

Maeva Fincker

Bioinformatics / Data-science - Full time

maeva.fincker@gmail.com

Education

Stanford University, Department of Civil & Environmental Engineering, Stanford, CA

2013 — Dec 2019 (estimated) *PhD in Environmental Microbiology*, with Dr. Alfred Spormann

2011 — 2012 *M.S. in Environmental Engineering and Sciences*

Ecole Centrale Paris, Châtenay-Malabry, France

2009 — 2012 *B.S and M.S in Engineering*

Portfolio & Projects

- 2019 **Genome assembly and metabolic reconstruction of deep-sea microbes**, Stanford
- Developed a metagenomic pipeline to reconstitue and analyze the metabolic potential of marine subsurface microorganisms
- 2018 **Readmission rate to the ER within 48h of discharge as predicted with EHR data**, Stanford
- Implemented and parameter-tuned deep-learning models (feed forward and recurrent neural networks) in TensorFlow to predict readmission to the ER after discharge using Stanford Hospital EHR data.
- 2017 **California Poverty Project**, Stanford Center on Poverty & Inequality, Stanford Data Lab
collaboration with Dr. David Grusky and William Berhman
- Designed and implemented a multi-scale interactive map displaying demographic and socio-economic variables in California for policy makers to understand the impact of novel policies.
- 2016 **Microbial Growth Rate Prediction from Genomic Features**, Stanford
- Preprocessed genomic data and trained classification models (SVM, RF) to predict microbial growth rate *in silico*.

Selected Publications

Fincker M, Spormann AM *et.al*, 2019, Metabolic reconstruction of globally distributed marine subsurface Chloroflexi genomes, *in preparation*.

Fincker M, Spormann AM *et.al*, 2019, Metabolic stability of *Dehalococcoides mccartyi* under long term starvation, *in preparation*.

Fincker M, Spormann AM. 2017. Biochemistry of catabolic reductive dehalogenation. *Annu. Rev. Biochem.* 86(1): 357–86.

Mayer-Blackwell K, **Fincker M**, *et al.* 2016. 1,2-Dichloroethane exposure alters the population structure, metabolism, and kinetics of a trichloroethene-dechlorinating *Dehalococcoides mccartyi* consortium. *Environ. Sci. Technol.* 50(22): 12187–96

Experience

2012 — Present **Spormann Laboratory**, Stanford

Graduate research assistant, with Dr. Alfred Spormann

- Conducted research on the metabolism of slow growing microorganisms (experiments, modeling, bioinformatics).
- Mentored and supervised undergraduate and master students.
- Lectured at Stanford University.
- Published research papers and presented research contribution at international conferences

Skills

- Machine learning (Scikit-learn, TensorFlow)
- Data visualization (Vega.js, D3.js)
- Computational biology
- R, Python, MATLAB, LaTeX, Bash, AWS
- Fluent in French and English, basics of Spanish

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