

Biographical Details

Dr. Kathleen Stewart

Department of Geography
The University of Iowa
Iowa City, IA 52242
Tel: (319) 335-0161 Fax: (319) 335-2725
Email: kathleen-stewart@uiowa.edu
<http://www.uiowa.edu/~geog/faculty/stewart/index.shtml>

Professional Preparation

McMaster University, Canada, Geography, Hons. B.A. 1982.
University of British Columbia, Canada, Geography, M.S. 1984.
University of Maine, Spatial Information Science and Engineering, Ph.D. 1999.
University of Maine, National Center for Geographic Information and Analysis, Postdoctoral Research Associate, 1999-2001.

Appointments

Associate Professor, The University of Iowa (2010-present)
Assistant Professor, The University of Iowa (2007- 2010)
Assistant Research Professor, University of Maine (2001-2007)
Postdoctoral Research Associate, University of Maine (1999-2001)

Selected Publications Most Closely Related

Hubbard S., and **K. Stewart Hornsby** (2011) Modeling alternative sequences of events in dynamic geographic domains, *Transactions in GIS*, 15(5): 557-575.
White, E. and **K. Stewart** (2011) Modeling geospatial barriers, First ACM SIGSPATIAL International Workshop on Spatial Semantics and Ontologies (SSO) 2011, Chicago, IL.
Nixon, V. and **K. Stewart Hornsby** (2010) Using geolifespans to model dynamic geographic domains, *The International Journal of Geographical Information Science*, 24(9): 1289-1308.
Stewart Hornsby, K. and W. Wang (2010) Representing dynamic phenomena based on spatiotemporal information extracted from web documents. *Extended Abstracts, GIScience Conference 2010*, online at http://www.giscience2010.org/pdfs/paper_131.pdf.
Stewart Hornsby, K. and Yuan, M. (Eds.) (2008) *Understanding dynamics of geographic domains*, CRC Press, New York, NY.

Other Significant Publications

Kulik, I., **K. Stewart Hornsby**, I. Bishop (2011) Modeling geospatial trend changes in vegetation monitoring data, *Computers, Environment, and Urban Systems*, 35(1): 45-56.
Stewart Hornsby, K. and K. Joshi (2010) Combining ontologies to automatically generate temporal perspectives of geospatial domains, *Geoinformatica*, 14:481-505.
Stewart Hornsby, K. and N. Li (2009) A conceptual framework for modeling dynamic paths from natural language expressions, *Transactions in GIS*, 13(s1): 27-45.
Stewart Hornsby, K. and K. King (2008) Modeling motion relations for moving objects on road networks, *Geoinformatica*, 12(4): 477-495.

Yuan, M. and **K. Stewart Hornsby** (2007) *Computation and visualization for understanding dynamics in geographic domains: a research agenda*, CRC Press, New York, NY.

Synergistic Activities

Dr. Stewart's research interests are in spatiotemporal GIS, modeling geospatial semantics, including moving objects research, event modeling for dynamic GIS, geospatial ontologies, and hazard modeling. Synergist activities include the following:

- Deans's Scholar 2010-2012, College of Liberal Arts and Science, The University of Iowa
- Associate editor, *Computers, Environment, and Urban Systems*
- Editorial board member of the *International Journal of Geographic Information Science*, *Transactions in GIS*, the *Journal of Spatial Information Science*, and the GIS Section of *Geography Compass Journal*
- Co-PI on NSF IGERT award *Geoinformatics for Environmental and Energy Modeling and Prediction (GEEMaP)*, a graduate program centered on topics in wind energy, water resources, flood control, geographic information science, spatial statistics, and computer science.
- Co-organizer, *Symposium on Space-Time Integration in Geography and GIScience*, 2011 AAG Annual Conference, Seattle, WA, April 2011
- Chair, Research Committee, University Consortium of Geographic Information Science 2010-2012

Collaborators & Other Affiliations

Marc Armstrong, The University of Iowa
David Bennett, The University of Iowa
Ian Bishop, University of Melbourne, Australia
Kate Cowles, The University of Iowa
Jennifer Glanville, The University of Iowa
Shane Hubbard, The University of Iowa

Naicong Li, University of Redlands
Harvey Miller, The University of Utah
Alberto Segre, The University of Iowa
Chris Schwartz, The University of Iowa
May Yuan, The University of Oklahoma

Graduate and Post Doctoral advisors:

(Postdoctoral advisor) Dr. Max J. Egenhofer, University of Maine
(Ph.D.) Dr. Max J. Egenhofer, University of Maine
(M.S.) Dr. John E. Hay, University of British Columbia, Canada

Primary thesis advisor for:

(Graduated): Inga Kulik (PhD), University of Melbourne (co-advisor); Current (The University of Iowa): Junchuan Fan (PhD), Jonathan Goergen (PhD), Shane Hubbard (PhD), Wei Wang (PhD), and Emily White (PhD). Serves currently on the graduate committee of 4 Ph.D. students.