

The Dangermond Lecture

October 14, 2010; 1930 Buchanan; 3:30 – 4:45

Presented by

Mike Worboys

Bringing geographic information indoors

Abstract:

As indoor spaces become more complex, and information technology develops, there is a growing use of devices that help users with a variety of tasks in indoor space. Outdoor spatial informatics is well developed, with GIS at its core. Indoor spatial informatics is less well developed, and there is currently a lack of integration between outdoor and indoor spatial information systems. The talk discusses potential application domains, and a variety of models of indoor space and unified outdoor-indoor space from formal models, through data models, to functional models related to usability of indoor and outdoor-indoor information systems. We also consider topics that should be included in a research agenda for the integration of indoor and outdoor spaces.

Bio:

Mike has a PhD in mathematics and is Professor and Chair of the Department of Spatial Information Science and Engineering, as well as a member of the National Center for Geographic Information and Analysis (NCGIA) at the University of Maine, USA. He is also a cooperating professor in the Department of Mathematics, and holds a professorial fellowship at the University of Melbourne, Australia. Mike is a Distinguished Scientist of the ACM, a Life Member of the London Mathematical Society, and he was honored to receive the 2008 UCGIS Research Award. He is a member of the Mapping Science Committee of the National Research Council, under the auspices of the National Academies of Sciences and Engineering and Institute of Medicine.

Mike has worked for many years at the boundary between computer science, mathematics, and geographic information science. His current research interests include

- Ontologies and data models for dynamic geographic phenomena, including those sensed by wireless sensor networks;
- Unified models of indoor and outdoor spaces;
- Qualitative approaches to spatial reasoning under uncertainty;
- Geospatial technology in the emergency management domain.