



Max Czapanskiy, PhD

UC SANTA BARBARA, ASSISTANT PROFESSOR OF TEACHING

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Ecologist, data scientist, and educator. I teach scientists at all career stages how to improve their data analysis skills through innovative course design and hands-on mentorship. My research integrates software engineering and ecology to promote open and reproducible science.

Education

Stanford University	Pacific Grove, CA
PHD IN BIOLOGY	2022
<ul style="list-style-type: none">Advised by Jeremy GoldbogenDissertation: Baleen whale physiology revealed through the integration of bio-logging and ecoinformatics	
San Francisco State University	San Francisco, CA
MS IN GEOGRAPHIC INFORMATION SYSTEMS	2018
<ul style="list-style-type: none">Advised by Ellen HinesThesis: Using energy landscapes to understand seabird movement and spatial ecologyGraduate hood, College of Science & Engineering	
Columbia University	New York, NY
BS IN COMPUTER SCIENCE	2014

Teaching and Mentoring

Data Science for Eco/Evo	UC Santa Cruz
LEAD INSTRUCTOR	2023
<ul style="list-style-type: none">Graduate seminar in the Department of Eco and Evo Bio covering scientific programming, project management, and open science.Course website: flukeandfeather.github.io/BIOE215fall23/	
Undergraduate researcher mentor	Stanford University
REEFS MENTOR	2022
Just Enough Software Engineering (For Scientists)	Stanford University
LEAD INSTRUCTOR	2021
<ul style="list-style-type: none">Two-week self-directed, mastery-oriented software engineering course for biosciences graduate students	
Introduction to Physiological Ecology	Stanford University
TEACHING ASSISTANT	2021
Undergraduate researcher mentor	CSU Monterey Bay REU
NSF REU MENTOR	2019
<ul style="list-style-type: none">Mentee Hayden Smith presented his work at a conference and published it in the <i>Journal of Exp. Bio.</i> (Gough et al., 2021).	
Data Carpentry	The Carpentries
CERTIFIED INSTRUCTOR	2018 - present
Introduction to Ecology	Stanford University
TEACHING ASSISTANT	2018
Introduction to GIS	San Francisco State University
TEACHING ASSISTANT	2016 - 2017

Publications

Sea-Ice and Macrozooplankton Distribution as Determinants of Top Predator Community Structure in Antarctic Winter	Marine Ecology Progress Series
CZAPANSKIY, M.F. , SANTORA, J.A., DIETRICH, K.S., CIMINO, M.A., HAZEN, E.L., ..., VEIT, R.R.	2024
Ecosystem Sentinels as Early-Warning Indicators in the Anthropocene	Ann. Rev. of Environment and Resources
HAZEN, E.L., SAVOCA, M.S., CLARK-WOLF, T., CZAPANSKIY, M.F. , RABINOWITZ, P.M., ABRAHMS, B.	2024

Energy Densities of Key Prey Species in the California Current Ecosystem

PRICE, S.E., SAVOCA, M.S., KUMAR, M., **CZAPANSKIY, M.F.**, McDERMOTT, D., ..., GOLDBOGEN, J.A.

Frontiers in Marine Science2024

Field measurements reveal the risk of microplastic ingestion by filter-feeding megafauna

KAHANE-RAPPORT, S.R., **CZAPANSKIY, M.F.**, FAHLBUSCH, J.A., FRIEDLAENDER, A.S., CALAMBOKIDIS, J., ..., SAVOCA, M.S.

Nature Communications2022

Fast and furious: energetic tradeoffs and scaling of high-speed foraging in rorqual whales

GOUGH, W.T., CADE, D.E., **CZAPANSKIY, M.F.**, POTVIN, J., FISH, F.E., ..., GOLDBOGEN, J.A.

Integrative Organismal Biology2022

Blue whales increase feeding rates at fine-scale ocean features

FAHLBUSCH, J.A., **CZAPANSKIY, M.F.**, CALAMBOKIDIS, J., CADE, D.E., ABRAHMS, B., ..., GOLDBOGEN, J.A.

Proceedings of the Royal Society B2022

Baleen whale inhalation variability revealed using animal-borne video tags

NAZARIO, E.C., CADE, D.E., BIERLICH, K., **CZAPANSKIY, M.F.**, GOLDBOGEN, J.A., ..., FRIEDLAENDER, A.S.

PeerJ2022

How reproducibility will accelerate discovery through collaboration in physio-logging

CZAPANSKIY, M.F., BELTRAN, R.S.

Frontiers in Physiology2022

An accelerometer-derived ballistocardiogram method for detecting heart rates in free-ranging marine mammals

CZAPANSKIY, M.F., PONGANIS, P.J., FAHLBUSCH, J.A., SCHMITT, T.L., GOLDBOGEN, J.A.

Journal of Exp. Bio.2022

Elephant seals time their long-distance migrations using a map sense

BELTRAN, R.S., YUEN, A.L., CONDIT, R., ROBINSON, P.W., **CZAPANSKIY, M.F.**, ..., COSTA, D.P.

Current Biology2022

Scaling of maneuvering performance in baleen whales: larger whales outperform expectations

SEGRE, P.S., GOUGH, W.T., ROUALDES, E.A., CADE, D.E., **CZAPANSKIY, M.F.**, ..., GOLDBOGEN, J.A.

Journal of Exp. Bio.2022

Tools for integrating inertial sensor data with video bio-loggers, including estimation of animal orientation, motion, and position

CADE, D.E., GOUGH, W.T., **CZAPANSKIY, M.F.**, FAHLBUSCH, J.A., KAHANE-RAPPORT, S.R., ..., GOLDBOGEN, J.A.

Animal Biotelemetry2021

Baleen whale prey consumption based on high-resolution foraging measurements

SAVOCA, M.S., **CZAPANSKIY, M.F.**, KAHANE-RAPPORT, S.R., GOUGH, W.T., FAHLBUSCH, J.A., ..., GOLDBOGEN, J.A.

Nature2021

Modelling short-term energetic costs of sonar disturbance to cetaceans using high-resolution foraging data

CZAPANSKIY, M.F., SAVOCA, M.S., GOUGH, W.T., SEGRE, P.S., WISNIEWSKA, D.M., ..., GOLDBOGEN, J.A.

Journal of Applied Ecology2021

Scaling of oscillatory kinematics and Froude efficiency in baleen whales

GOUGH, W.T., SMITH, H.J., SAVOCA, M.S., **CZAPANSKIY, M.F.**, FISH, F.E., ..., GOLDBOGEN, J.A.

Journal of Exp. Bio.2021

Cervical air sac oxygen profiles in diving emperor penguins: parabronchial ventilation and the respiratory oxygen store

WILLIAMS, C.L., **CZAPANSKIY, M.F.**, JOHN, J.S., ST LEGER, J., SCADENG, M., PONGANIS, P.J.

Journal of Exp. Bio.2021

Why whales are big but not bigger: Physiological drivers and ecological limits in the age of ocean giants

GOLDBOGEN, J.A., CADE, D.E., WISNIEWSKA, D.M., POTVIN, J., ..., **CZAPANSKIY, M.F.**, ..., PYENSON, N.D.

Science2019

Extreme bradycardia and tachycardia in the world's largest animal

GOLDBOGEN, J.A., CADE, D.E., CALAMBOKIDIS, J., **CZAPANSKIY, M.F.**, FAHLBUSCH, J., ..., PONGANIS, P.J.

PNAS2019

Diving behavior of Pink-footed Shearwaters *Ardenna creatopus* rearing chicks on Isla Mocha, Chile

ADAMS, J., FELIS, J.J., **CZAPANSKIY, M.F.**, CARLE, R., HODUM, P.

Marine Ornithology2019

Collision and displacement vulnerability to offshore wind energy infrastructure among marine birds of the Pacific Outer Continental Shelf

KELSEY, E.C., FELIS, J.J., **CZAPANSKIY, M.F.**, PEREKSTA, D.M., ADAMS, J.

Journal of Env. Mgmt.2018

TECHNICAL REPORTS

Habitat Affinities and At-Sea Ranging Behaviors among Main Hawaiian Island Seabirds: Breeding Seabird Telemetry, 2013–2016.

ADAMS, J., FELIS, J.J., **CZAPANSKIY, M.F.**

OCS Study BOEM 2020-006.2020

Trends in mammalian predator control trapping events intended to protect ground-nesting, endangered birds at Haleakalā National Park, Hawai'i: 2000–14.

KELSEY, E.C., ADAMS, J., **CZAPANSKIY, M.F.**, FELIS, J.J., YEE, J.L., KAHOLOAA R.L., AND BAILEY, C.N.

U.S. Geological Survey Open-File Report 2019-1122.2019

Software

stickleback (pypi.org/project/stickleback)

A MACHINE LEARNING PIPELINE FOR DETECTING FINE-SCALE BEHAVIORAL EVENTS IN BIO-LOGGING DATA

Python

rstickleback (github.com/FlukeAndFeather/rstickleback)	
AN R INTERFACE TO THE STICKLEBACK MACHINE LEARNING PIPELINE	R
catsr (doi.org/10.5281/zenodo.5140484)	
TOOLS FOR READING AND VISUALIZING 3D BIO-LOGGING DATA; ACCOMPANIES CADE ET AL. (2021)	R
beats (github.com/FlukeAndFeather/beats)	
INTERACTIVE TOOLS FOR IMPORTING, ANNOTATING, AND VALIDATING ECG BIO-LOGGER DATA	R

Employment

UC Santa Barbara, Bren School & College of Creative Studies	
ASSISTANT PROFESSOR OF TEACHING	2024 - Present
NOAA / UC Santa Cruz	
POSTDOCTORAL SCHOLAR	2022 - 2024
Stanford University	
STANFORD DATA SCIENCE SCHOLAR	2019 - 2021
U.S. Geological Survey Western Ecological Research Center	
BIOLOGICAL SCIENCES TECHNICIAN	2014 - 2017
University of Montana Avian Science Center	
AVIAN POINT COUNT TECHNICIAN	2014
Friends of Cooper Island	
FIELD ASSISTANT AND DATA ANALYST	2012 - 2013
Point Blue Conservation Science	
MARINE ECOLOGY INTERN	2013
Microsoft	
SOFTWARE DEVELOPER ENGINEER IN TEST	2009 - 2012

Conference presentations

Stickleback: A machine learning pipeline for detecting behavioral events in bio-logging data	Online
7TH INTERNATIONAL BIO-LOGGING SYMPOSIUM	2021
Quantifying the Influence of Energy Windscares on Seabird Distributions	Portland, OR
OCEAN SCIENCES MEETING	2018
Modeling Seabird Habitat Accessibility	Pacific Grove, CA
SOCIETY FOR CONSERVATION GIS ANNUAL CONFERENCE	2017
Taking the Plunge: Comparing Diving Behavior of Red-footed and Brown Boobies Breeding on Lehua Islet, Hawaii	Turtle Bay, HI
PACIFIC SEABIRD GROUP ANNUAL MEETING	2016

Awards and scholarships

Stanford Data Science Initiative	Stanford University
STANFORD DATA SCIENCE SCHOLAR FELLOWSHIP	2020
Department of Biology	Stanford University
OUTSTANDING TEACHING ASSISTANT AWARD	2019
Vice Provost for Graduate Education	Stanford University
STANFORD GRADUATE FELLOWSHIP	2018
College of Science and Engineering	San Francisco State University
GRADUATE HOOD	2018
Esri Development Center	Esri
STUDENT OF THE YEAR	2018
Council on Ocean Affairs	California State University
COAST REASEARCH AWARD	2018
College of Science and Engineering	San Francisco State University
MAXWELL MEMORIAL SCHOLARSHIP	2017

Department of Geography and Environmentt

PEASE AWARD

University Committee on Written English Proficiency

CWEP AWARD FOR GRADUATE STUDENT WRITING

San Francisco State University

2017

San Francisco State University

2017