

## Clàudia Rodés Bachs

Mathematician



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<https://github.com/klau506>

Main Interests: Climate change policies, air pollution, food consumption, ocean's level and pollution, water resources, plastic management, ecosystems evolution, global warming, and energy trends.

### Experience

RFF-CMCC European Institute on Economics and the Environment (EIEE)

Milano, Italy

November 2022 - present

AFFILIATED RESEARCHER AT RFF-CMCC EUROPEAN INSTITUTE ON ECONOMICS AND THE ENVIRONMENT (EIEE)

Affiliated researcher to develop a project on uncertainty of *net-zero* climate policies on health impacts and economical damages.

Wageningen University and Research (WUR)

Wageningen, Netherlands

September 2022 - present

JUNIOR RESEARCHER

Junior researcher in Agrochains team at Wageningen Food Safety Research (WFSR). Focus on modelling on climate change, food security, and circularity.

Universitat Politècnica de Catalunya (UPC)

Barcelona, Spain

September 2021 - December 2021

TEACHER ASSISTANT

Correction of first-year students' work of the Bachelor's Degree in Mathematics. Teaching in solve-doubts sessions.

RheinFit Sportakademie GmbH & Reisereise

Germany

July 2021 - August 2021

KIDS AND TEENAGERS' SPORTS INSTRUCTOR

Sport and language instructor in summer camps.

Wiris

Barcelona, Spain

July 2020 - June 2021

MATHEMATICAL SOFTWARE DEVELOPER

Software developer in an international technology business. Mainly collaborative development with different branches and repositories in a multidisciplinary team. As well as agile development in collaboration with the Support, Product and QA departments. Also bugs' resolution and new functionalities implementation in products managed by the team.

Programming with C++, Java, Javascript, Haxe, Omega, HTML, and CSS. Code revision and testing with GitHub, Bitbucket, and Jenkins. Kanbanize as a ticketing tool.

Club Elements

Catalonia, Spain

June 2019 - September 2020

KIDS AND TEENAGERS' INSTRUCTOR AND RESOURCE INSTRUCTOR

Instructor and resource instructor in sport summer camps.

Accessible sailing association

Mataró, Spain

June 2019 - September 2019

KIDS AND TEENAGERS' RESOURCE INSTRUCTOR

Resource instructor at sailing Mataró summer camp.

Nargy

Barcelona, Spain

September 2017 - March 2019

HOSTESS

Formal functions hostess in theatres, cinemas, and events.

Narkam

Girona, Spain

July 2018 - August 2018

KIDS AND TEENAGERS' MOUNTAIN INSTRUCTOR

Mountain summer camps instructor.

Private Piano Teacher

Barcelona, Spain

September 2017 - June 2018

KIDS AND TEENAGERS' PIANO TEACHER

Private piano teacher for beginners.

Private Teacher

Barcelona, Spain

September 2015 - present

KIDS, TEENAGERS, AND YOUTH ADULTS' PRIVATE TEACHER

Private teacher at Elementary, Secondary, and Baccalaureate levels of languages, humanities and sciences; and at University level of calculus, informatics and algebra courses.

### Education

Politecnico di Milano (PoliMi)

Milan, Italy

February 2022 - June 2022

ERASMUS

Lectures on Energy and climate change modelling scenarios and Model identification and data analysis.

[Master Thesis](#) with Lara Aleluia Reis (RFF-CMCC EIEE) about an uncertainty assessment of air pollution health co-benefits of net-zero climate policies.

Universitat Politècnica de

MASTER'S DEGREE IN ADVANCED MATHEMATICS AND MATHEMATICAL

Catalunya (UPC)  
Faculty of Mathematics and  
Statistics of UPC (FME)  
Barcelona, Spain  
September 2021 - July 2022

Universitat Politècnica de  
Catalunya (UPC)  
Faculty of Mathematics and  
Statistics of UPC (FME)  
Barcelona, Spain  
September 2017 - July 2021

IPSI  
Barcelona, Spain  
September 2015 - May 2017

ABRSM  
London, England, June 2016

Red Cross  
Barcelona, Spain, April 2021

Qualitas Alimentaria Proyecto  
Málaga, Spain, February 2020

CET10  
Barcelona, Spain, December 2018

### Volunteering

University students against the  
pandemic  
Online, Spain  
March 2020 - June 2020

Just Trade Center  
Bury St Edmunds, England  
July 2016 - August 2016

### ENGINEERING (MAMME)

Specialization in modelling with emphasis on climate change models, ODEs, PDEs, and Numerical development of biological and physical models.  
Erasmus in Politecnico di Milano (PoliMi).

### BACHELOR'S DEGREE IN MATHEMATICS

Specialization in partial differential equations, dynamical systems, functional analysis, history of mathematics and financial mathematics.  
[Bachelor Thesis](#) with Albert Mas Blesa (UPC) about the Rayleigh-Faber-Krahn inequality and its applications.

### BACCALAUREATE WITH HONOURS

Specialization in sciences: Mathematics, Physics, Chemistry and Biology.  
Ranked 1 of the class.

### GRADE 8 PIANO AND MUSIC THEORY

### FIRST AID LICENSE

### FOOD HANDLER LICENSE

### LEISURE AND FREE TIME INSTRUCTOR LICENSE

### KIDS AND TEENAGERS' PRIVATE TEACHER

Private online teacher for kids and teenagers at risk of social exclusion.

### WAITRESS

Waitress in Bury St. Edmunds Tee salon.

### Awards and stays in Research Centres

European Institute on Economics  
and Environment (EIEE)  
Milan, Italy, 2022

Center of Agrigenomic Research  
of Catalonia (CRAG)  
Barcelona, Spain, 2017

Catalonia Government  
Barcelona, Spain, 2017

Cangur.org  
Barcelona, Spain, 2015, 2017

Cangur.org  
Barcelona, Spain, 2014

### MASTER STUDENT

Master thesis with Lara Aleluia Reis (RFF-CMCC EIEE) about air pollution health co-benefits modelling and sensitivity analysis.

### GUEST STUDENT

Rotational stay through the different labs and teams to get familiarized with the different projects and methodologies followed at the centre.

### EXTRAORDINARY BACCALAUREATE AWARD

Award due to the excellent baccalaureate results.

### TOP 3% and 5% IN "PROVES CANGUR" in 2015 and 2017 respectively

Top 3% of more than 7500, and 5% of nearly 4000 in the mathematical competition called Proves Cangur, in Catalonia, Spain in 2015 and 2017 respectively.

### 2nd PLACE IN "COPA CANGUR"

Second place in the first edition of the Copa Cangur, a logic-mathematical competition by teams in Catalonia, Spain.

### Skills and Interests

**Languages** Catalan (native), Spanish (native), English (professional), German (high), Italian (intermediate), Dutch (basic).

**Programming, software and usage** R, Python, C++, GAMS, bash & CDO, Matlab, Java, JS, HTML, CSS, Omega, Haxe, AMPL.  
Github, Latex, Linux and Windows environments, GIS raster & netCDF4 data.  
Maple, XPPaut, Jenkins, Bitbucket, Kanbanize.

**Models** TM5-FASST, OSeMOSYS, DICE, DICENS, RICE, WITCH.

**Other skills** Motivation, Empathy, Enthusiasm, Team working, Creativity.

**Interests** Dingy sailing at professional level: former participation in European and World Championships.  
Climbing and trekking in the mountains. Yoga.  
DIY and reading.