

UCSB Geography Colloquium

1/3/12; 3:30 – 4:45; 1930 Buchanan

Cartographic design for digital terrain visualization in 2D and 3D

Presented by

Dr. Bernhard Jenny

Abstract:

When cartographers depict terrain on maps in 2D and 3D using manual approaches, they apply a variety of design principles. This presentation demonstrates ways to transfer these design principles to the digital realm by adapting computer graphics algorithms. Topics include progressive bending and interactive distortion of terrain for panorama maps; the generalization of terrain for shading and hypsometric tinting at small scales; and experiments with animating terrain using head tracking.

Bio:

Bernie Jenny is an assistant professor in cartography and geovisualization at Oregon State University. He received a PhD from the Institute of Cartography and Geoinformation of ETH Zurich, where he was also a postdoctoral researcher. He holds a M.S. in Geomatics, Surveying and Environmental Sciences of EPFL Lausanne and a post-graduate certificate in computer graphics from ETH Zurich. His research combines cartography, computer graphics, geovisualization, and GIS. His fields of interests are 2D and 3D terrain representation, web mapping, map design, projections, and the distortion analysis of diagrams and maps.