

Special Issue

Machine Learning in Aquaculture

Message from the Guest Editors

The Special Issue focuses on the use of neural networks and algorithms to optimize various aspects of the field, including species identification, counting, classification, and behavior analysis. With the growth of aquaculture, it is essential to develop and automate management processes to achieve greater efficiency and agility. This Special Issue will explore how neural networks and detection algorithms can be applied innovatively in aquaculture to improve monitoring, automatic identification, fish counting, and behavior analysis. We aim to present scientific advancements in the use of machine learning for the automated management of aquatic environments, both in controlled production systems and in natural or underwater environments. Practical and technical limitations in the use of these technologies will also be explored, such as issues with data labeling and image quality, as well as adverse visual capture conditions. Moreover, we will focus on the solutions that these technologies offer to address such challenges and improve the accuracy and efficiency of management in modern aquaculture.

Guest Editors

Dr. Adriano Costa

Instituto Federal Goiano, Campus Rio Verde, Rodovia Sul Goiana, km 01, Zona Rural, Rio Verde 75901-970, CEP, Brazil

Prof. Dr. Rilke Tadeu Fonseca De Freitas

Faculty of Animal Science and Veterinary Medicine, Federal University of Lavras, UFLA, Minas Gerais, Lavras 37200-900, CEP, Brazil

Dr. Rafael Reis Neto

UNESP Aquaculture Center (CAUNESP), Jaboticabal, Brazil

Deadline for manuscript submissions

31 August 2025



Fishes

an Open Access Journal
by MDPI

Impact Factor 2.1
CiteScore 1.9



mdpi.com/si/226029

Fishes

MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
fishes@mdpi.com

[mdpi.com/journal/
fishes](https://mdpi.com/journal/fishes)





Fishes

an Open Access Journal
by MDPI

Impact Factor 2.1
CiteScore 1.9



[mdpi.com/journal/
fishes](https://mdpi.com/journal/fishes)



About the Journal

Message from the Editor-in-Chief

Fishes is a multidisciplinary open access journal focusing on reports of original research and critical reviews and synthesis from the broad area of fishes and aquatic animals. The ultimate objective of *Fishes* is to facilitate the discovery of connections between research areas, advancing science and filling knowledge gaps, and providing solutions for all present and future issues encountered in the sector of fisheries and aquaculture. As Editor-in-Chief, I encourage you to consider *Fishes* for your scientific papers and would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Maria Angeles Esteban

Department of Cell Biology and Histology, Faculty of Biology, University of Murcia, 30100 Murcia, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubAg, FSTA, and other databases.

Journal Rank:

JCR - Q2 (Marine and Freshwater Biology)