

9-10 March 2026

The Institute for Coastal and Marine Research presents a Seminar and Hands-On Workshop

By Luther Adams

SEMINAR

Strategies for counting fauna and flora using computer vision over space, time and different sensors for ecology.

Processing large image and video datasets manually is time-consuming and often impractical at ecological scales. Computer vision (CV) enables rapid, repeatable extraction of biological information from imagery collected across diverse marine environments and sensor platforms. However, many marine scientists face barriers in knowing where to begin, which tools to use, and how to design robust workflows.

This seminar presents practical strategies for applying computer vision to biodiversity monitoring, with emphasis on counting fauna and flora across spatial and temporal scales. We will discuss data requirements, model selection, annotation strategies, domain shift across sensors, and deployment considerations. Real-world marine ecology examples will illustrate how to move from raw imagery to ecologically meaningful metrics.



Monday, 09 March 2026, 13:00 - 14:00



B Block, Conference Hall, Ocean Sciences Campus, Nelson Mandela Uni



Register for in-person or online attendance:
<https://forms.office.com/r/ykute8K2B7>

WORKSHOP

An introduction to computer vision for marine ecology

This one-day hands-on workshop introduces marine scientists to practical computer vision workflows for ecological applications. Participants will learn how to prepare image datasets, train and evaluate deep learning models, and deploy models to generate ecological metrics. No prior machine learning experience is required, but a laptop, with a mouse and an account on [BIIGLE](#) are essential.

By the end of the workshop, participants will have trained and evaluated a working computer vision model on marine imagery and will understand how to adapt the workflows to their own datasets.

Seats are limited for the workshop.



Tuesday, 10 March 2026, 09:00 - 15:00



B Block Conference room 1, Ocean Sciences Campus, Nelson Mandela University, Venue TBC



Register for in-person attendance:
<https://forms.office.com/r/bF1Tv937Mc>

BIOGRAPHY

Luther Adams is a benthic ecologist with expertise in underwater image processing. Currently, he is a PhD candidate at Rhodes University with affiliations to the South African Institute for Aquatic Biodiversity and the South African National Biodiversity Institute. His work focuses on marine ecosystem classification and mapping, and automated biodiversity monitoring. Over the past five years, he has developed and applied computer vision approaches to extract ecological information from large underwater image datasets.