



UFZ-Seminar

Research Unit



Water Resources and Environment



24 June 2019, 3 p.m.

Seminar Room 1, Brückstr. 3a, Magdeburg

David Hamilton

Griffith University, Brisbane

will give a talk on:

Challenges for modelling of cyanobacteria blooms and toxicity

Cyanobacteria have several physiological adaptations that enable them to dominate the phytoplankton assemblage and form blooms under certain conditions. Capturing these conditions requires hydrodynamic models to simulate the stratification dynamics and circulation. These physical dynamics in turn affect the physiological adaptations of the cyanobacteria and present one of the greatest challenges for improving our models of them.

I use *Microcystis*/ sp. as an example to consider physical-biological coupling and examine possibilities to improve simulations of cyanobacteria blooms. The physical-biological coupling is of special significance as, for example, turbulence affects colony formation and size, and it may select for different strains within what we conventionally describe as a species.