

Prof. Dr. Benjamin D. Stocker

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Education

- Nov. 2009- Dec. 2013** **PhD Climate Sciences at Climate- and Environmental Physics**, University of Bern,
Climate Forcings and Feedbacks from the Terrestrial Biosphere – From Greenhouse-Gas Emissions to Anthropogenic Land Use Change
Supervised by Prof. Fortunat Joos, date obtained: 13. Dec. 2013
- Sep. 2007- Oct. 2009** **MSc Climate Sciences at Climate- and Environmental Physics**, University of Bern,
Transient Simulations of Land Use Change in the Holocene – Separating the Human Impact from Natural Drivers of the Carbon Cycle
Supervised by Prof. Fortunat Joos, date obtained: 16. Nov. 2009
- Jun. 2006** **Undergraduate in Geography** (120 ECTS) with a Minor (60 ECTS) in **Physics**, and a complementary (15 ECTS) in **General Ecology**, University of Bern

Employment

- Since Sep. 2019** **Assistant Professor** for Computational Ecosystem Science, Department for Environmental Systems Science, ETH Zürich, and WSL Birmensdorf, Switzerland
- Apr. 2019- Aug. 2019** **Visiting Scholar** with Prof. Robert Jackson, Department of Earth System Science, Stanford University, USA
- Mar. 2017- Feb. 2019** **Marie Skłodowska-Curie Postdoctoral Research Fellow** with Prof. Josep Peñuelas, Ecological and Forestry Applications Research Centre (CREAF), Barcelona, Spain
- Sep. 2017- Feb. 2018** **Postdoctoral Researcher** with Prof. S. Seneviratne, Department for Environmental Systems Science, ETH Zürich, Switzerland
- Mar. 2014- Sep. 2016** **Postdoctoral Research Fellow**, with Prof. I. C. Prentice, Department of Life Sciences, Imperial College London, U.K.
- Jan.-Feb. 2014** **Postdoctoral Researcher** with Prof. F. Joos, Climate- and Environmental Physics, University of Bern.

Approved research projects (Chronological order)

- **[co-applicant] SNF Agora**, *Biotinkering for Youth - Robotics and digital learning in plant science engagement*; Swiss National Science Foundation, 2.5 years, Apr. 2021 - Sep. 2023, 200 kCHF (approx. 182 kEUR). This funds outreach activities on robotics and digital learning for plant sciences which I co-create with co-applicants.
- **[co-PI] Virtual Earth System Research Institute**, *LEMONTREE - Land Ecosystem Models based On New Theory, observations, and Experiments*; Schmidt Futures, 5 years, Jan. 2021 - Dec. 2025, 10 mio. US\$ (approx. 9 mio. CHF). This funds a postdoc (3 yr) and a PhD (3 yr) in my group.
- **[co-PI] WSL Internal Innovative Project**, *Increasing cold stress on photosynthesis in a warming world?* Granted Aug. 2019, 60 kCHF (approx. 56 kEUR) [WSL internal project]. This funds a postdoc (Y. Luo), co-supervised by Prof. A. Gessler (WSL) and myself.
- **[PI] SNF Eccellenza Professorial Fellowship**, *MIND - developing next-generation Modelling approaches for simulating processes in the terrestrial biosphere by Including New Data streams and optimality approaches*; Swiss National Science Foundation, 60 months, Sep. 2020 - Aug. 2024, total 1.8 mio. CHF (approx. 1.6 mio. EUR). This funds my salary, 3 yr postdoc, and two 4-yr PhD in my group.

Supervision and mentoring

- **Current PhD:** Yunke Peng, 2020-present ; Francesco Giardina, 2010-present; Gabriela Sophia, MPI-BGC Jena, Germany, start in July 2021, co-supervision with Dr. Sönke Zaehle
- **Current MSc:** Pascal Schneider, 2021-present; Martina Buck, 2021-present; Ana Roldan Cevallos [scheduled start Nov. 2021]
- **Current postdoc** Koen Hufkens, 2021-present; Laura Marqués, postdoc, 2019-present; Di Tian, postdoc, 2020-present; Yungpeng Luo, postdoc, 2021
- **Past MSc (co-supervision):** Fabienne Meier, MSc 2020-2021; Paula Casadei, MSc, 2018-2019; Fabian Feissli, MSc, 2011; Guan Jie Low, B.Sc. 2014;

Teaching

- **Environmental Systems Data Science**, co-lead of new lecture for MSc in Environmental Sciences and MSc in Agricultural Sciences, ETHZ, lecturer and author of tutorial chapters (autumn 2020, 2021, tutorial available at https://stineb.github.io/esds_book/)
- **Global Change Biology**, lecturer, for MSc in Environmental Sciences and MSc in Agronomy, ETH Zürich (spring 2020, spring 2021)
- **Data Science Lab**, guest-lecturer, for MSc in Computer Science, ETH Zürich (spring and autumn 2021)
- **Machine Learning for Eddy Covariance data**, lecturer and author of tutorial, C2SM Summer School 2021 (tutorial available at https://stineb.github.io/ml4ec_workshop/)
- **Lecturer at summer schools:** *Greening of the Earth*, C2SM Summer School 2021; *The CO₂ fertilisation effect across scales*, FORMON Summer School 2021
- **Introduction to the Carbon Cycle**, guest lecturer, MRes in Ecosystem and Environmental Change, Imperial College London; designed own course material (autumn 2015)
- **Teaching assistant** for several courses during PhD at Physics Institute, U. Bern

Professional service, panel memberships, and reviewing

- **PhD jury member:** Dr. Marcos Fernández-Martínez, UAB Barcelona, Spain (Jan. 2016)
- **Reviewer for grant proposals:** ERC Consolidator Grant Call 2018
- **Completed peer reviews** for journals: *Nature* (3), *Nature Geoscience* (4), *Nature Climate Change* (1), *New Phytologist* (3), *Global Change Biology* (4), *Geoscientific Model Development* (5), *Biogeosciences* (9), *Journal of Climate* (1), *Earth System Dynamics* (1), *Environmental Research Letters* (1), *Geophysical Research Letters* (1), *Global Biogeochemical Cycles* (1), *Earth and Planetary Science Letters* (1), *Journal of Geophysical Research – Biogeosciences* (1), *Earth's Future* (1), *AGU Advances* (2), *Remote Sensing of the Environment* (1) [see also publons.com/a/1186022/]

Organisation of conferences

- **Conferences and symposia:** Zurich-Basel Plant Science Center Symposium, 8 Dec. 2021
- **Workshops:** *Terrestrial nitrogen cycling in Earth system models revisited*, UK, Feb. 2016; *Palaeoclimate experiments to evaluate the impact of LULC on climate and the carbon cycle: a joint co-design workshop of the PAGES LandCover6ka WG and the Palaeoclimate Modelling Intercomparison Project*, Sep. 2018
- **Conference sessions:** EGU 2018, 2019, 2020, 2021; SIBECOL 2019; PAGES OSM 2017; INQUA 2015

Awards and fellowships

- **[Fellow] Marie Skłodowska-Curie Actions Individual Fellowship**, Mar. 2017-Feb. 2019, project number H2020-MSCA-IF-2015-701329 FIBER, total 158 kEUR (approx. 181 kCHF)
- **[Offered Fellowship] Incoming PEGASUS Fellowship**, granted by the Flemish Science Foundation (FWO), 36 months, July 2016. Not accepted due to acceptance of the MSCA Fellowship (see above).

- **[Fellow] SNF Early Postdoc.Mobility scholarship**, Swiss National Science Foundation, 18 months, Mar. 2015 - Aug. 2016, project number P2BEP2_158964, total 63 kEUR (72 kCHF).
- **Faculty prize** for best Master's thesis at the Physics Institute, University of Bern, obtained Feb. 2010