

## **Bio details**

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Kathleen Stewart Hornsby is currently an assistant research professor with the National Center for Geographic Information and Analysis at the University of Maine. In Fall 2007, she will join the Department of Geography at the University of Iowa as assistant professor. Kathleen received her Ph.D. from the Department of Spatial Information Science and Engineering, University of Maine in 1999. Her research interests relate to modeling geospatial semantics, including event-based modeling for dynamic GIS and reasoning about spatio-temporal phenomena over multiple granularities. She is also interested in ontologies and their role for information system design. Kathleen has received support for her work from the National Geospatial-Intelligence Agency, the Disruptive Technology Office, and the National Science Foundation.

Kathleen Stewart Hornsby presented a keynote talk at the Workshop on *Talking About and Perceiving Moving Objects* at Spatial Cognition 2006. She also co-organized the UCGIS Workshop on *Computation and Visualization for the Understanding of Dynamics in Geographic Domains* in October 2006 in Linthicum Heights, MD. Previously, she co-organized the research workshop on *Action-Oriented Approaches in Geographic Information Science* held in 2002 in Lucerne, ME. She has been co-chair of the Special Track on Spatiotemporal Reasoning at FLAIRS'2002 and FLAIRS'2001 and was co-organizer of the International Workshop on Temporal, Spatial, and Spatio-Temporal Data Mining (TSDM2000) in Lyon, France. Kathleen is a member of numerous program committees including the International Conference on Spatial Information Theory (COSIT 2007), the 7th International Workshop on Web and Wireless GIS (W2GIS 2007), the 10th AGILE International Conference on Geographic Information Science (AGILE 2007), and the International Conference on Spatial Cognition (Spatial Cognition 2006) among others. She serves also on the editorial board of the GIS section of the journal *Geography Compass*.

## **Selected publications**

- Stewart Hornsby, K. and King, K. (2007) Linking geosensor network data and ontologies for a transportation domain, *Advances in Geosensor Networks*, Lecture Notes in Computer Science, Springer, Berlin, *accepted for publication*.
- Stewart Hornsby, K., and S. Cole (2007) Modeling moving geospatial objects from an event-based perspective, *Transactions in GIS*, *accepted for publication*.
- Hornsby, K. (2006) Linking geosensor network data with ontologies, *Proceedings of 2<sup>nd</sup> International Conference on Geosensor Networks*, GSN 2006.
- Mau, I., Hornsby, K., and Bishop, I. (2006) Modeling geospatial events and impacts through qualitative change, *Proceedings of the International Conference on Spatial Cognition 2006*, Lecture Notes in Artificial Intelligence, Springer, Berlin, *In press*.

- Cole, S. and Hornsby, K. (2005) Modeling noteworthy events in a geospatial domain, *Proceedings of the First International Conference on Geospatial Semantics, GeoS 2005*, Lecture Notes in Computer Science, 3799, Springer, Berlin, pp. 78-92.
- Hall, S. and K. Hornsby (2005) Ordering events for dynamic geospatial domains, in A. Cohn and D. Mark (eds.) *Proceedings of the Seventh International Conference on Spatial Information Theory, COSIT 2005*, Lecture Notes in Computer Science 3693, Springer, Berlin, pp. 330-346.
- Campos, J. and K. Hornsby (2004) Temporal constraints between cyclic geographic events, *Proceedings of Sixth Brazilian Symposium on GeoInformatics, GeoInfo 2004*, Campos do Jordao, Brazil, pp.109-125.
- Hornsby, K. and S. Hall (2004) Generating linear orders of text-based events, *Proceedings of the Workshop on Computational Lexical Semantics*, Human Language Technology Conference 2004 (HLT-NAACL'04), Boston, MA, pp. 92-99.
- Hornsby, K. (2004) Retrieving event-based semantics from images, *Proceedings of the IEEE Sixth International Symposium on Multimedia Software Engineering*, 13-15 December 2004, Miami, FL, IEEE Computer Society, pp. 529-536.
- Worboys, M., and K. Hornsby (2004) From objects to events: GEM, the geospatial event model. In: Egenhofer, M., C. Freksa, and H. Miller (eds.) *Proceedings of GIScience 2004*, Lecture Notes in Computer Science, 3234, Springer, Berlin, pp. 327-343.
- Campos, J., K. Hornsby, M. Egenhofer (2003) A model for exploring virtual reality environments, *Journal of visual languages and computing*, Elsevier Press, 14(5): 471-494.
- Hendricks, M., M. Egenhofer, K. Hornsby (2003) Structuring a wayfinder's dynamic space-time environment, in W. Kuhn, M. Worboys, S. Timpf (eds.) *Proceedings of the International Conference on Spatial Information Theory, COSIT'03*, Kartause Ittingen, Switzerland, *Lecture Notes in Computer Science*, Vol. 2855, Springer, Berlin, pp. 75-92.
- Hornsby, K. and M. Egenhofer (2002) Modeling moving objects over multiple granularities, Special issue on Spatial and Temporal Granularity, *Annals of Mathematics and Artificial Intelligence*, Kluwer Academic Press. 36: 177-194.
- Hornsby, K. (2001) Temporal zooming, *Transactions in GIS*, 5(3): 255-272.