

International Year of the Salmon (IYS) postdoctoral position in Ocean Remote Sensing in the North Pacific

Applications are being accepted for a Postdoctoral position at the University of Victoria under the supervision of Dr. Costa and in collaboration with Dr. Hunt (UBC), Dr. Peña (DFO) and Dr. Hirawake (National Institute of Polar Research). The postdoc will be based in Victoria, Vancouver Island, but at an initial phase, due to Covid-19 restrictions, remote work will be considered.

The high seas life phase of Pacific salmon is a critical area of concern in their overall survival. It is here that most Pacific salmon species do the majority of their growth, and mature before returning to freshwater ecosystems to spawn. However, significant knowledge gaps remain around the conditions experienced by salmon on the high seas, and the implications of these conditions for their growth and survival. In an effort to fill these knowledge gaps, the IYS Program has instigated a series of multi-nation research expeditions in the North Pacific that aim to update and advance understanding of high seas salmon ecosystems (<https://yearofthesalmon.org/high-seas-expeditions>).

This project aims to use 24 years (1997 to present) of satellite imagery and data from 2019, 2020, and 2022 IYS voyages from the pan-North Pacific to document the spatial-temporal phenology and functional groups of phytoplankton and associated bioregionalization dynamic, and its response to physical forcing at different time scales. Specifically, the research is expected to address the following:

1. Document the phenology of phytoplankton and functional groups at various times scales and associated bioregionalization based on satellite data from different platforms: SeaWiifs (1997-2010), MERIS (2002-2012), MODIS (2002 to present), VIIRS (2012 to present), and Sentinel 3 (2016 to present). *Deliverable* – one peer-review publication and database of satellite-derived products.
2. Document response of the satellite-derived chl_a and phytoplankton functional groups characteristics, intensity, recurrence, and dynamics of the pan-NP to the temporal dynamic of physical drivers. *Deliverable* - one peer-review publication and database with physical drivers.
3. Document seasonality and phenology of satellite-derived chl_a and phytoplankton functional groups compared with zooplankton phenology and community composition. This work will be done in collaboration with Dr. Hunt (UBC) and Dr. Pakhomov (UBC). *Deliverable* - one peer-review publication.

Ideal qualifications: A Ph.D. degree (completed by the time of appointment) in optical remote sensing and oceanography. Expertise in ocean colour remote sensing/ocean ecology biogeochemistry is ideal. Other fields of expertise to be considered include oceanography, climate and atmospheric sciences, marine biogeochemistry, phytoplankton ecosystem ecology, scientific computing, and statistics.

Technical skills required: Programming skills (Python, MATLAB®, R), statistical analysis skills, satellite imagery processing, analysis of multi-dimensional large data sets.

Application closure date: June 25, 2021.

Start date: July 2021

Position Length: Two years, pending annual review

Salary: CAD 55,000

Applicants must submit:

- A CV, including the email and phone number for three references;

- A short cover letter explaining the applicant's motivation for working on the project and how previous experience qualifies them for this position;
- Reprints of 2 published papers, if available;
- Confirmation of ability to work in Canada

Equity and diversity are essential for academic excellence. An open and diverse community fosters the inclusion of voices that have been underrepresented or discouraged. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the B.C. Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as a First Nations, Metis, Inuit, or Indigenous person.

Submit applications to:

Maycira Costa (maycira@uvic.ca)