

Last updated 08.06.2024

1. Personal information

Marie Skłodowska-Curie Actions postdoctoral fellow Emma-Liina Marjakangas

I am a community ecologist. The overarching theme of my research is understanding what makes species' communities as they are and how they will change under the ever-intensifying anthropogenic pressures. My research focuses on biodiversity trends at large spatial and temporal scales and on a wide range of taxa. I am broadly interested in theoretical ecology, species' interactions, biogeography, species' traits, global change drivers, and species distribution modelling.

Contact: [Personal webpage](#), [Twitter](#), [ResearchGate](#), [LinkedIn](#), [ORCID](#)

2. Education

01.12.2015 – 30.11.2019 PHILOSOPHIAE DOCTOR IN BIOLOGY

Norwegian University of Science and Technology (NTNU), Norway

Thesis: Understanding species interactions in the tropics: dynamics within and between trophic levels. Advisors: As. Prof. Vidar Grøtan, Prof. Otso Ovaskainen, and Docent Nerea Abrego. Award date: 25.11.2019

01.09.2013 – 16.10.2015 MASTER OF SCIENCE

University of Jyväskylä (JYU), Finland

Major: ecology and evolutionary biology with specialization in conservation biology. Minor: statistics, environmental law, pedagogics. Thesis: Detectability and conservation of moonworts (*Botrychium*) in Finland. Advisors: Senior Lecturer Panu Halme, PhD Kaisa Raatikainen, and Professor Mikko Mönkkönen. Award date: 16.10.2015

01.09.2009 – 16.10.2015 TEACHER EDUCATION

University of Jyväskylä (JYU), Finland

Pedagogic training as part of teacher education. Teacher qualification for biology and ecology awarded within the MSc degree (16.10.2015).

01.09.2009 – 15.05.2013 BACHELOR OF SCIENCE

University of Jyväskylä (JYU), Finland

Major: ecology and evolutionary biology. Minor: history. Thesis: Winter activity of Arthropods (*Arthropoda*) in forest and meadow habitats. Advisor: Senior Lecturer Jari Haimi. Award date: 15.05.2013

3. Research experience

01.06.2023 – 31.05.2026 POSTDOCTORAL RESEARCHER and MARIE SKŁODOWSKA-CURIE ACTIONS POSTDOCTORAL FELLOW

Centre for Ecological Dynamics in a Novel Biosphere (ECONOVO), Aarhus University (AU), Denmark

Project: Rewiring of ecological networks under global change. Conducting research related to community and network ecology, climate change, biodiversity predictions, and statistical modeling. Co-supervising PhD and MSc students. PI: As. Prof. Alejandro Ordonez.

01.12.2019 – 30.06.2023 POSTDOCTORAL RESEARCHER and VISITING RESEARCHER

Finnish Museum of Natural History, University of Helsinki (UH), Finland

Project: Changes in species communities: role of climate change, human land use and community complexity. Conducting research related to community ecology, climate change, spatiotemporal patterns, and statistical modeling. Co-supervising PhD and MSc students. Teaching the course 'Climate change and biodiversity: impacts on birds'. 01.02.–30.06.2023 as visiting researcher. PI: Docent Aleksu Lehtikainen.

01.12.2015 – 30.11.2019 PHD CANDIDATE

Centre for Biodiversity Dynamics (CBD), Norwegian University of Science and Technology (NTNU), Norway

Project: [Understanding species interactions in the tropics: dynamics within and between trophic levels](#). Conducted research related to community ecology, statistical modelling, and conservation (62.5% of position). Taught on BSc and MSc courses as lecturer/assistant (25%). Completed courses 'Stochastic population models', 'Integrated

population modeling’, and ‘GBIF programming’ (12.5%). Supervised by As. Prof. Vidar Grøtan, Prof. Otso Ovaskainen and Docent Nerea Abrego.

01.05.2015 – 15.09.2015 RESEARCH INTERN

Centre for Biodiversity Dynamics (CBD), Norwegian University of Science and Technology (NTNU), Norway
Analyzed fungal community data for conservation management. Supervisor: Docent Nerea Abrego.

01.02.2014 – 30.04.2014 RESEARCH ASSISTANT

Intervention Ecology Group, University of Jyväskylä (JYU), Finland
Georeferenced historical data on cultural landscapes with GIS tools. PI: Senior Lecturer Panu Halme.

4. Research funding

2023 TRAVEL GRANT AS PI: 1,400 € from Oskar Öflunds Stiftelse for research stay costs at AU

2023 MSCA POSTDOCTORAL FELLOWSHIP AS PI: 240,000 € from EU Horizon 2020 Marie Skłodowska-Curie Actions for self-designed postdoctoral research project “Rewiring of ecological networks under global change” at AU

2022 POSTDOCTORAL FUNDING AS PI: 41,000 € from Postdocpool/Emil Aaltosen Säätiö for self-designed postdoctoral research project “Mutualistic pollination networks under global change” at AU

2021 PHD FUNDING FOR STUDENT AS CO-PI: 120,000 € from KONE foundation to MSc Joséphine Couet for PhD project “Understanding altitudinal shifts in avian communities under climate change: implications for conservation” (project plan and funding application co-written by student and supervisors) at UH

2018 TRAVEL GRANT AS PI: 19,000 NOK / ~ 1,700 € from Faculty of Natural Sciences (NTNU) for research stay costs at UNESP, Rio Claro, Brazil

2015 PHD SCHOLARSHIP AS PI: 2,000,000 NOK / ~180,000 € from NTNU Sustainability for self-designed PhD research project “Understanding species interactions in the tropics: dynamics within and between trophic levels” at NTNU

2015 INTERNSHIP GRANT AS PI: 2,000 € from Erasmus+ programme for MSc internship at NTNU

2014 MSC THESIS GRANTS AS PI: 800 € and 1,100 € from SPFFF and Vanamo, respectively, for field work in thesis project “Detectability and conservation of moonworts (*Botrychium*) in Finland” at JYU

5. Supervision and teaching experience

01.12.2019 – Present SUPERVISOR

University of Helsinki, Finland (remotely since June 2023)

Co-supervising students Leena Hintsanen (PhD project: ‘Changing bird communities: effects of climate, land use and conservation’; PhD defence on April 12th 2024), Joséphine Couet (PhD project: ‘Understanding altitudinal shifts in avian communities under climate change: implications for conservation’; PhD defence planned for February 2026) and Jenni Heiskanen (MSc project: ‘Phenological shifts in autumn migration of Finnish birds’; MSc thesis submission planned for September 2024).

01.01.2023 – 30.06.2023 LECTURER

University of Helsinki, Finland

Planned course content, gave a lecture, led an R exercise, supervised group work, and graded assignment and exams (course: ‘Climate change and biodiversity: impacts on birds’). Gave a guest lecture (course: ‘Area-based conservation’).

01.09.2017 – 30.09.2020 LECTURER

NTNU, Norway

Planned course content, gave lectures, supervised group work, and graded reports (courses: ‘Capacity building for conserving biodiversity and ecosystem services’ and ‘Sustainable management of ecosystem services’). Gave guest

lectures (courses: 'Community ecology and ecosystems', 'Natural resources management', 'Biodiversity and conservation I', and 'Biodiversity and conservation II').

01.01.2016 – 15.10.2019 TEACHING ASSISTANT

NTNU, Norway

Supervised group work, taught presentation skills, led journal clubs and statistical exercises, and graded exams (courses: 'Scientific seminars', 'Biodiversity and conservation I', 'Biodiversity and conservation II', 'Community ecology and ecosystems', and 'Natural resources management').

6. Other academic achievements (including selected conference presentations)

- **2024–present SUBJECT-MATTER EDITOR** for Ecological Monographs
- **2017–present REVIEWER** for scientific journals (>30 reviews), including Science, Nature Communications, Proceedings B, Current Biology, Global Ecology and Biogeography, Oikos, Ecology and Evolution, and Biological Conservation
- **2023–present MEMBER** of SCB (Society for Conservation Biology) Europe –board
- **2023–present MEMBER** of ECCB2024 conference Steering Committee
- **2023–present CHAIR** of DEIJ (Equity, Diversity, Inclusion & Justice) Committee at SCB Europe
- **2023–present MEMBER** of Communications Committee at SCB Europe
- **2023–present MEMBER** of DEIJ Committee at SCB Global
- **09.01.2024 CONFERENCE PRESENTATION** International Biogeography Society conference, Prague, Czech Republic, Title: Rewiring potential in pollination networks
- **13.–15.02.2023 ORGANIZER** of Oikos Finland conference and 'Careers outside academia' -workshop, Helsinki, Finland
- **2022 ORGANIZER** of Biodiversity post-2020: synthesizing large-scale predictions for the future under climate and land use change -symposium at ECCB2022 conference (2022), Prague, Czech Republic
- **25.08.2022 CONFERENCE PRESENTATION** European Congress of Conservation Biology, Prague, Czech Republic, Title: Identifying 'climate keystone species' as a tool for conserving ecosystem functioning under climate change
- **10.05.2022 INVITED TALK** Centre for Biological Diversity Seminar series, St Andrews, UK, Title: Bird community responses to climate change: sources of variation
- **03.03.2020 CONFERENCE PRESENTATION** Nordic Oikos Conference, Reykjavik, Iceland, Title: Inferring the assembly of ecological networks
- **11.09.2019 INVITED TALK** BIOCHANGE Seminar series, Aarhus, Denmark, Title: Species interactions within and between trophic levels: drivers and conservation
- **09.01.2019 CONFERENCE PRESENTATION** International Biogeography Society Conference, Spain, Title: Tropical tree co-occurrences along gradients of environment and species similarity
- **19.10.2018 INVITED TALK** Biology Department Seminar series, Bodø, Norway, Title: Understanding species interaction dynamics in the tropics – a modelling approach
- **05.03.2018 INVITED TALK** Institute of Biosciences Seminar series, UNESP, Brazil, Title: Species interactions in space - a modelling approach.
- **2017–2018 MEMBER** of Gender Equality Committee, Centre for Biodiversity Dynamics, NTNU, Norway
- **2017–2018 MEMBER** of Extended Leader Group at the Centre for Biodiversity Dynamics, NTNU, Norway

7. Research visits

- **05.05.2022 – 02.06.2022 University of St Andrews, Scotland, UK**
Host: Reader Alison Johnston, Analyzing data for a global metric for bird species' tolerances to anthropogenic disturbance. Duration: 3 weeks.
- **10.09.2019 – 17.09.2019 Aarhus University, Aarhus, Denmark**
Host: As. Prof. Alejandro Ordonez, Discussing research ideas about ecological network rewiring for future projects. Duration: 1 week.
- **22.04.2019 – 31.05.2019 Concordia University, Montreal, Canada**
Host: As. Prof. Jean-Philippe Lessard, Working on concepts and methods for trait-based inference of ecological network assembly. Duration: 6 weeks.
- **15.09.2018 – 22.09.2018 Aarhus University, Aarhus, Denmark**
Host: Prof. Carlos Peres, Discussing research ideas about defaunation effects for future projects. Duration: 1 week.
- **20.08.2018 – 27.08.2018 Naturalis, Leiden, Netherlands**

Host: Researcher Renato Lima, Analyzing data of co-occurrences of tropical trees in eastern South America.
Duration: 1 week.

- **01.03.2018 – 21.03.2018 UNESP, Rio Claro, Brazil**

Host: Prof. Mauro Galetti, Working on PhD thesis project and participating in data collection trips. Duration: 3 weeks.

- **01.03.2016 – 21.03.2016 UNESP, Rio Claro, Brazil**

Host: Prof. Milton Cezar Ribeiro, Working on PhD thesis project and participating in data collection trips.
Duration: 3 weeks.

8. Scientific and societal influence

- **2021–present UPDATING** Finnish and English Wikipedia on community ecology and biogeography topics (>10 articles)
- **09/2023 POPULAR SCIENCE ARTICLE.** Title: [Centuries of loneliness: unraveling of interaction networks](#)
Suomen Luonto Magazine
- **10/2023 POPULAR SCIENCE ARTICLE.** Title: [The intestines of a bird do magic to rowanberry seeds.](#)
Suomen Luonto Magazine
- **06/2023 BLOG POST.** Title: [Alleviating my bad conscious for biodiversity crisis with establishing an urban meadow.](#) *Suomen Luonto Magazine*
- **05/2023 INVITED PUBLIC LECTURE** at Porkkalan Lintuviikko. Title: [Biodiversity – the basis of a stable ecosystem.](#)
- **04/2023 COURSE** participation in science communication organized by Suomen Luonto -magazine and three popularized science articles in the magazine.
- **02/2022 INVITED PUBLIC PRESENTATION** in 500 Women Scientist -event for International Day of Women and Girls in Science Topic: “What is it like to be a woman in Science”.