# **TRAINING ACTIVITIES**

ICTA-UAB offers transversal and specific training activities (in green and blue respectively) through the *Maria de Maeztu* programme, on an annual basis and at the start of each academic year.

These training activities are complementary to courses already organized by the UAB PhD school and to Massive Open Online Courses (MOOC) accessible with UAB credentials.

Training will be held by internal and external instructors, at ICTA-UAB when possible.

The online format will be available for specified courses and depending on the circumstances.





ICTA-UAB TRAINING WEEKS

from 27th September 2021 to 28th October 2021

# REGISTRATION

To guarantee the quality of the training and maximize interactions between attendees and instructors, places are limited for most of the courses. Therefore, we suggest booking sufficiently in advance by filling in the enrollment form: https://forms.office.com/r/HCsQcYM 7V7

Registration will close on <u>September 15th, 2021</u>. Based on booking date and course requirements, two lists (priority and reserve) will be prepared. If justified, participants can cancel their registration up to 72 h before the course starts to give the opportunity to other researchers to attend the course.





Institute of Environmental Science and Technology-UAB

### GENDER EQUITY and SOCIAL JUSTICE

**Date:** 27th and 28th September 2021 (3 h session per group)

> **Classes:** from 09:30 to 13:00 h from 14:30 to 18:00 h

**Recommended for:** all ICTA-UAB staff

**Participation:** limited to 20 attendees

> Language: English

Mode: in presence at ICTA-UAB

## **TRAINER**



### Dr Sara Ortiz Escalante, member of Collectiu Punt 6

Sara studied Sociology at the UAB and earned a PhD in Urban Planning at the University of British Columbia (Canada), where she developed a research project focused on the role of women as active producers of knowledge and action to create safer and more mobile cities.

She joined Col·lectiu Punt 6 in 2009 and since then she has been participating in different activities including facilitating workshops, designing guides, teaching.



# **PROGRAM**

### **SUMMARY**

The workshop will have a theoretical part where the facilitators will share key concepts about an intersectional gender perspective, reflecting on how to integrate this perspective in practice at the internal level of the institution but also on the work that is developed externally. We will also share tools that might be used to apply this perspective.

- Introduction
- Reflective and Analytical Dialogues
- A Reflection from within
- A Reflection Out: ICTA-UAB in the academic world
- Working forward

### SCIENTIFIC COMMUNICATION

**Date:** 29th and 30th September 2021 (2 half-day sessions)

> **Classes:** from 09:30 to 13:30 h

Recommended for: all ICTA-UAB researchers, particularly presenters at the annual symposium 2021

**Participation:** limited to 15-20 attendees

> Language: English

Mode: in presence at ICTA-UAB

## **TRAINER**



### Dr. Michele Catanzaro, award-winning science journalist

Michele earned a PhD in Physics in 2001. Since then, he has been working as freelance scientific writer for important scientific journals as well as national and international newspapers.

He has coordinated several public conferences on different scientific topics in Barcelona and he is also lecturer in Science communication.

# **PROGRAM**

#### SUMMARY

This course will help researchers to better communicate their scientific results by providing context about communicating Science and practical advice on how to convey effective messages. During the hands-on sessions, examples of scientific information will be analyzed, and presentations of chosen research topics/projects will be drafted and commented.

- Theoretical introduction: how science communication works
- Practical introduction: how to communicate Science effectively
- How to present research projects to a broad audience
- How to interview scientists

### GRANT: WRITING A SUCCESSFUL PROPOSAL

**Date:** 6th and 7th October 2021 (2 half-day sessions)

> **Classes:** from 15:30 to 17:30 h

**Recommended for:** R2-R3-R4 researchers

**Participation:** limited to 15 attendees

> Language: English

> > Mode: online

## **TRAINER**



Dr Maite Ferrando, CEO K-veloce

Maite is a Psychologist with scientific background on behavioral change and psychosocial evaluation. She has worked as external researcher and advisor expert in different public and private research institutions at national/international level.

Since 2010, she collaborates with the European Commission as external evaluator and reviewer for competitive funded programs, including H2020 calls related with research and innovation topics with high social and human impact.



## **PROGRAM**

### **SUMMARY**

This course will give you an overview of the EU opportunities and the key aspects to prepare and submit a successful proposal for your project ideas, such as basic fundamentals presented together with examples and practical exercises.

- Introduction to the EU funding scheme
- From the idea generation to the proposal submission (objectives, partners, workplan)
- Transversal issues to be considered in the proposal (Gender, Open Science, Green implementation, Ethics)
- Evaluation (practical exercises)

GRANT: Impact, Exploitation, Communication and dissemination

**Date:** 13th and 14th October 2021 (2 half-day sessions)

> **Classes:** from 15:30 to 17:30 h

**Recommended for:** R2-R3-R4 researchers

**Participation:** limited to 15 attendees

> Language: English

> > Mode: online

## **TRAINER**



Dr. Mireia Ferri, researcher at K-veloce

Mireia holds a Master's Degree in Financial Management and a PhD in Social Sciences, Labour and Human Resources.

She participates in research projects at national and European level related to inclusion, health promotion and active and healthy aging, citizen participation, new technologies, entrepreneurship, social innovation and co-production; always delving into sustainability and socioeconomic impact.



# **PROGRAM**

#### **SUMMARY**

The goal of this course is to identify key points to successfully capitalize the results of R&D projects and develop an exploitation plan. The course also aims to explain what impact is understood (and tools to measure it) and will provide some key aspects to communicate and disseminate your project results.

- Exploitation of R+D+i results (strategies, business models, practical exercise)
- Impact of R+D+i projects
  (Scientific, technical, social impact & innovation potential;
- tools to measure impact)
- Communication and dissemination (strategies, tools, open science)

### WRITING an ERC PROPOSAL: discussion with successful applicants

**Date:** 8th October 2021 (1 half-day session)

**Classes:** from 11:00 to 13:00 h

**Recommended for:** R2-R3-R4 researchers

**Participation:** limited to 20 attendees

### Language: English

Mode: online

## **TRAINER**



### Prof. Isabelle Anguelovski, ICREA Research Professor at ICTA-UAB

Isabelle obtained a PhD in Urban Studies and Planning from MIT (US) and she is currently the director of BCNUEJ.

Her research examines the extent to which urban plans and policy decisions contribute to more just, resilient, healthy, and sustainable cities, and how community groups in distressed neighborhoods contest the existence, creation, or exacerbation of environmental inequities as a result of urban (re)development processes and policies. In 2016, Isabelle was awarded a fiveyear ERC-funded project called GreenLULUs



Institut de Ciència i Tecnologia Ambientals-UAB

# **PROGRAM**

### **SUMMARY**

This workshop will discuss how to build successful proposals that respond to the type of research funded by the European Research Council (ERC), which is high risk/high gain. After a brief review of rules, criteria, and overall funding structure of such proposals, we will practice some brief brainstorming exercises and then delve into the experience of ICTA-UAB Principal Investigators (PIs) who have written ERC proposals and obtained funding.

- Introduction
- Brief presentation of ERC proposals and structures
- Dissection of successful ERC proposal
- Individual exercise
- Roundtable with ERC PIs
- Questions & Answers

### BECOMING A SCIENTIFIC WRITER: PUTTING WHY? BEFORE HOW?

**Date:** 3th, 14th and 15th October 2021 (3 half-day sessions)

> **Classes:** from 10:00 to 13:30 h

**Recommended for:** postdoctoral researchers will be given priority

**Participation:** limited to 16 attendees

> Language: English

> > Mode: online

## **TRAINER**



### Dr Gavin Lucas, Leader and trainer at ThePaperMill

Gavin is a biomedical researcher with 12 years of experience as an academic author's editor, consultant and trainer. In addition to his own solid track-record as a publishing scientist he has helped plan, critique, and polish over 450 original scientific articles for dozens of institutes in diverse fields.

He also has extensive experience as a trainer in scientific writing and provides consultancy on scientific productivity at numerous academic institutes, public agencies, charitable foundations, and private companies.



# **PROGRAM**

### **SUMMARY**

The goal of this workshop is to help scientists develop a more impartial, analytical view of scientific writing, to better understand their readers as the focus for their scientific communication, and to make them more efficient writers and editors. Their writing will no longer be driven by a standard formula for How? to write a paper, but will be inspired by the question Why?

- Five stages of Publishing
- Who is my reader?
- Destination and Roadmap
- Building structure and connectivity
- From scientific report to a scientific argument
- Scientific writing in English; words, sentences, and paragraphs

### SCIENTIFIC PUBLISHING AND OPEN ACCES

Date: 15th October 2021 (1 half-day session)

**Classes:** from 15:00 to 17:30 h

**Recommended for:** all ICTA-UAB researchers

> Participation: unlimited

> > Language: English

Mode: in presence at ICTA-UAB

## **TRAINER**



### Dr. Michela Osnato, scientific manager at ICTA-UAB

Michela is a plant scientist interested in climate change and sustainable development, currently managing activities related to the Maria de Maetzu program.

Since 2020, she has been collaborating with the knowledge-sharing platform Plantae by writing Science News and producing Teaching tools for University students. She also serves as Review editor of the open access journal "Frontiers in Plant Science" and Assistant Features Editor of the hybrid journal "The Plant Cell".



Institut de Ciència i Tecnologia Ambientals-UAB

# **PROGRAM**

### **SUMMARY**

The workshop is aimed at giving an overview of the scientific publishing process and options, with a particular focus on Open Access. This course includes an informative session related to transformative agreements between UAB and publishers of important scientific journals as well as initiatives of the SOMM alliance to foster Open Science.

- Scientific publishing: the process
- Scientific Journals: Subscriptionbased, hybrid, Open Access
- Bibliometrics and Altmetrics
- Plan S and Directory of Open Access Journal (DOAJ)
- UAB Transformative agreements
- Initiatives of the SOMM alliance
- Questions and discussion

### CAREER DEVELOPMENT

**Date:** 8th and 18th October 2021 (2 half-day sessions)

> **Classes:** from 10:00 to 12:00 h

> **Recommended for:** R1-R2-R3 researchers

**Participation:** limited to 15-20 attendees

> Language: English

> > Mode: online

## **TRAINER**



### Dr. Manolo Castellano, CEO Carreras Científicas Alternativa

Manolo is a life scientist with 20 years of research experience in Spain and USA.

Since 2017, he has been working as consultant and trainer for early career scientists by helping researchers to broaden their professional horizon. He also works as talent recruiter for R&D companies by serving as headhunter and nethunter (Talento cientifico).



# **PROGRAM**

#### **SUMMARY PART 1**

The value of a PhD beyond academia: personal strategies for a smooth professional transition

### **CONTENT PART 1**

- professional opportunities outside academia
- skills and competences
- transitioning beyond academia
- strategies, new professional path, exploring careers

#### **SUMMARY PART 2**

Practical tools to identify skills for your CV and professional social networks

### **CONTENT PART 2**

- improving employability
- creating non academic CV,
- adding skills to resume
- creating great LinkedIn profile
- exploiting social networks

### MANAGING MYSELF & WORKING WITH MY TEAM: a skill upgrade for postdocs

**Date:** 28th and 29th October 2021 (2 full day sessions)

> **Classes:** from 10:00 to 18:00 h

**Recommended for:** postdoctoral researchers

**Participation:** limited to 16 attendees

> Language: English

Mode: in presence at ICTA-UAB

## **TRAINER**



Dr Tobias Maier, trainer at ThePaperMill

Tobias holds a PhD in biochemistry and has a ten-year track record in academic research, funding acquisition, and publishing in high impact journals (e.g., Cell and Science). Currently, he's Deputy director of the National Institute for Science Communication (NaWik) in Germany.

He has extensive experience as a trainer at workshops for scientists on diverse topics, including scientific writing, online science communication, career development, leadership, and other transferrable skills.

thepapermill

# **PROGRAM**

### **SUMMARY**

The goal of this workshop is to address the changing needs of Postdocs as increasingly expert researchers with growing responsibilities and pressures. Participants will gain a renewed perspective of some key transferrable competencies for the postdoctoral research stage and beyond.

- Review of core communication skills
- Time and task management
- Motivation
- Delegation
- Communicating with superiors

### IMPLICATIONS OF COMPLEXITY FOR SUSTAINABLE SCIENCE: POST-NORMAL SCIENCE

**Date:** 29th and 30th September 2021 (2 half-day sessions)

> **Classes:** from 10:00 to 13:00 h

**Recommended for:** all ICTA-UAB staff

Participation: unlimited

> Language: English

Mode: in presence at ICTA-UAB

## **TRAINER**



### Prof. Mario Giampietro, ICREA Research Professor at ICTA-UAB

Mario works on integrated assessment of sustainability issues using new concepts developed in complex systems theory. He has developed a novel scientific approach (MuSIASEM) that integrates biophysical and socioeconomic variables across multiple scales, thus establishing a link between the metabolism of socioeconomic systems and the potential constraints of the embedding natural environment.

Recent research focuses on the nexus between land use, food, energy and water in relation to sustainable development goals.



Institut de Ciència i Tecnologia Ambientals-UAB

# PROGRAM

#### **SUMMARY**

This course proposes a reflection on the implications of complexity in relation to the use of scientific inputs informing the governance of sustainability. The issue of sustainability forces science to deal with issues that escape the reach of reductionism. The causality of event is always contested and predictions are not possible.

- The epistemological implications of complexity
- Addressing the phenomenon of "socially constructed ignorance" in sustainability science: uncomfortable knowledge and results of the EU project MAGIC
- Illustrating the concept of Post-Normal Science (PNS)

### **RESEARCH DESIGN**

**Date:** 4th and 5th October 2021 (2 full-day sessions)

**Classes:** from 10:00 to 13:00 h from 14:00 to 17:00 h

### **Recommended for:** 1st year PhD students will be given priority

**Participation:** limited to 20 attendees

> Language: English

Mode: in presence at ICTA-UAB

# **TRAINER**



### Prof. Esteve Corbera, ICREA Research Professor at ICTA-UAB

Esteve is a political ecologist building knowledge on the environmental and wellbeing outcomes of climate change and biodiversity conservation policies and producing scientific findings that inform global policies for sustainable land use.

### Prof. Jordi Honey-Rosés, Ramón y Cajal Researcher at ICTA-UAB

Former Associate Professor at the University of British Columbia (Canada), Jordi has worked on environmental policy, planning and management, with a particular focus on water resources, urban rivers and forests.



Institut de Ciència i Tecnologia Ambientals-UAB

# PROGRAM

### **SUMMARY**

This course develops core skills in research design, guides students through the logic of the research enterprise, and provides them with the analytical, methodological, technological tools necessary to conduct research.

- Introduction to Social Science Inquiry and Research Design
- Asking the right questions & designing research
- Deconstructing theory and literature reviews
- Case Study Approaches;
  Measurement, Reliability, Validity
- Introduction to the preparation of research proposals & the writing/submission of scientific articles

### GOOD PRACTICE IN RESEARCH

Date: 6th October 2021 (1 half-day session)

**Classes:** from 10:00 to 13:00 h

Recommended for: 1st year PhD students will be given priority

**Participation:** limited to 20 attendees

### Language: English

Mode: in presence at ICTA-UAB

## **TRAINER**



### Prof. Victoria Reyes-García, ICREA Research Profesor at ICTA-UAB

Victoria is an anthropologist investigating local ecological knowledge systems, including their benefits, drivers of change, and potential contributions to conservation and development.

Her research encompasses the interdisciplinary study of dynamic relations among peoples, biota, and environments. Her research draws on the insights from the natural and behavioural sciences at multiple levels- from the views of villagers in developing nations to those of policymakers in industrial nations.



Institut de Ciència i Tecnologia Ambientals-UAB

# PROGRAM

#### **SUMMARY**

This course will provide a general overview of good practices in research by presenting the UAB Code and Ethics committee as well as the European Regulation for the Protection of Personal Data.

- Good practice in research
- Ethics at UAB: UAB Code of Good Practice in Research, functioning of the Ethics committee at UAB, the European Regulation for the Protection of Personal Data
- Question & Answer session: presentation and discussion of ethical issues related to participants' ongoing research projects

### SYSTEMATIC LITERATURE REVIEWS and RELATED METHODS

**Date:** 26th and 27th October 2021 (2 half-day sessions)

> **Classes:** from 14:30 h to 17:30 h

Recommended for: 1st year PhD students will be given priority

**Participation:** limited to 20 attendees

> Language: English

Mode: in presence at ICTA-UAB

## **TRAINER**



### Dr. Sergio Villamayor-Tomas, Ramón y Cajal Researcher at ICTA-UAB

Sergio is a political scientist, also affiliated with the Ostrom´s Workshop and the Berlin Workshop in Institutional Analysis of Socio-Ecological Systems.

His research areas include communitybased natural resource management and adaptation in rural contexts, and the interaction of social movements and commons management. He has also specialized in systematic reviews and co-authored 8 different publications .

> Institut de C i Tecnologia

#### nstitut de Ciència Tecnologia Ambientals-UAB

# PROGRAM

### **SUMMARY**

This course will cover the basics of systematic reviews, with particular attention to social-environmental sciences topics. The course will include reading discussions, lecturing and hands-on learning exercises. The students will be encouraged to explore synergies across their topics and the possibility of a joint systematic literature or case study review.

- Motivation for systematic reviews
- Types of systematic reviews
- Approaches to systematic reviews
- Research examples (COMOVE project)
- Best practices
- In-class exercises
- Collective discussion

### ORIENTATION to R STUDIO SOFTWARE and R LANGUAGE

**Date:** 18th, 19th, 20th, 21st and 22nd October 2021 (5 full days)

> Classes: from 14:00 to 19:30 h (+ 1 h open office)

**Recommended for:** R1-R2-R3 researchers with basic knowledge of Statistics

**Participation:** limited to 16 attendees

> Language: English

> > Mode: online

## **TRAINER**



### Dr. Ashton Drew, instructor for Transmitting Science

Ashton is a landscape ecologist who develops spatially-explicit models and data collection strategies in support of adaptive management. Many of her projects focus on developing methods to step-down wildlife habitat and population objectives from broad regional plans to local actions.

As lead Consultant and owner of KDV Decision Analysis LLC, Ashton also helps clients to improve the efficiency and effectiveness of decisions that depend on multifaceted and complex data.



# PROGRAM

- Manipulate basic data structures: vectors, matrices, DataFrames, lists (Install code packages and use functions; Manage working directory and environment; Establish good coding style practices)
- Read and inspect data (Import tabular, spatial, and other data formats; Perform quick data inspection via summary functions; Perform quick data inspections via plot functions)
- Data management (Identify and handle missing values; Subset data by multiple methods; Create new variables; Group and summarize data; Join two datasets based on common ID value; Export data to common formats)
- Data visualization with ggplot2 (Create common graphs (scatterplot, boxplot, bar graph, time series plot); Customize graph text and aesthetics; Export graphs to common image formats)
- Efficiency and reproducibility (Identify common strategies to manage projects in R; Use R Markdown to interweave code and text; Find and evaluate R packages and help resources; Write your own functions to perform common tasks)

### **SPATIAL ANALYSIS WITH R**

Date: 18th, 19th, 20th, 21st and 22nd October 2021 (5 full days)

> Classes: from 10:00 to 13:00 h (+ 5 h open office)

Recommended for: R1-R2-R3 researchers with basic knowledge of GIS and knowledge of R

> **Participation:** limited to 16 attendees

> > Language: English

> > > Mode: online

## **TRAINER**



### Dr. A. Márcia Barbosa, instructor for Transmitting Science

Marcia is a biologist interested in biogeography, macroecology, distribution modelling, comparative phylogeography, biodiversity patterns, and conservation. She has worked on terrestrial vertebrates but she has also contributed to macroecological analyses on other organisms.

As researcher at CIBIO/InBIO (University of Évora, Portugal), she has focused on maximization of large-scale efficiency in biodiversity management and conservation.



# PROGRAM

- Introduction to cartography and GIS
- $\boldsymbol{\cdot}$  Map projections and coordinate systems
- Spatial data types: vector and raster
- $\boldsymbol{\cdot}$  Obtaining spatial data: public data sources
- Introduction to GIS with R: Available Packages
- $\boldsymbol{\cdot}$  Import and export of spatial data with R
- Composition of maps in R
- $\boldsymbol{\cdot}$  Mapping of data and attributes of a database
- Color palettes for maps
- $\boldsymbol{\cdot}$  Manipulation of spatial data with R

 Manipulation of vector maps: select by attributes, select by location or trim, dissolve, simplify geometries, join geometries, join attributes, get centroids, intersect. Raster map manipulation: trim, reproject, add /disaggregate (change spatial resolution), reclassify, combine / stack (stack), map algebra. · Spatial analysis with R: clean geometry, calculate areas, lengths and distances, calculate zones of influence (buffer). create random points in space, create / import regular grids of grids, rasterize, overlap, extract values to points, lines and polygons. • Spatial analysis with R (continued): tessellation / Thiessen polygons / Voronoi diagrams, interpolation, minimal convex polygon, kernel analysis, zonal statistics

### TOPIC MODELLING METHOD TO ANALYZE TEXTUAL DATA

**Date:** 25th October 2021 (1 full-day session)

**Classes:** from 09:30 to 13:30 h from 14:30 to 18:30 h

**Recommended for:** ICTA-UAB researchers with basic R programming skills

**Participation:** limited to 20 attendees

> Language: English

Mode: in presence at ICTA-UAB

## **TRAINER**



Dr. Ivan Savin, senior researcher at ICTA-UAB

Ivan completed his PhD on computational econometrics at the Justus Liebig University in Giessen (Germany) in 2011 and his habilitation at the Karlsruhe Institute of Technology (Germany) in 2017.

Ivan works on topics related to economics of innovation and climate policy analysis, economics of complexity and economics of networks. He is also senior researcher at the Ural Federal University in Yekaterinburg (Russia).

> nstitut de Ciència Tecnologia Ambientals-UAB

# **PROGRAM**

#### **SUMMARY**

The course will offer a theoretical understanding and practical skills of working with the method called "topic modelling". Using this method, participants will learn new ways on: 1) how to analyse textual data with computer algorithms, 2) clustering the information into meaningful topics, and 3) relating this information to other characteristics of the text.

- Motivation
- What is Topic Modelling (TM) and how it works (lecture)
- Introduction to R: Example of wordclouds
- Hands-on with abstracts of papers published on EIST
- What is Structural TM, and its advantages. stm-package in R
- Hands-on with answers to openended survey questions in Spain



### FEMINIST APPROACHES TO RESEARCH

**Date:** 26th October 2021 (1 half-day session)

**Classes:** from 10:00 to 12:00 h

**Recommended for:** all ICTA-UAB researchers

**Participation:** limited to 20 attendees

> Language: English

Mode: in presence at ICTA-UAB

## **TRAINER**



### Dr. Panagiota Kotsila, Juan de la Cierva fellow at ICTA-UAB

Panagiota is a political ecologist investigating the unequal distribution of environmental and health risks and how the very concepts of risk, health and well-being are constructed, mobilised and interpreted through and for power.

Her recent work examines the drivers of injustice in urban sustainability planning, with an intersectional lens on vulnerability and a focus on the knowledge and agency of vulnerable residents.



Institut de Ciència i Tecnologia Ambientals-UAB

# **PROGRAM**

#### **SUMMARY**

This course will give a brief introduction to feminist research methods and approaches, useful for both social and natural science researchers. We will discuss gender as a transversal element in research. and ways to apply a feminist perspective by thinking how research is conducted, who is involved, and who benefits from research results. Participants will get the chance to reflect on (their own) subjectivity and the way this shapes knowledge production in all fields and disciplines.

- Gender matters
- Positionality and reflexivity
- Question & Answer session based on participants' ongoing projects