

Gastvortrag

Marco Van De Wiel

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„The Use of Computer Modelling in Physical Geography“

Geomorphology has traditionally employed empirical and observation-based methods of inquiry. But, like many other scientific disciplines, it has witnessed a notable rise in the use of computational modelling as a tool for predicting changes, testing hypotheses and generating new knowledge. The advance of computational modelling has brought a number of questions: How do these computer models relate to the real world? Does a model have to relate to the real world to be a good model? What is good model anyway? Can model goodness be measured? Can bad models be useful? Can we really learn anything from models? Are there limits to what we can learn from models? The answers to these questions are not as straightforward as they might appear at first glance. They essentially depend on the nature of the modelling exercise. In this context I distinguish three main modes of computational modelling: predictive, explanatory and exploratory – each of which has its own epistemological and methodological framework.

Marco Van De Wiel is a computational geomorphologist; he spends a lot of time in front of a computer, studying virtual landscapes being changed by virtual geomorphological processes. Somehow he believes that doing this can help him understand real geomorphology. His research focusses on understanding non-linear process interactions in geomorphology, and has been published in Geology, Earth-Science Reviews, Water Resources Research, Geomorphology, Earth Surface Processes and Landforms, and Earth Surface Dynamics. Marco obtained his PhD from the University of Southampton in 2003, and became associate professor at the University of Western Ontario in 2005. He teaches courses on geomorphology, rivers and environmental modelling. A majority of his students seems to think he does a passable impression of being an adequate teacher.

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17.00 Uhr

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