

## INTENSIVE COURSE

### ***“Land Change Modeling Methods: Calibration, validation, and extrapolation”***

**by Robert Gilmore Pontius Jr.,**

**Saturday, 31 May 2008**

**Dept. of Geography, the University of the Aegean  
Mytilene, Lesvos, Greece**

This course provides hands-on training in GIS-based land change modeling. Participants learn the concepts and perform the analyses necessary to calibrate and to validate a land change model. The workshop uses the model **Geomod**, which reads raster maps of land-use and other biological, geological, sociological, demographic, or economic attributes to determine empirically the attributes of land that humans tend to use. **Geomod** forecasts locations for land-use change according to any of three decision rules based on: (1) nearest neighbors, (2) stratification by sub-region, and/or (3) a suitability map. Participants then use tools for validation in order to quantify the model's ability to forecast land change accurately based on a variety of statistical measurements, including error due to quantity and error due to location at multiple resolutions.

The workshop focuses on both the general concepts and the specific operation of the relevant modules of the GIS software **Idrisi**. Prior experience with GIS is helpful, while prior experience with **Idrisi** is not necessary. Participants who complete the course are entitled to a 50 percent discount on purchase of an **Idrisi** license, which is a \$625 savings. Participants should register early because this course was sold out when it was offered at the meetings of the International Association for Landscape Ecology in Syracuse, USA and Wageningen, the Netherlands.

Robert Gilmore Pontius Jr, “Gil” for short, is Associate Professor at Clark University in both the School of Geography and the Department of International Development, Community & Environment, where he coordinates the graduate program in Geographic Information Sciences for Development and Environment. His research compares land change models and quantifies their predictive powers. He created the land-use change model **Geomod** and several new statistical techniques to compare maps at multiple resolutions. He is active in the National Science Foundation's Long Term Ecological Research (LTER) and Human Environment Regional Observatory (HERO) programs. Gil holds a Master of Applied Statistics from The Ohio State University and a doctorate from the State University of New York's College of Environmental Science and Forestry. He has been creating, researching, and evaluating land change models for the past 15 years. To see the products of his activity, please visit his web site at [www.clarku.edu/~rpontius](http://www.clarku.edu/~rpontius).

#### **Cost for the course: 100€**

It includes lunch, 2 coffee breaks and a certificate for participants who complete the course.

#### **Maximum number of participants: 35**

*Note:* In case the number of applications exceeds 35, an extra session may be organized within the conference dates, 1-6 June 2008.

#### **Course duration: from 9am to 6pm**

Information on payment methods and deadlines will be announced soon.

This course is organized in the context of the International Conference on “Studying, Modeling and Sense Making of Planet Earth”, 1-6 June 2008, Mytilene, Lesvos, Greece

For more information on the course please check the conference website at:

<http://www.aegean.gr/geography/earth-conference2008/>.

For more details please contact:

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