active in the field of insurance, reinsurance and catastrophe modelling.
- You will have the once-in-a-lifetime opportunity to acquire **a unique skill set**, as well as build and extend your **international network** to develop your professional career.
- You will have the opportunity to acquire outstanding **complementary training in transferable skills** (e.g. presentation techniques, networking, publishing, and outreach) as well as leadership, innovation and entrepreneurial skills.
- You will be advised by **group of leading researchers and professionals in the field of weather extremes**.

Available Positions

EDIPI will offer 14 Ph.D. positions. These will be advertised by the individual host organisations and through the EDIPI website between December 2020 and April 2021, for a start in September 2021, with some flexibility. Further details on individual Ph.D. projects are available at: <https://edipi-itn.eu/about-us/>

1. **Long-range predictability of heat waves under Global Change** (Host: Uppsala University)
2. **Explosive cyclone intensification in the North Atlantic driving European windstorms** (Host: Stockholm University)
3. **Air-sea interactions controlling atmospheric rivers and European wet and windy extremes** (Host: Uppsala University)
4. **Machine learning and rare event algorithm approach to the study of extreme heat waves and storms** (Host: CNRS Lyon)
5. **The Gulf Stream as a modulator of atmospheric blocking and European temperature extremes** (Host: Imperial College London)
6. **Precursors and dynamics of atmospheric blocking leading to European temperature extremes** (Host: CNRS Paris)
7. **Merged Atlantic and African jets: from instanton theory to predictability of temperature and precipitation extremes** (Host: Tel Aviv University)
8. **An investigation of extreme climate instabilities with an application to windstorm predictability** (Host: The Royal Meteorological Institute)
9. **Changes in the dynamics and predictability of explosive North Atlantic cyclones under anthropogenic forcing** (Host: CNRS Paris)
10. **Impacts-based forecasting of droughts** (Host: Uppsala University)
11. **Exposure and vulnerability to dry/hot and humid/hot extreme events in a changing climate** (Host: ETH Zürich)
12. **Changing cumulative risks from extreme windstorms in a changing climate** (Host: Karlsruhe Institute of Technology)
13. **Integrated Digital Data Streams for Predicting Health Outcomes of European Temperature Extremes** (Host: Barcelona Institute for Global Health)
14. **Impacts of extreme weather on the agricultural sector** (Host: Karlsruhe Institute of Technology)

Who can apply?

To apply for an ITN, candidates must fulfill all eligibility criteria and mobility rules set by the European Commission. If you do **not meet all criteria**, you cannot apply.

Eligibility Criteria and Mobility Rules for Researchers in an [MSCA ITN-ETN](#)

1. **ITN-supported researchers may be of any nationality.** Suitable candidates from all over the globe are invited to apply.
2. **ITN-supported researchers must be early-stage researchers (ESRs)**, i.e. at the date of recruitment they must be in the first four years (full-time equivalent) of their research careers and have not been awarded a doctoral degree. *'Full-time equivalent research experience' is measured from the date when the researcher obtained the degree entitling him/her to embark on a doctorate (either in the country in which the degree was obtained or in the country in which the researcher is recruited or seconded) – even if a doctorate was never started or envisaged.'*
3. **ITN-supported researchers must comply with the mobility rules**, which stipulates that “researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting beneficiary for more than 12 months in the 3 years immediately before the recruitment date”. *'Date of recruitment' means the first day of employment of the researcher for the purposes of the action (i.e. the starting date indicated in the employment contract/equivalent direct contract).'* Compulsory national service, short stays such as holidays and time spent as part of a procedure for obtaining refugee status under the Geneva Convention are not taken into account.

Only complete applications from candidates who fulfill the above-mentioned requirements and that have been submitted before the application deadline stated in the individual advertisements will be considered eligible. The eligible candidates will be ranked according to the procedure described in the “Selection Procedure” section below. Please consult carefully the relevant advertisement for each ESR position for a full list of required and desired criteria.

Employment Conditions

Selected candidates will be full-time employed for 36-48 months (the duration will follow national regulations). EDIPI will fund 36 months of employment; longer contracts will be co-funded by the Host Organisation and specific terms may apply to the period beyond the EDIPI timeline. Within EDIPI, the selected candidates will receive a salary in accordance with the MSCA regulations for ESRs. The basic gross salary (living allowance) is €3,270 per month. A correction factor will be applied per country (as specified in the [H2020 Work Programme](#), pg. 94, Table 2). Consider that the net salary will be lower than the gross amount due to taxes, social benefit premiums etc. In addition to the living allowance, selected candidates will benefit from a mobility allowance of €600 per month, and a family allowance of €500. These amounts (living allowance, mobility allowance, family allowance) are defined by the EU. All details of financial aspects can be found in the [H2020 Programme – Guide for Applicants \(pp. 27-29\)](#).

Indicative Timeline

Dec '20 to April '21	Opening of the calls by the Host Organisations
June '21	Selection of all candidates completed
September '21	All successful candidates have begun their Ph. D.

Applying for the Positions

The details of the application procedure will be determined by the individual Host Organisations, in compliance with national and H2020 guidelines. All applications should be submitted through the portals of the individual organisations.

Selection Procedure

Candidates that comply with all eligibility criteria will be ranked by the selection committees based on:

1. Scientific background and merits at the time of the application.
2. Past activities relevant to the project and evidence of interest in the latter.

These two points will be evaluated against the required and desired criteria stated in the individual advertisements. Based on this evaluation, a shortlist of candidates for each position will be drawn. The selection commissions will obtain references for the shortlisted candidates and will conduct VOIP/phone interviews with these candidates. All interviews for each position will be conducted along a jointly established structure to ensure a fair and equitable selection.

Successful candidates will be contacted and offered a Ph.D. position. All hired ESRs will be registered at their respective Host Organisations. For non-academic Host Organisations, the ESRs shall be registered by the partner universities specified in the EDIPI Grant Agreement.

Further information

For further information, please contact:

- EDIPI Coordinator: Dr. Gabriele Messori (gabriele.messori@geo.uu.se)
- ESRs supervisors: contact details available at <https://edipi-itn.eu/contact-us/>