Hosting offer for Marie Sklodowska-Curie Postdoctoral Fellowships (PF) 2022 at University of Antwerp/Plants and Ecosystems Research Group/ Centre of Excellence Global Change Ecology

MSCA Postdoctoral Fellowships are individual research grants offering excellent postdoctoral researchers the chance to develop their skills by means of international mobility. Through the implementation of an original and personalised research project, MSCA Postdoctoral Fellowships aim to foster excellence through training and mobility and to equip researchers with new skills and competences in order to identify solutions to current and future challenges.

The Global Change Ecology Centre of University of Antwerp invites motivated postdoctoral researchers to jointly prepare an application for the MSCA-PF-2022 call Marie Skłodowska-Curie Postdoctoral Fellowships call (MSCA-PF-2022) with them as host organisation.

Description of Hosting organisation/group

The PLECO research group (part of the Global Change Ecology Excellence Centre) performs studies that improve our fundamental understanding of the **impact of global changes on plants and ecosystems** at different hierarchical levels of organisation so that we can simulate and predict their responses under future conditions, and develop **nature-based pathways for adaptation and mitigation**. PLECO aims to conduct excellent research that makes a difference to our field at the international level, and maximize the impact of our work by providing excellent training and teaching and by realizing efficient and effective outreach to peers and to society.

The PLECO research team has large experience with hosting Marie Curie Fellows, having hosted at least one successful MSCA postdoc in each of the last 5 years. It also coordinates a large multi-host MSCA ITN doctoral network. **We have all the crucial experience therefore to make your research stay at University of Antwerp a success**. The PLECO research team is partner in two major European ESFRI infrastructures: AnaEE (Analysis and Experimentation on Ecosystems) and ICOS (Integrated Carbon Observation System), and has key state-of-the-art ecology lab facilities available.

www.uantwerpen.be/pleco and www.uantwerpen.be/gce

Twitter: GCE

Topics/expertise

We welcome candidates interested in following topics:

The agro-ecological transition: Against a background of increasing climate-induced yield losses, science is challenged to make agriculture more sustainable: greater climate robustness against drought and heat, less fertilizer and pesticides input, more carbon storage, greater soil health and biodiversity. Topics will be developed in the context of AnaEE. Supervisors: Prof. Ivan Nijs and Dr. Hans De Boeck

The importance of micro-climate in the ability of organisms (with a focus on plants and soil microbiota) to cope with climate change induced temperature increases. PLECO leads an international network of +35000 soil micro-climate sensors (temperature and soil moisture), SOILTEMP. This allows for unique embedment of micro-climate research questions in an international context. Supervisor: Prof. Ivan Nijs and Dr. Jonas Lembrechts.

Enhanced weathering as a negative emission technique (NET). Nature-based solutions that focus on active carbon sequestration are key to achieving the Paris Climate targets. PLECO performs world-leading research on enhanced silicate weathering in terrestrial ecosystem soils as a NET. We welcome research topics that focus on interactions between EW and ecosystem functioning, with a particular focus on accurate verification methods and interactions with soil microbiota. Prof. Erik Verbruggen en Prof. Sara Vicca

Big data in forest ecosystem functioning assessment. PLECO runs one of the longest-running ICOS forest observation systems, with 20+ years of ecosystem scale flux towers assessments of ecosystem respiration and carbon sequestration. We are currently developing a new drone system to combine these ecosystem observations with real-time tree-level scale observations of tree functioning though hyperspectral imaging. We welcome candidates with specific interest in the use of big data to assess ecosystem functioning. Prof. Ivan Janssens

Shifting forest ecosystem seasonality: Phenology, or the seasonality of ecosystem processes, is a prime example of key ecosystem process impacted by climate change, and of natural adaptation of organisms to these changes. However, if one seasonal process shifts due to climate change, this does not necessarily mean that other seasonal processes can just adapt and shift in the same manner. Similarly, if one species adapts better than other species , it may become more competitive, resulting in community shifts that may cascade into altered functioning of the whole ecosystem. We welcome candidates interested in phenology of temperate deciduous forests (e.g. leaves, wood, fine roots), in particular on (i) fundamental drivers of phenology (e.g. climatic and non-climatic), (ii) temporal and spatial patterns at large scale and (iii) phenology interaction of trees and birds at regional level. Prof. Matteo Campioli

Your profile

- You must have a completed PhD in biology, bio-engineering, environmental sciences at the time of the call deadline (14 September 2022). We also welcome welcome candidates with a PhD in other specializations, as long as sufficient experience with key skills can be proven.
- Candidates must have a maximum of 8 years full-time research experience from the PhD award date until September 14, 2022. Periods of inactivity in research (e.g. unemployment, periods of employment outside research, parental or sick leave) do not count towards the time of research experience.
- For European fellowships, candidates can be of any nationality and must not have resided or carried out their main activity (work, studies, etc.) in Belgium for more than 12 months in the 36 months immediately before September 14, 2022.
- Highly motivated candidate with an excellent research track record appropriate to career stage, as evidenced by academic publications and other scientific output.

What we offer

- Support and guidance for the preparation of your MSCA PF proposal
- A stimulating, interdisciplinary environment for high-level research.

How to apply?

Indicate your interest by contacting the host institution as follows:

Please contact eric.struyf@uantwerpen.be by e-mail with a short CV and motivation to indicate your interest to prepare a MSCA-PF application.

After the supervisor agrees to support you as a MSCA-PF candidate, you can start preparation of MSCA PF project proposal and will be supported further by the supervisor and the Research Support Office of the host university.

For more information on the MSCA PF scheme or the host institution, you can contact the MSCA coordinator of the University of Antwerp: Dr. Liesbet Cockx (Research, Innovation & Valorisation Antwerp, Grants Office): Liesbet.cockx@uantwerpen.be

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