




Sveinn Valtyr Einarsson

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EXPERIENCE

Post Doctoral Research Associate

University of Florida / USDA GBRU Affiliate

January 2022 – Present, Gainesville, FL

- Package genomic software for ease of distribution and use by scientists in bioinformatic pipelines.
- Upgraded the ITSxpress python package for use with new versions of bioinformatic pipelines, as a plugin for Qiime2. Upgrades included, expanding use cases, fixing bugs, resolving dependency issues, Docker containerization, continuous integration, git/github version control, conda packaging and benchmarking on HPC.
- Currently researching bacterial infections of roots and plant seed microbiomes, using bayesian networks, metagenomics, and/or exo-metabolomics data.

Visiting Assistant Professor of Biology

Haverford College

October 2021 - December 2021, Haverford, PA

- Taught 2 courses:
 - BIO450 Advanced Topics in Biology: Biogeochemical Modeling.
 - BIO300 Advanced Lab in Biology (Co-instructor with Dr. Kristen Whalen).

Graduate Research/Teaching Assistant

Old Dominion University

August 2016 - September 2021, Norfolk, VA

- DNA/RNA extraction, amplification, and high-throughput sequencing; Cloning; Quantitative PCR; diatom culturing, trace metal clean incubations, RNA-seq.
- Field experience:
 - 2019 (Oct-Nov) S. A. Aghullas II; SCALE 2019. Field and incubation sampling of DNA/RNA, dissolved iron, nitrate, and nitrogen isotopes.
 - 2018 (Sept-Nov) R/V Revelle; GEOTRACES GP15, Pacific Ocean. Deployment of a trace metal clean rosette and GeoFish, DNA/RNA sample collection, single cell analysis and trace metal clean sampling for SXRF (synchrotron radiation X- ray fluorescence).
 - 2016 (Sept-Oct) R/V I/B Nathaniel B. Palmer; Southern Ocean. Deployment of trace metal clean rosette, DNA/RNA and metatranscriptomic sample collection, dissolved iron and total metal sampling.
- Graduate Teaching Assistant, Introduction to Oceanography (Dr. Shannon Wells primary instructor).

EDUCATION

Doctor of Philosophy, Oceanography

Old Dominion University • Norfolk, VA • 2021

Master of Science, Ocean and Earth Science

Old Dominion University • Norfolk, VA • 2018

Bachelor of Science, Ocean and Earth Science

Minor in Computer Engineering • Old Dominion University • Norfolk, VA • 2016

Matricular Examination with Physics concentration

Verslunarskóli Íslands • Reykjavik, Iceland • 2011

PUBLICATIONS

Peer reviewed publications:

Einarsson S.V, Lowry K., Ashjian C., Lin P., Pickart R., Chappell P. D.. (2022),

Alexandrium on the Alaskan Beaufort Sea shelf: Impact of upwelling in a warming Arctic. Harmful Algae, 120: 102346.

Abdala, Z.M., Clayton, S., Einarsson, S.V., Powell, K., Till, C.P., Coale, T.H. and Chappell, P.D. (2022), Examining ecological succession of diatoms in California Current System cyclonic mesoscale eddies. Limnol Oceanogr, 67: 2586-2602.

Selden C. R., Einarsson S. V., Lowry Kate, Crider K. E., Pickart R. S., Lin P., Ashjian C., Chappell P. D. (2022). Coastal upwelling enhances abundance of a symbiotic diazotroph (UCYN-A) and its haptophyte host in the Arctic Ocean. Fron in Mar Sci, 9. * Co-first author

Submitted:

Sveinn V. Einarsson, Kim Powell, Claire Till, Tyler Coale, P. Dreux Chappell. Diatom Community Response to High and Low Iron Upwelling Plumes in the California Current System Mar Ecol Prog S.

Publications complete; to be submitted following collaborator review:

Sveinn V. Einarsson and Adam R. Rivers. ITSxpress Version 2. Microbiology Spectrum.

PROGRAMMING EXPERIENCE

7+years Python, Matlab, Shell. In addition to several years of experience with R, C++ and Assembly.

NVIDIA DLI – Fundamentals of Deep Learning Certificate

OUTREACH & PROFESSIONAL SERVICE

2017-2021 Blue Crab Bowl Volunteer

2016-2018 Science outreach with VA Young Scientist's Program

2017 Guest Lecturer for AP Environmental Science and AP Marine Biology at Cape Henry Collegiate, VA

2014-2017 Virginia Beach EMS Emergency Medical Technician

OTHER LICENSES

2014 FAA Private Pilot License, Epix Aviation, Chesapeake, VA

2012 Emergency Medical Technician, University of Iowa Hospitals and Clinics, Iowa City, IA

REFERENCES

Available upon request:

- USDA GBRU – Adam R. Rivers
- Haverford College – Kristen Whalen
- Old Dominion University – P. Dreux Chappell (Current affiliation University of South Florida)

CONFERENCE & INVITED PRESENTATIONS (As first author)

Sveinn Einarsson, Adam Rivers, USDA – Argicultural Research Service Microbiome Seminar Series, ITSxpress: Software to rapidly trim internally transcribed space sequences with quality scores for marker gene analysis. Oct 20th 2023. (Virtual Presentation)

Sveinn Einarsson, Adam Rivers, The Software Package ITSxpress. 5th NIH-FDA-NIST-USDA Joint Agency Microbiome (JAM) Summer Symposium, Beltsville, MD, Aug. 23rd 2023. (Oral Presentation)

Sveinn Einarsson, Kate Lowry, Carin Ashjian, Robert Pickart, P. Dreux Chappell. Alexandrium in the Arctic: Are harmful algae spreading as the Arctic warms. Graduate Research Achievement Day, March 2021, Old Dominion University, Norfolk, Virginia, USA. (Poster Presentation)

Sveinn Einarsson, Kate Lowry, Carin Ashjian, Robert Pickart, P. Dreux Chappell. Beaufort Sea Upwelling and Corresponding Shifts in the Eukaryotic Community. Presented at 2020 Ocean Science Meeting, San Diego, CA, 16-21 Feb. (Oral Presentation)

Sveinn Einarsson, Zuzanna M Abdala, Kimberly Powell, Claire P. Till, Dreux Chappell. High and Low Iron Upwelling and Corresponding Shifts in the Diatom Community. Presented at 2018 Ocean Sciences Meeting, Portland, OR, 12-16 Feb. (Oral Presentation)

Sveinn Einarsson, Zuzanna M. Abdala, Kimberly Powell, P. Dreux Chappell. Diatom community composition through upwelling over thin and broad continental shelves. Ocean Carbon and Biogeochemistry Workshop, 26-29 June 2017, Woods Hole, Massachusetts, USA. (Poster Presentation)

Sveinn Einarsson, Zuzanna M. Abdala, Kimberly Powell, Benjamin Twining, Claire P. Till, Tyler Coale, P. Dreux Chappell. Diatom community composition along Oregon Coast upwelling in relation to environmental variables. Ocean Carbon and Biogeochemistry Workshop, 25-28 July 2016, Woods Hole, Massachusetts, USA. (Poster Presentation)

CONFERENCE PRESENTATIONS (As co-author)

2021 OCB Virtual Meeting: Coastal upwelling enhances abundance of a symbiotic diazotroph (UCYN-A) and its host in the Arctic Ocean. Corday Selden, **Sveinn Einarsson**, Kate Lowry, Katie Crider, Robert Pickart, Carin Ashjian, and P. Dreux Chappell (Poster Presentation)

2021 ASLO Virtual Meeting: Field-based nitrate assimilation isotope effect estimates from the Atlantic sector of the subantarctic Southern Ocean. Rachel K. Thomas, Sarah Fawcett, Heather Forrer, Sven Kranz, P. Dreux Chappell, **Sveinn Einarsson**, Angie Knapp (Oral Presentation)

2021 ASLO Virtual Meeting: Nitrate assimilation isotope effect estimates from incubations of natural communities in the Atlantic sector of the subantarctic under light and iron stress. J.M. Rose, Rachel K. Thomas, Lumi Haraguchi, **Sveinn Einarsson**, Heather J. Forrer, Sarah Fawcett, P. Dreux Chappell, Angie N. Knapp, Sven A. Kranz (Oral Presentation)

2018 Ocean Sciences Meeting: Diatom community composition shifts in the nitrogen-limited Mid-Atlantic Bight. Z. Abdala, **Sveinn Einarsson**, K. Powell, B. Widner, P. Bernhardt, P. D. Chappell (Poster Presentation)

2017 OCB Summer Workshop: Diatom community composition shifts in the nitrogen limited Mid-Atlantic Bight. Z. Abdala, **Sveinn Einarsson**, K. Powell, B. Widner, P. Bernhardt, P. D. Chappell (Poster Presentation)

2016 OCB Summer Workshop: Diatom community composition shifts as a response to California coastal upwelling. Z. Abdala, **Sveinn Einarsson**, K. Powell, J. Fitzsimmons, T. Coale, C. P. Till, P. D. Chappell (Poster Presentation)