

PACIENT

RESPECTFUL

MARIA CALDERÓ PASCUAL

TEAM WORK

COMPETENT

PUNCTUAL

COMMITTED

ORGANISED

NATURAL

PERFECTIONIST

CURIOUS

MULTIDISCIPLINARY

CREATIVE

INITIATIVE

RESPONSIBLE

DEDICATED



...and what counts is the effort of the day-to-day!

**2021**

Calderó-Pascual et al. in revision  
(Hydrobiologia)

Champion of ZooSize project  
(Global Lake Ecological Observatory Network)

**2020**

PARAFAC model course  
(drEEM toolbox in MATLAB)

Calderó-Pascual et al. published  
(Water)

**2019**

Transfer Viva – PhD candidate  
(Dundalk Institute of Technology)

AQUACOSM Transnational Access  
(Middle East Technical University)

**2018**

PhD position in limnology research  
(Dundalk Institute of Technology)

**2017**

Water research volunteering  
(Volunteering Initiative Nepal, Kathmandu)

**2016**

Master in Water Science and Technology  
(University of Girona)

Master Thesis

(Catalan Institute of Water Research)

Work experience with existing treatment  
systems for nitrate polluted groundwater  
(Catalan Water Partnership)

**2015**

Degree in Biotechnology  
(University of Girona)

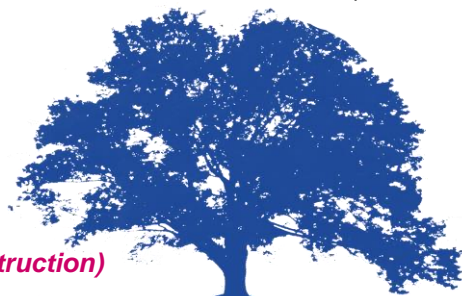
Final degree project (Erasmus+)  
(Danish Technical University)

**2014**

Work experience with integrated  
membrane system for water reuse  
(Catalan Institute of Water Research)

**2013**

Extracurricular experience in DNA  
extraction (University of Girona)



# Degree in Biotechnology

## Master in Water Science and Technology

### PhD candidate in Limnology Research

#### ACADEMIC BACKGROUND

**2017 - Present** PhD in lake biogeochemistry and planktonic communities, Dundalk Institute of technology, Ireland. 4 years funded by the Marine Institute through BEYOND2020 project. Supervised by Dr Valerie McCarthy and Prof Eleanor Jennings.

Transfer Viva: *Nutrients and zooplankton dynamics over one year period in Lough Feeagh* (Accepted to transfer to PhD candidate, 2019).

**2016** Master in Water Science and Technology, University of Girona, Spain. 60 ECTS, 8.78/10, 1<sup>st</sup> position of 11 students.

Master thesis: *Dissemination of a plasmid encoding antibiotic resistance in experimental bioreactor* (Grade: 9,9/10 - outstanding mark). Supervised by Dr Carles Borrego and Dr Oriol Gutierrez.

**2015** Degree in Biotechnology, University of Girona, Spain. 240 ECTS, 7.95/10, 5<sup>th</sup> position of 58 students.

Final degree project: *Modelling respirometric assays for estimating kinetic parameters for ammonium and nitrite oxidizing bacteria. Measurements and analysis of N<sub>2</sub>O dynamics* (Grade: 9,9/10). Supervised by Dr Carlos Domingo-Félez and Dr Jesús Colprim.

**2011** High School Diploma in Science, IES Cassà de la Selva, Spain. Outstanding mark of 9.73/10.

Final research project: *L'Onyar, un riu en perill?* (Grade: 10/10). Supervised by Dolors Calsina and Pep Mas through "Jove Campus de Recerca" during summer 2010.

#### SCIENTIFIC PUBLICATIONS

- Calderó-Pascual, M.; Yıldız, D.; Yalçın, G.; Metin, M.; Yetim, S.; Fiorentin, C.; Andersen, M. R.; Jennings, E.; Jeppesen, E.; Ger, A. K.; Beklioğlu, M.; McCarthy, V. The importance of allochthonous organic matter quality when investigating pulse disturbance events in freshwater lakes: a mesocosm experiment. In revision. *Hydrobiologia* 2021.
- Hoke, A.; Woodhouse, J.; McCarthy, V.; de Eyto, E.; Calderó-Pascual, M.; Geffroy, E.; Dillate, M.; Grossart, HP.; Jennings, E. Impacts of Extreme Weather Events on Bacterial Community Composition of a Temperate Humic Lake. *Water* 2020, 12.1, 2757.
- Calderó-Pascual, M.; de Eyto, E.; Jennings, E.; Dillane, M.; Andersen, M. R.; Kelly, S.; Wilson, H. L.; McCarthy, V. Effects of Consecutive Extreme Weather Events on a Temperate Dystrophic Lake: A Detailed Insight into Physical, Chemical and Biological Responses. *Water* 2020, 12.5, 1411.
- Domingo-Félez, C.; Calderó-Pascual, M.; Sin, G.; Plósz, B. G.; Smets, B. F. Calibration of the comprehensive NDHA-N<sub>2</sub>O dynamics model for nitrifier-enriched biomass using targeted respirometric assays. *Water research* 2017, 126, 29-39.

## SCHOLARSHIPS

**2019 AQUACOSM Transnational Access Grant** Access free of charge, travel expenses and lodging for two months in Middle East Technical University to participate in a mesocosm experiment with an individual research project to carry out. Check [blog post](#) to know more about the experience. **1970€**.

**2018 GLEON20 Travel Award** Travel expenses to participate in GLEON20 conference in Australia. **1250\$**.

**2016 Santander Scholarship CRUE-CEPYME** Work experience for three months in ABM Serveis d'Enginyeria i Consulting SL Company, in collaboration with the Catalan Water Partnership and Catalan Water Agency, to carry out the project entitled "*Analyses of existing treatment systems for nitrate polluted groundwater in Catalonia*". **1800€**.

**2015 Spanish Ministry ERASMUS+ Grant** Living expenses for three months to carry out my final degree project in Technical University of Denmark. April-July. Part of LaGas project supervised by Prof Barth F. Smets. **1350€**.

**2011 High School Diploma Honours** First year Biotechnology degree fees in University of Girona. **1287.60€**.

**2010 Jove Campus de Recerca Award** Opportunity to carry out the high school final research project in the University of Girona during summer school break.

**2008 Catalan Government Scholarship for linguistic stays** Two weeks in Rouen, France, to learn French. **556€**.

## SELECTED CONFERENCES

**2021 SEFS** Virtual. Oral (2). *Long-term trends and impact of environmental drivers on dystrophic lake plankton & Effects of consecutive extreme weather events on a temperate dystrophic lake.*

**2021 ASLO** Virtual. Oral. *Long-term trends and impact of environmental drivers on dystrophic lake plankton.*

**2021 2<sup>nd</sup> AQUACOSM symposium** Virtual. Oral. *Characterisation and impact of different allochthonous organic matter additions in a mesocosm experiment investigating pulse disturbance events in Mediterranean shallow lakes.*

**2021 Shallow lakes conference** Virtual. Oral. *Characterisation and impact of different allochthonous organic matter additions in a mesocosm experiment investigating pulse disturbance events in Mediterranean shallow lakes.*

**2021 IFSA** Virtual. Oral. *Zooplankton taxa specific grazing experiments in Lough Feeagh.*

**2020 GLEON21.5** Virtual. Traits & tech sub-working group.

**2020 ENVIRON** Dublin, Ireland. Oral. *Effects of consecutive extreme weather events on a temperate dystrophic lake: a detailed insight into physical, chemical and biological responses.*

**2019 SIBECOL** Barcelona, Spain. Poster. *Nutrient dynamics in Lough Feeagh to understand the drivers of ecosystem productivity.*

**2018 GLEON20** Rottneest Island, Australia. Poster. *Nutrient dynamics in Lough Feeagh to understand the drivers of ecosystem productivity.*

**2018 IFSA** Dublin, Ireland. Oral. *The BEYOND2020 project.*

**2017 GLEON19** New York, USA. Poster. *Resolving the links between nutrient and carbon budgets in the Burrishoole catchment.*

## INTERNATIONAL COLLABORATIONS

- 2021** [AQUACOSMplus](#) World Café Co-author of an opinion paper. “*Changing mean and variance in ecosystems under global change*”.
- 2021** [EFI Aquatic Forecast Challenge](#) “Beyond the water” group participant.
- 2021** [ZooSize project](#) Project co-champion.
- 2021** [ZooST](#) and [ZIG](#) projects Data provider and part of the data harmonization team.
- 2020** [EUROPONDS project](#) Irish selected participant.
- 2020** [GEISHA-Stormblitz project](#) Data provider.
- 2019** [TRADE-OFFS project](#) Data provider.
- 2019** [DayNNightZ project](#) Data provider.

## COURSES AND TRAINING

- 2021** Introduction to lake ecosystem modelling with [WET](#) by Tobias K. Andersen through GLEON GSA limnoserries. Online workshop. 15<sup>th</sup> June.
- 2020** Introduction to LaTeX by Johannes Feldbauer & César Ordóñez through GLEON GSA limnoserries. Online workshop. 23<sup>rd</sup> February.
- 2020** Produce a validated PARAFAC model from fluorescence and absorbance measurements using the drEEM toolbox in MATLAB. Online course. 5<sup>th</sup>-23<sup>rd</sup> October.
- 2020** General Additive Models with Dr Gavin Simpson. Online workshop. 30<sup>th</sup> July 2020.
- 2018** Introduction to “GGPLOT2” and “PLOTLY” in R Studio. University of Barcelona, Spain. SIBECOL conference workshop. 4<sup>th</sup> February.
- 2018** R programming: QAQC of high-frequency lake data and application of GLEON-initiated R packages. Karma Resort, Australia. GLEON20 conference workshop. 3<sup>rd</sup> December.
- 2018** SUVA nitrate sensor training by the company SEA-BIRD scientific. Dundalk Institute of Technology, Ireland. 21<sup>st</sup> May.
- 2018** Introduction to freshwater algae identification course. Durham University, UK. 9<sup>th</sup>-13<sup>th</sup> July.
- 2018** Understanding methods and tools used for high frequency data analysis. IGB Lakelab, Germany. 2<sup>nd</sup> MANTEL Training School workshop. 19<sup>th</sup>-23<sup>rd</sup> February.
- 2017** Data visualization in R. Mohonk Mountain House, USA. GLEON19 conference workshop. 27<sup>th</sup> November.
- 2017** Interdisciplinary concepts for municipal wastewater treatment and resource recovery; tackling future challenges; modelling assessment and decision support tools. Catalan Water Research Institute, Spain. TreatRec advanced training course. 15<sup>th</sup>–16<sup>th</sup> March.
- 2014** Work experience in Catalan Institute of Water Research. June August 2014. “*Operation of an integrated membrane system for water reuse, work experience report*”. Industrial experience supervised by Dr Ignasi Rodríguez Roda.
- 2013** Extracurricular experience in DNA extractions from aquifer samples. June-July 2013. Microbiology laboratory practices supervised by Dr Carles Borrego.

## COMPUTER PROGRAMES

Currently used RStudio, MATLAB, Office, Zotero, and GitHub.

Introduced during the degree and master AQUASIM, BioEdit, Groundwater Vistas, MEGA, Medusa, MINTEQ, Octave, Stella, GIS and Simulink.

## LANGUAGES

**Catalan** Native speaker. High school diploma. Level C1. 2011.

**Spanish** Bilingual. High school diploma. Level C1. 2011.

**English** Cambridge FCE. Level B2. 2011 and TOEFL iBT. 81/120. 2014.

**French** DELF. Level B1. 2007.

**German** UdG service of languages. Level B1. 2014.

## ADDITIONAL INFORMATION

Incorporation available from October 2021.

**2011 - Present** Driving licence B and own car.

**2017** Volunteering experience in Water Research in Nepal with Volunteering Initiative Nepal (VIN). Kabresthali community, Kathmandu. July-August (5 weeks).

**2013** Certificate in Vocational Graded Examination in Dance: Advanced I – Level 5 (Ballet) for the Royal Academy of Dance.

**2009 – 2013** Leader of a voluntary work. River forest reforestation in Riudellots de la Selva, Girona, Spain. With the collaboration of family, friends, people from town, town council and industrial area.

**21<sup>st</sup> September 2021**