

Curriculum vitae
Dr. Carlos J. Melián

1. Education and Positions

2013-Present, Lecturer, University of Bern, Switzerland.

2010-Present, Associate Professor and Group leader (Tenured since end 2015).
Eawag Swiss Federal Institute of Aquatic Science and Technology, Switzerland.

2008-2010, Researcher fellowship.

Granted: Microsoft Research Ltd. (Unrestricted Gift).

National Center of Ecological Analysis and Synthesis, University of California, USA.

Title: Unifying Theories of Molecular, Community and Network Evolution.

Period: 2 Years, 200,000\$.

2005-2007, Postdoctoral fellowship.

Granted: National Center of Ecological Analysis and Synthesis, University of California, USA.

Title: The Evolution of Behavior and the Structure of Complex Ecological Networks.

Period: 3 Years, 120,000\$.

2000-2004 PhD. with honors in Biology and Environmental Sciences. University of Alcalá, Madrid, and Biological Doñana Station, Seville, Spain. *Dissertation title: On the Structure and Dynamics of Ecological Networks*, Dr. Jordi Bascompte, advisor.

1998 B.S. in Biology and Environmental Sciences. University of Alcalá, Madrid, Spain.

2. Oral communication

Languages: Spanish (native), English (fluent), German (basic).

3. Organization International Scientific workshops

2. **2016** International exploratory workshop “Interactions on evolutionary trees”,
Swiss National Science Foundation, Switzerland.

1. **2008** Workshop “Theoretical ecology: Big questions and challenges”. National Center for
Ecological Analysis and Synthesis (NCEAS). Univ. California Santa Barbara, USA.

4. Grant history

11. **2018**, Melián, C. J. (PI) (To be Submitted October 2018)

Funding Agency: Swiss National Science Foundation, Division III, Switzerland

Title: Deciphering Coevolutionary Diversification in the Tangled Webs of Life

Period: 2 years, 240,000 CHF.

10. **2018, Melián, C. J.** (PI) (Submitted Pre-proposal)
Funding Agency: Swiss Data Science Center (SDSC). Switzerland
Title: Data-intensive Tangling of the Webs of Life
Period: 2 years, 240,000 CHF.
9. **2016, Melián, C. J.**, Matthews, B., Seehausen, O., and Harmon, L. J.
Granted: Swiss National Science Foundation, International exploratory workshops
Title: Interactions on Trees.
Period: 1 Week, 21,000 CHF.
8. **2014-2015, Kalinkat, G., and Melián, C. J.** (PI)
Granted: German Academic Exchange Service (DAAD). Germany
Title: Analysing the interplay between allometric constraints and intraspecific trait variation to predict food web dynamics.
Period: 6 Months, 17,694€.
7. **2014-2015, Melián, C. J.** (PI) and Klecka, J.
Granted: Swiss National Science Foundation, International Coop. Switzerland.
Title: Modeling the effects of predator phenotype on food web structure.
Period: 3 Months, 9,510 CHF.
6. **2012-2015, Melián, C. J.** (PI)
Granted: Swiss National Science Foundation, Division III. Switzerland.
Title: A theory for next-generation food web data.
Period: Granted for 3 years (PhD. student). Mutation to 1 and a half Years (Postdoc), 161,000 CHF.
5. **2012-2014, Melián, C. J.** (PI) , Klecka, J., Křivan, V., and Altermatt, F.
Granted: Sciex, Switzerland.
Title: Food webs in space: integrating metacommunity and food web research.
Period: 1 Year, 92,900 CHF.
4. **2012, Matthews, B., Pomati, F., Melián, C. J., and Altermatt, F.**
Granted: Swiss National Science Foundation. International exploratory workshops
Title: Biodiversity dynamics of phytoplankton communities along environmental gradients.
Period: 1 Week, 20,000 CHF.
3. **2012-2015, Pomati, F., and Melián, C. J.** (Co-PI)
Granted: Swiss National Foundation, Division III. Switzerland.
Title: An individual-level approach to disentangle niches, drift and dispersal in phytoplankton metacommunity dynamics.
Period: 3 Years, 243,136 CHF.
2. **2012-2015, Alonso, D., and Melián, C. J.** (Co-PI)
Granted: Spanish Research Council (CSIC), Spain.
Title: Development of theoretical community models for biodiversity and species distributions: a generalized site-occupancy approach.
Period: 3 Years, 90,000€.

1. **2011-2013**, Montoya, J., M., Williams, R. J., Joppa, L., and **Melián, C. J.** (Co-PI)
Granted: Microsoft Research Ltd., UK.
Title: Contrasting assembly and disassembly of ecological networks in a changing world.
Period: 3 Years, 150,000€.

5. Peer-reviewed articles (five last years 2014-2018)

13. **Melián, C. J.**, Matthews, B., de Andreazzi, C. S., Rodriguez, J. P., Harmon, L., and Fortuna, M. A. (2018). Deciphering the interdependence between ecological and evolutionary networks. *Trends in Ecology and Evolution*
doi.org/10.1016/j.tree.2018.04.009. [IF:15.268]
12. de Andreazzi, C. S., *Guimaraes, P., and ***Melián, C. J.** (2018). Eco-evolutionary feedbacks promote fluctuating selection and long-term stability of antagonistic networks. *Proceedings of the Royal Society B*, 285:20172596. *Last co-authors. [IF:4.94]
11. Pellissier, L., Albouy, C., Bascompte, J., Farwig, N., Graham, C., Loreau, M., Maglianesi, M. A., **Melián, C. J.**, Pitteloud, C., Roslin, T., Rohr, R., Saavedra, S., Thuiller, W., Woodward, G., Zimmermann, N. E., and Gravel, D. (2017). Comparing species interaction networks along environmental gradients, *Biological Reviews*, 93:785-800. [IF:11.615]
10. De Laender, F., Rohr, J. R., Ashauer, R., Baird, D. J., Berger, U., Eisenhauer, N., Grimm, V., Hommen, U., Maltby, L., **Melián, C. J.**, Pomati, F., Roessink, I., Radchuk, V., and Van den Brink, P. J. (2016). Reintroducing environmental change drivers in biodiversity–ecosystem functioning research. *Trends in Ecology and Evolution*, 31:905-915. [IF:15.268]
9. Leprieur, F., Descombes, P., Gaboriau, T., Cowman, P. F., Parravicini, V., Kulbicki, M., **Melián, C. J.**, de Santana, C. N. Heine, C., Mouillot, D., Bellwood, D. R., and Pellissier, L. (2016). Plate tectonics drive tropical reef biodiversity dynamics. *Nature Comm.*, 7:11461. [IF:12.124]
8. *Fronhofer, E., *Klecka, J., **Melián, C. J.**, and Altermatt, F. (2015). Condition-dependent movement and dispersal in experimental metacommunities. *Ecology Letters*, 18:954-963. *First co-authors. [IF:9.449]
7. Hines, J., van der Putten, W. H., De Deyn, C. B., Wagg, C., Voigt, W., Mulder, C., Weisser, W. W., Engel, J., **Melián, C. J.**, Scheu, S., Birkhofer, K., Ebeling, A., Scherber, C., and Eisenhauer, N. (2015). Towards an integration of biodiversity–ecosystem functioning and food Web theory to evaluate relationships between multiple ecosystem services. *Advances in Ecological Research* 53:161-199. [IF:5.056]
6. **Melián, C. J.**, Seehausen, O., Fortuna, M. A., Eguíluz, V., and Deiner, K. (2015). Diversification and biodiversity dynamics of hot and cold spots. *Ecography*, 38:393-401. [IF:4.902]

5. Sanz-Aguilar, A., Jovani, R., **Melián, C. J.**, Pradel, R., and Tella, J. L. (2015). Multievent capture-recapture analysis reveals individual foraging specialisation in a generalist species. *Ecology*, 96:1650–1660. [IF:4.809]
4. ***Melián, C. J.**, *Křivan, V., Altermatt, F., Stary, P., Pellissier, L., and De Laender, F. (2015). Dispersal dynamics in food webs. *The American Naturalist*, 185:157-168. *First co-authors. [IF: 4.167]
3. **Melián, C. J.**, Baldó, F., Matthews, B., Vilas, C., González-Ortegón, E., Drake, P., and Williams, R. J. (2014). Intraspecific trait variation and diversity in food webs. *Advances in Ecological Research*, 50:207-241. [IF:5.056]
2. Moya-Laraño, J., Bilbao-Castro, J. R., Barrionuevo, G., Ruiz-Lupión, D., Casado, L. G., Montserrat, M., **Melián, C. J.**, and Magalhães, S. (2014). Eco-evolutionary spatial dynamics: rapid evolution and isolation explain food web persistence. *Advances in Ecological Research*, 50:75-143. [IF:5.056]
1. *De Laender, F., ***Melián, C. J.**, Bindler, R., Van den Brink, P., Daam, M., Roussel, H., Juselius, J., Verschuren, D., and Janssen, C. (2014). The Contribution of intra- and interspecific tolerance variability to biodiversity changes along toxicity gradients. *Ecology Letters*, 17:72–81. *First co-authors. [IF:9.449]

6. Teaching

2013-present. “Introduction to literature analysis” with Prof. Barbara Taborsky. Department of Biology, U. Bern, Switzerland.

2013. Four guided sessions about “Speciation models” in Journal club aquatic ecology and evolution. Eawag, Kastanienbaum, Switzerland.

2012. Four guest lectures in course “Evolutionary biodiversity dynamics” with Prof. Ole Seehausen. Department of Biology, U. Bern, Switzerland.

7. PhD students

2014-2017 Co-supervision PhD. student Vicente Jiménez with Dr. David Alonso. Spanish Research Council Grant *CGL2012* – 39964, Spain.

2012-2015 Co-supervision PhD. student Simone Fontana with Dr. Francesco Pomati. Swiss National Science Foundation Grant 31003A_144162, Switzerland.

2012-2015 Co-supervision PhD. student Francisco Baldo with Dr. Pilar Drake, PhD. Fellowship, Spanish Ministry of Science and Technology, Spain.

2014 Co-supervision PhD. student Cecilia S. de Andreazzi with Dr. Paulo Guimaraes, PhD. Fellowship, University of Sao Paulo, Brazil.

8. Postdocs

- 2017** Gian Marco Palamara (Lab discretionary funding).
2015 Ayana Martins (BEPE fellowship, Brazil)
2013-2015 Charles N. de Santana (SNSF 31003A_144053, Switzerland).
2014 Jan Klecka (*SCIEEX*12.327, Switzerland).
2013-2014 Gregor Kalinkat (German Academic Exchange Service (DAAD), Germany).
2012 Josephine Rodriguez (Lab discretionary funding).

9. Editorial and Boards

- 2011-present** Subject editor *Oikos*¹
2018 Recommender for *PCI Ecology*²

10. International Invited Talks (five last years 2014-2018)

- 2018** Title: **Fluctuating Selection in E-co-evolutionary Networks**. “Networks on Networks” workshop, University Darmstadt, February, Germany.
2018 Title: **The Stability and Complexity of Eco-evolutionary Networks in Meta-ecosystems**. “UMR Biodiversite, Genes and Communautes (Biogeco)”, University Bordeaux, January, France.
2017 Title: **The Stability Complexity Continuum in Eco-evolutionary Networks**. Freiburg Institute for Advanced Studies (FRIAS), University of Freiburg, May, Germany.
2017 Title: **Interdependent Networks in Ecology and Evolution**. “Human driven scenarios for evolutionary and ecological changes”, MEDECOS conference, February, Seville, Spain.
2016 Title: **Food Web Modeling**, CIESM Congress, September, Kiel, Germany.
2015 Title: **Eco-evolutionary Diversification Dynamics**. “Mathematical models in ecology and evolution”, European Society for Mathematical and Theoretical Biology, July, Paris, France.
2015 Title: **Eco-evolutionary Diversification Dynamics: From Dreams to Models**. Muenster graduate school of evolution workshop “Community network approach to ecological complexity”, University of Muenster, March, Muenster, Germany.
2015 Title: **Radiations and Diversification in Biological Networks**. “Simulating the ecology and evolution of ecological interactions”, Spanish Research council, January, Almeria, Spain.
2014 Title: **Do Organisms Dream with Neutral Landscapes?** “Dispersal evolution in a community context” workshop, University of Wuerzburg, September, Wuerzburg, Germany.
2014 Title: **Intraspecific Trait Variation and Diversity in Food Webs**. “Jena Network workshop”, Friedrich-Schiller-University of Jena, February, Jena, Germany.

¹<http://www.oikosjournal.org/about-journal/editorial-board>

²<https://ecology.peercommunityin.org/>