Winter School 2025

Ghana ~ Germany

Computational modelling in marine ecology, fisheries and climate

Cape Coast, Ghana, from 27 to 31 January, 2025

The Winter School will be held at the Africa Centre of Excellence in Coastal Resilience (ACECoR), University of Cape Coast, Ghana, and is targeted at enthusiastic MSc and PhD students with a keen interest in computational modelling, marine ecology, fisheries, and climate. Advanced knowledge in mathematical or numerical disciplines is not required. We offer equal opportunities to all applicants and we foster diversity, inclusion, and cultural exchange among participanting students.

Organised by

UENR UNIVERSITY OF ENERGY & NATURAL RESOURCES

ZMT LEIBNIZ CENTRE for Tropical Marine Research

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ZMT LEIBNIZ CENTRE for Tropical Marine Research

Deadline for application: 15 November 2024

Contact: Dr. Kwabena A. Owusu
kwabena@aims.edu.gh

Apply now online:
https://forms.gle/A6MfEfnwqvcHNcc48

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Mathematical modelling skills are a growing requirement in scientific undertakings. This Winter School is an opportunity for enthusiastic students to learn and discuss mathematical modelling techniques that are relevant for addressing problems in marine ecology, fishery, and climate. Advanced knolwdge in mathematical or numerical disciplines is not required. We offer equal opportunities to all applicants and we foster diversity, inclusion, and cultural exchange among participating students.

The Programme

The Winter School aims at exploring a number of ecological problems using state-of-the-art modelling methods, including differential equation-based and agent-based modelling. Both approaches will be applied using the programming language python. The topics include: population growth, predator-prey interactions, plankton dynamics, fishery, climate and the greenhouse effect. An overview of the basic principles of mathematical modelling and of python will smoothly introduce the students into the topics. The Winter School promotes cultural exchange between students of different backgrounds and fosters ethical and legal values in ocean governance for a sustainable and peaceful use of marine resources.

Lecturers and organisers

Prof. Agostino Merico (Leibniz Centre for Tropical Marine Research, Bremen, Germany), **Prof. Joseph Aggrey-Fynn** (ACECoR and University of Cape Coast, Ghana), and **Dr. Kwabena A. Owusu** (University of Energy & Natural Resources, Sunyani, Ghana),

Pre-requisites and costs

Applicants should have a keen interest in computational modelling and in marine ecology. Advance knowledge or background in mathematical or numerical disciplines is not required. Funding, which will cover all costs (including travel, accommodation, and meals), is available for all the selected participants. The selection process will start right after the application deadline. Selection will be based primarily on student's motivation, which will be assessed from a brief motivation letter and, if necessary, via Zoom meetings.

How to apply

Applications are welcome! The interested students can apply by filling out an online form and by uploading a letter of motivation (only half page) and a CV in one single PDF file at the link provided (see below). Applications not following these requirements will be rejected.

The School is intended for students based in Ghana and Germany (regardless of nationality).

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