

# C-CASCADES

a Marie Curie Innovative Training Network



## 15 Early-Stage Researchers (Positions within the C-CASCADES project) EU Marie Skłodowska-Curie Actions - Innovative Training Network (ITN) European Training Network (ETN)

**C-CASCADES** is seeking to employ 15 Early-Stage Researchers (ESR)<sup>1</sup> to contribute to a breakthrough in the understanding of the transfer of carbon between land and ocean at the planetary scale and its consequences for atmospheric CO<sub>2</sub> and climate. Research undertaken by the ESRs will permit the characterization of the transport, transformation and ultimate fate of carbon in rivers, lakes and coastal waters and their representation in Earth System Models. This will allow a better quantification of the fluxes of greenhouse gases exchanged with the atmosphere and their impacts on the climate system. The closely related training objective is to engage the next generation of Earth system scientists in an integrated, cutting-edge and highly relevant joint research programme. The research undertaken will capture technological innovation in sensor development; advance mechanistic understanding of the carbon transformations that occur during the lateral transfer between land and ocean; embed this understanding in enhanced catchment, regional and global-scale models; and, assess quantitatively the carbon transfer fluxes and carbon transformations along the land to ocean aquatic continuum at the global scale, from terrestrial ecosystems to the open ocean via rivers, lakes and coastal waters.

**C-CASCADES** includes a comprehensive European-wide training compulsory for all ESRs. Each ESR will perform original research at its host institution, secondment at project partner institutions, and network-wide training (summer school, training workshops and mini-conferences).

All ESR positions are full-time and funded for 3 years at competitive rates. Each ESR will receive a living allowance (gross EU contribution) of 3110 euros/month (multiplied by a country correction factor), plus a mobility allowance (600 euros/month) and, if eligible, a family allowance of up to 500 euros/month. The starting date is negotiable, but expected during spring-summer 2015. The ESR positions are subject to strict eligibility rules. Applicants can be of any nationality and must hold a Master degree. At the time of recruitment, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their primary host institution for more than 12 months in the 3 years immediately prior to the reference date.

Applicants are asked to apply directly to the host institution, NOT to the C-CASCADES project manager. Candidates are allowed to apply to more than one position. However, if they do, we ask that they inform each primary host concerned, by listing all the ESR positions they are applying to. Application should include a CV, transcripts of all university courses with grades, a copy of their university degree, a cover letter motivating their interest for this position and up to 3 name(s) of reference persons.

For further information about C-CASCADES, check our website (<http://c-cascades.ulb.ac.be/>). For general enquiries about the project, please contact our administrative support: [l.a.connect@icloud.com](mailto:l.a.connect@icloud.com)

<sup>1</sup> **Early-Stage Researchers (ESRs)** are, at the time of recruitment by the host organization, in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree. (Definition provided in the Guide for Applicants, Marie Skłodowska-Curie Actions, page 4)

## List of ESR projects

### WP1 Process Understanding: Technical development, observations and experiments

#### 1.1 Optimization and adaptation of sensors for CO<sub>2</sub>, CH<sub>4</sub> and O<sub>2</sub> across the full river-ocean mixing regime

Primary host: CONTROS, Secondary hosts: GEOMAR, ETH Zurich.

Please contact P. Fietzek ([p.fietzek@contros.eu](mailto:p.fietzek@contros.eu)) or A. Körtzinger ([akoertzinger@geomar.de](mailto:akoertzinger@geomar.de)) for more information, send application documents to [careers@contros.eu](mailto:careers@contros.eu)

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp1#WP1-1>

#### 1.2 Temporal variations of greenhouse gas fluxes (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O) from headwaters to downstream water systems

Primary host: EPF Lausanne, Secondary hosts: CONTROS, Univ. Uppsala.

Please contact T. Battin for more information ([tom.battin@epfl.ch](mailto:tom.battin@epfl.ch)), send application documents to [tania.gonin@epfl.ch](mailto:tania.gonin@epfl.ch)

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp1#WP1-2>

#### 1.3 Particulate organic carbon dynamics along the land ocean aquatic continuum

Primary host: Univ. Exeter, Secondary hosts: Univ. Uppsala.

Please contact T. Quine ([T.A.Quine@exeter.ac.uk](mailto:T.A.Quine@exeter.ac.uk)) for more information, send application documents with subject line C-CASCADES to [cles-studentships@exeter.ac.uk](mailto:cles-studentships@exeter.ac.uk)

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp1#WP1-3>

#### 1.4 Influence of organic carbon quality changes on greenhouse gas emissions from inland waters

Primary host: Univ. Uppsala, Secondary hosts: EPF Lausanne.

Please contact G. Weyhenmeyer ([Gesa.Weyhenmeyer@ebc.uu.se](mailto:Gesa.Weyhenmeyer@ebc.uu.se)) for more information, send application documents online to <http://www.uu.se/en/about-uu/join-us/details/?positionId=57261>

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp1#WP1-4>

#### 1.5 Organic carbon pathways in the Seine River system

Primary host: Institut Pierre-Simon Laplace, Secondary hosts: Veolia Water.

Please contact J. Garnier ([josette.garnier@upmc.fr](mailto:josette.garnier@upmc.fr)) for more information, send application documents to [josette.garnier@upmc.fr](mailto:josette.garnier@upmc.fr) and [vincent.thieu@upmc.fr](mailto:vincent.thieu@upmc.fr)

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp1#WP1-5>

### WP2 Regional scale applications: benchmark studies on hotspot areas

#### 2.1 The role of deltas as carbon sinks and sources – a study of the Danube

Primary host: ETH Zurich, Secondary hosts: EPF Lausanne.

Please contact B. Wehrli ([Bernhard.Wehrli@eawag.ch](mailto:Bernhard.Wehrli@eawag.ch)) for more information, send application documents to [Luzia.Fuchs@eawag.ch](mailto:Luzia.Fuchs@eawag.ch)

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp2#WP2-1>

#### 2.2 Catchment / continent scale model for organic carbon and particle dynamics in Malaysia and Europe including the Arctic section

Primary host: DELTARES, Secondary hosts: Institut Pierre-Simon Laplace.

Please contact J. van Gils ([Jos.vanGils@deltares.nl](mailto:Jos.vanGils@deltares.nl)) for more information. For applying for this position, please consult this page: <http://www.deltares.nl/en/working-for/vacancies>

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp2#WP2-2>

### 2.3 The imprint of the Amazon river system on the Atlantic carbon cycle

Primary host: ETH Zurich, Secondary hosts: Max Planck Institute Meteorology.

Please contact N. Gruber ([nicolas.gruber@env.ethz.ch](mailto:nicolas.gruber@env.ethz.ch)) for more information, send application documents online through ETH Recline <https://pub.refline.ch/845721/3750/++publications++/1/index.html>

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp2#WP2-3>

### 2.4 The effects of riverine delivery of nutrients and carbon on the biogeochemistry of the Arctic ocean under future climate change

Primary host: Institut Pierre-Simon Laplace, Secondary hosts: Univ. Brussels.

Please contact J. Orr ([James.Orr@lsce.ipsl.fr](mailto:James.Orr@lsce.ipsl.fr)) for more information, send application documents to [James.Orr@lsce.ipsl.fr](mailto:James.Orr@lsce.ipsl.fr)

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp2#WP2-4>

### 2.5 The role of Arctic Sub-sea permafrost in the carbon cycle

Primary host: Max Planck Institute Meteorology, Secondary hosts: Univ. Bristol.

Please contact V. Brovkin ([victor.brovkin@mpimet.mpg.de](mailto:victor.brovkin@mpimet.mpg.de)) for more information

For applying for the position, please consult this page:

<http://www.mpimet.mpg.de/en/institute/opportunities.html>

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp2#WP2-5>

## WP3 Global scale modeling and feedbacks on Earth system processes

### 3.1 Reservoir and lake effect on carbon fluxes through the land ocean aquatic continuum

Primary host: Univ. Brussels, Secondary hosts: Univ. Exeter, Univ. Uppsala, Global Carbon Project.

Please contact P. Regnier ([l.a.connect@icloud.com](mailto:l.a.connect@icloud.com)) for more information, send application documents to [l.a.connect@icloud.com](mailto:l.a.connect@icloud.com)

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp3#WP3-1>

### 3.2 Carbon burial, benthic-pelagic coupling and feedbacks on the global carbon cycle

Primary host: Univ. Bristol, Secondary hosts: ETH Zurich.

Please contact S. Arndt ([S.Arndt@bristol.ac.uk](mailto:S.Arndt@bristol.ac.uk)) for more information, send application documents to [S.Arndt@bristol.ac.uk](mailto:S.Arndt@bristol.ac.uk)

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp3#WP3-2>

### 3.3 Representation of lateral transfer of Dissolved Organic Carbon (DOC) from land to the river system in JULES.

Primary host: Univ. Exeter, Secondary hosts: Institut Pierre-Simon Laplace.

Please contact P. Friedlingstein ([P.Friedlingstein@exeter.ac.uk](mailto:P.Friedlingstein@exeter.ac.uk)) for more information, send application documents to Linda McIlwraith [L.McIlwraith@exeter.ac.uk](mailto:L.McIlwraith@exeter.ac.uk)

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp3#WP3-3>

### 3.4 Modeling dissolved organic carbon river transport at global scale in the ORCHIDEE process based land surface model, from soils emissions to estuaries

Primary host: Institut Pierre-Simon Laplace, Secondary hosts: Univ. Brussels.

Please contact P. Ciais ([philippe.ciais@lsce.ipsl.fr](mailto:philippe.ciais@lsce.ipsl.fr)) for more information, send application documents to [philippe.ciais@lsce.ipsl.fr](mailto:philippe.ciais@lsce.ipsl.fr)

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp3#WP3-4>

### 3.5 Global and regional contribution of riverine fluxes to ocean carbon and nutrient cycling

Primary host: Max Planck Institute Meteorology, Secondary hosts: DELTARES.

Please contact T. Ilyina ([tatiana.ilyina@mpimet.mpg.de](mailto:tatiana.ilyina@mpimet.mpg.de)) for more information

For applying for the position, please consult this page:

<http://www.mpimet.mpg.de/en/institute/opportunities.html>

Project description: <http://c-cascades.ulb.ac.be/index.php/join-us-wp3#WP3-5>

