Postdoctoral scholar position

The Institute of Marine Sciences [https://ims.ucsc.edu/] at the University of California, Santa Cruz (UCSC), working in conjunction with the NOAA National Marine Fisheries Service Southwest Fisheries Science Center (https://www.fisheries.noaa.gov/about/southwest-fisheries-science-center, NOAA Fisheries), invites applications for the position of Postdoctoral Scholar, under the direction of Dr. Juan Zwolinski and in collaboration with NOAA advisor Dr. Kevin Stierhoff and colleagues at the advanced survey technologies group.

Based at the La Jolla laboratory, the postdoctoral scholar will to perform a comprehensive review of the target strength (TS) equations used to estimate the biomasses of CPS using acoustic-trawl Surveys in the California Current. The first goal of this review is to derive equations of TS vs lengths based on in situ acoustic measurements and assess the merits for their implementation. For species without sufficient in situ TS measurements, the revision will be bibliographical. This project will support the expanded use of active acoustic data for ecosystem-based fisheries science and management.

The objectives for this position are to obtain:

- A data catalog of Echoview files and accompanying trawl data to extract species-validated, single-target detections. This catalog should span the entire duration of the ATM survey effort.
- Robust multi-frequency single-target detection algorithms.
- An analysis of TS dependence on species, length, depth, and other potential environmental effects.
- A literature review of TS-to-length equations for species having insufficient in situ TS measurements.
- Revised TS-to-length equations for Pacific Sardine, Pacific Mackerel, and Northern Anchovy,
- Jack Mackerel (*Trachurus symmetricus*), and Pacific Herring (*Clupea palasii*).

Applicants with expertise in any of the following areas are strongly encouraged to apply:

- Demonstrated knowledge of Experience with, knowledge of, or willingness to learn the principles and theories of fisheries acoustics, echosounder data analysis, and echo classification
- Demonstrable experience with computational modeling and data analysis methods
- Competent working with diverse teams in-person and remotely across multiple time zones
- Excellent verbal and written communication skills
- Proficiency in software languages, e.g. Python, R
- Google Cloud Platform (GCP) experience
- Demonstrable record of scientific publishing and oral presentation

The Institute of Marine Sciences (IMS) is an organized research unit whose mission is to increase knowledge of the world's oceans and inhabitants to better understand their economic importance and the impact people have on them. Through this effort, IMS maintains the responsibility to encourage, develop, and support marine research and education and does this by providing research opportunities,

resources, facilities, and support for scientists within the institute and with other marine research institutions.

As part of its mission's efforts, IMS launched the Fisheries Collaborative Program (FCP) to help foster research collaborations between NOAA scientists, UCSC faculty, IMS researchers, and students. The FCP's research activities include field studies, laboratory experiments, modeling, and computational studies involving marine and freshwater species and habitats. Comprehensive studies are being conducted on the ecology and life history of Pacific salmonids and other fishes. FCP research supports the conservation of coastal biodiversity and the sustainable management of fisheries resources.

The hiring unit will not sponsor employment-eligible immigration statuses for this position. The applicant needs to be a US citizen or a legal permanent resident.

ACADEMIC TITLE
Postdoctoral Scholar

SALARY
Commensurate with qualifications and experience. Minimum annual salary rates are made based on the individual's *Experience Level*, which is determined by the number of months of postdoctoral service at any institution. See current salary scale for Postdoctoral Titles at https://apo.ucsc.edu/compensation/salary-scales/index.html

BASIC QUALIFICATIONS
Ph.D. (or equivalent foreign degree) in the field of fisheries biology/management, natural resources management, data science, or other related field of study at the time of initial appointment.

POSITION AVAILABLE
As soon as possible after initial review of the applications. Ph.D. must be in hand at time of the initial appointment.

MAXIMUM DURATION OF SERVICE IN A POSTDOCTORAL TITLE
Postdoctoral Scholar appointments are full-time; the initial appointment is for a minimum of two years, with the possibility of reappointment. Reappointment will be contingent upon positive performance review and availability of funding. The total duration of an individual's postdoctoral service may not exceed five years, including postdoctoral service at any institution. Under limited circumstances, an exception to this limit may be considered, not to exceed a sixth year.

To apply please contact Dr. Juan Zwolinski jzwolins@ucsc.edu, Dr. Kevin Stierhoff kevin.stierhoff@noaa.gov, or Josiah Renfree josiah.renfree@noaa.gov

Documents/Materials
- Letter of application that briefly summarizes your qualifications and interest in the position (required)
- Curriculum vitae (required)
- List of publications (required)

Reference Requirement
Applicants must provide the names and contact information of their references (a minimum of 3 are required and a maximum of 5 will be accepted).

RECRUITMENT PERIOD
Full consideration will be given to applications completed by **January 15, 2026.** Applications received after this date will be considered only if the position has not been filled.