

# **Fish length measurements using artificial neural networks**

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## **ABSTRACT**

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An existing stereoscopic technique employing neural networks has been used to measure the length of fishes. Prior to the actual measurements, certain parameters that might affect the accuracy of the measurement were investigated. The influence of the index of refraction of water ( depending on salinity) and the orientation of the object relative to the cameras on the accuracy of the measurement was examined.

Results showed that the salinity of water and the orientation of the object with respect to the cameras have negligible effect on the measurements. With a total error of less than 2 mm, the method presented in this paper is far better than conventional techniques.

Keywords: fish length, artificial neural networks, fish measurement accuracy

## **INTRODUCTION**

Fishes play an important role as grazers in coral reef ecosystems for they can help in controlling algal growth in coral reefs (English *et al.*, 1994). They are a staple source of protein for humans and various species provide recreation to sports fishermen. They are also commercially important for both aquaculture