

Think Spatial

The Center for Spatial Studies' brown-bag forum on spatial thinking

Presents

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Institute of Geodesy, Research Group Geoinformation

Ontology and Epistemology for Indoor Manufacturing Environments

Tuesday, October 25, 2016

12:00 p.m.

3512 Phelps Hall



ABSTRACT:

Contemporary spatial information systems concentrate on the outdoor space, while humans and things reside both indoors and outdoors Klepeis et al. (2001) report that humans spend approximately 87% of their time indoors. In recent years, GIScience has been focusing on indoor spaces. This resulted in contributions ranging from positioning approaches, indoor tracking of humans and objects, to ontologies of indoor environments and modeling of human behavior.

In this talk, Scholz will highlight the special case of indoor manufacturing environments, using a semiconductor manufacturing plant as an example. In this context, GIScience can contribute to Industry 4.0 or smart manufacturing initiatives. He will elaborate on modeling the indoor manufacturing space with the help of ontologies and affordance-based approaches. In addition, the interaction between humans, manufacturing devices and production assets are of particular interest, as production assets are manipulated by humans. As a result, workers in the facility could be supported in their decision-making process and the production could be optimized.

BIO:

Johannes Scholz is an Assistant Professor at Graz University of Technology, Austria, Institute of Geodesy, Research Group Geoinformation. He was previously Senior Researcher at the Research Studios Austria—a non-profit research institution—Associate Faculty of the Doctoral College of University of Salzburg, Austria, and PostDoc at the Institute of Geoinformation, Vienna University of Technology, Austria. Johannes received his Ph.D. in Geodesy and Geoinformation from Graz University of Technology. He holds a Dipl.-Ing. (FH) in Geoinformation from School of Geoinformation, Carinthia University of Applied Sciences. Johannes teaching includes courses on GIS, spatial databases, spatial analysis, spatial optimization, and mobile GIS & LBS. Johannes' research interests lie in the areas of modeling indoor space, ontologies, and semantics, Linked (Open) Data, geolinguistics, and spatial optimization focusing on transport planning. He serves as reviewer for numerous journals in the field of GIScience, served as member of the organizing committee of Linked Open Data Workshop @ GIScience 2014, and is a member of the program committee of AGIT and GI Forum conferences and journals.

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