



Position available: *Research Assistant or Postdoc*

3D/4D modeling of South Pacific Islands (Moorea IDEA Avatar)

An environmental modeling project for the South Pacific Islands Moorea and Tetiaroa is underway, dealing with circulation models, biological connectivity, ecological networks and social dynamics. For this certain base data is needed, which describes the physical state of the island and into which all kind of information can be imbedded. Ideally this would be a spatial information system, to be used as database for administration, analysis and representation of the data (www.mooreaidea.com). Important base data is a 3D landscape model, whose essential components are a Digital Terrain Model, buildings, roads, and vegetation. Such models have already been created from high-resolution satellite stereo images and Lidar flights. In a second step the landscape model will be combined with a bathymetric model (including the reef and lagoon topography).

Major works are also underway to measure the growth rates of corals. This is achieved with repetitive high resolution underwater photogrammetry.

Tasks: 3D measurement and modeling of landscape and bathymetric data, UAV-based modeling, underwater photogrammetry

Requirements: The successful candidate has a Master or PhD degree in Geomatics or neighbouring disciplines. He/she is familiar with digital photogrammetric measurements and modeling and has substantial programming experience. He/she is prepared and capable to work in a highly interdisciplinary and international group of scientists and is able to perform the work largely autonomously.

Work Place: ETH Zurich, Institute of Theoretical Physics, Platform for Advanced Scientific Computing, with occasional fieldwork in Moorea and Tetiorea

Duration of Project: 2 years

Start of Work: 1 January 2018

Salary: According to ETH Zurich rules, commensurate with previous experience (between CHF 75K and 91K)

Application: Letter of motivation, CV, list of publications, certificates, and two references

Reference Person: Prof. em. Dr. Armin Gruen, agruen@geod.baug.ethz.ch