

the functioning of aquatic ecosystems mostly to avoid or decrease the frequency and intensity of algal blooms. Dr Malena Sabatino (Argentina) is a scientist working in mutualistic networks with a strong component in field studies of plant-pollinator networks. Dr. Sabatino currently explores eco-evolutionary dynamics models of mutualistic networks and specifically the effect of intraspecific interaction and migration trait variation on the coexistence of rare and common plants and pollinators along spatial gradients. Dr. Chaparro, Dr. Andreazzi and Dr. Sabatino will contribute to the development of ROBHOOT with their expertise in eco-evolutionary dynamics in ecosystems.

## List of publications

1. Melián C. J., et al. 2018. Deciphering the interdependence between ecological and evolutionary networks. **Trends in Ecology & Evolution** 33,7: 504-512.
2. Andreazzi C., Guimaraes P, Melián C. J. 2018. Eco-evolutionary feedbacks promote fluctuating selection and long-term stability of antagonistic networks. **Proc. R. Soc. B** 285: 20172596.
3. Melián C. J., Seehausen O, Eguiluz V, Fortuna M, Deiner K. 2015. Diversification and Biodiversity Dynamics of Hot and Cold Spots. **Ecography** 38, 393-401.
4. Melián C. J., et al. 2015. Dispersal dynamics in food webs. **American Naturalist** 185, 2: 157-168.
5. Melián C. J., et al. 2014. Individual trait variation and diversity in food webs. **Advances in Ecological Research**. Vol. 50. Academic Press, 207-241.

## List of relevant projects

1. 2020 Melián, C. J. (PI) and Ferrão Filho, Aloysio S. Granted: Brazilian-Swiss Joint Research Programme SNSF, Title: Feedbacks between coevolving predator-prey interactions and the functioning of aquatic ecosystems. SFr 228k
2. 2018 Melián, C. J. (PI), Andreazzi, C., and Astegiano, J. Swiss National Science Foundation, Scientific exchange program, Title: Biodiversity Dynamics in Coevolutionary Metaecosystems. SFr 20k
3. 2015 Melián, C. J. (PI) Granted: Swiss National Science Foundation, Division III. Switzerland. Title: A theory for next-generation food web data. SFr 200k.
4. 2012 Melián, C. J. (PI), Klecka, J., Krivan, V., and Altermatt, F. Granted: Sciex, Switzerland. Title: Food webs in space: integrating metacommunity and food web research. SFr 93k.
5. 2012 Pomati, F., and Melián, C. J. (Co-PI). Granted: Swiss National Science Foundation, Division III. Switzerland. Title: An individual-level approach to disentangle niches, drift and dispersal in phytoplankton metacommunity dynamics. SFr 243k

## Infrastructure relevant to the proposed work

EAWAG in Kastanienbaum Lucerne offers excellent office, meeting rooms, laboratory and testing facilities in modern, state-of-the-art buildings. EAWAG provides access to first-class research facilities that regularly offer training for the use of equipment, tools and software. Of particular relevance for this research project is the access to two computing clusters “Leonhard” and “Euler” with more than 50 000 processor cores available for scientific computations, and training for their use offered by ETH Zürich.

## 2, CSIC

The Spanish National Research Council (CSIC) is Spain’s largest public research institution and ranks third among Europe’s largest research organizations. Attached to the Spanish Ministry of Science and Innovation, the CSIC plays a key role in scientific and technological policy in Spain and worldwide. According to its Statute (Article 4), it has 4 main missions:

- to foster multidisciplinary scientific and technological research,
- knowledge transfer to industry and society,