



Katrin Tirok



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Coastal Engineering/Marine Biology

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I was born in Berlin, Germany and studied Biology with the focus on Aquatic Ecology and Ecosystem Modelling at the University of Potsdam, Germany. I received my PhD in Ecology from the University of Potsdam, Germany in 2008. After a post-doctoral research stay at the Max-Planck Institute of Molecular Plant Physiology in Potsdam, Germany, I decided to come to South Africa to conduct research on Lake St. Lucia in the iSimangaliso Wetland Park in KwaZulu-Natal.

## CURRENT RESEARCH

### Topic

Modelling the impact of environmental conditions on the food-web in Lake St. Lucia with respect to conservation and management of the system

### Methodology

- I use dynamic simulation models as tools for understanding, predictions, and management combined with field work and data analysis.
- I am working with Matlab, R, and Mike21

### Application

dynamics in aquatic food-webs, influence of environmental variables as well as species interactions and diversity on community dynamics; adaptation of communities (populations, organisms) to changing conditions

## UKZN main Publications

1. Tirok, K. and Scharler, U.M. (2013) Dynamics of pelagic and benthic microalgae during drought conditions in a shallow estuarine lake (Lake St. Lucia), Estuarine, Coastal and Shelf Science 118: 86-96.

## Past Researches

1. Mathematical modelling of photosynthetic processes
2. Modelling of predator-prey interaction
3. Dynamic-trait/adaptive dynamics approaches
4. Analysis of long-term data from Lake Constance

## Future Interests

Research, Data analysis, Consultancy, Stats training

## Extra Interests

Sports (squash, surfing, volleyball, all for fun not competition), Outdoor activities (hiking, game parks ...), Travels