

## Thomas J. Cova

Department of Geography  
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### Professional Preparation

Institution	Major	Degree and date
University of Oregon	Computer Science	BS, 1986
University of California Santa Barbara	Geography	MA, 1995
University of California Santa Barbara	Geography	PhD, 1999

### Appointments

2005 – present. Associate Professor, Department of Geography, University of Utah  
1999 – 2005. Assistant Professor, Department of Geography, University of Utah.

### Publications

#### 1. Related to the workshop

2007. Kim, T.H. and Cova, T.J., "Tweening grammars: deformation rules for representing change between discrete geographic entities." *Computers, Environment & Urban Systems*, in press.
2007. Goodchild, M.F., Yuan, M., and Cova, T.J., "Towards a general theory for geographical representation, *International Journal of Geographical Information Science*, 23(3), 239-260.
2002. Cova, T.J., and Goodchild, M.F., "Extending geographic representation to include fields of spatial objects," *International Journal of Geographic Information Science*, 16(6), 509-532.
2000. Cova, T.J., and Church, R.L., "Contiguity constraints for single-region site search problems," *Geographical Analysis*, 32(4), 306-329.
2000. Cova, T.J., and Church, R.L., "Exploratory spatial optimization in site search: a neighborhood operator approach," *Computers, Environment, & Urban Systems*, 21, 401-419.

#### 2. Other significant publications

2003. Cova, T.J. and Johnson, J.P., "A network flow model for lane-based evacuation routing, *Transportation Research Part A: Policy and Practice*, 37(7), 579-604.
2002. Cova, T.J., and Johnson, J.P., "Microsimulation of neighborhood evacuations in the urban-wildland interface," *Environment and Planning A*, 34(12), 2211-2229.
2000. Church, R.L., and Cova, T.J., "Mapping evacuation risk on transportation

- networks using a spatial optimization model," *Transportation Research Part C: Emerging Technologies*, 8(1-6), 321-336.
2000. Radke, J., Cova, T.J., Sheridan, M.F., Troy, A., Lan, M., and Johnson, R., "Application challenges for GIScience: implications for research, education, and policy for risk assessment, emergency preparedness and response," *Urban and Regional Information Systems Association Journal*, 12(2), 15-30.

### **Synergistic activities**

- 2006-present. Vice President, GIS Specialty Group, AAG
- 2003-present. Director, Center for Natural & Technological Hazards, Univ. of Utah
1999. Developed computer lab instruction set entitled "Building a Relational GIS" for an advanced GIS class that uses MS Access.
1995. Developed an algorithm for identifying neighborhoods that may be difficult to evacuate that has been incorporated into ArcView by Eva Lorrain in Italy.

### **Collaborators and Other Affiliations**

#### 1. Collaborators during past 48 months

Denise Dearing, University of Utah  
Phil Dennison, University of Utah  
Frank Drews, University of Utah  
Michael Goodchild, UC Santa Barbara  
Paul Sutton, University of Denver  
David Theobald, Colorado State University  
May Yuan, University of Oklahoma

#### 2. Graduate advisors

PhD/MA: Richard Church (primary advisor), Michael Goodchild, Helen Couclelis, UC Santa Barbara.

#### 3. Graduate advising (past five years)

##### *Current students*

Ph.D.: Lina Cao

M.S. : Laura Siebeneck, Edward Pultar, Justin Johnson, Lorraine Nelms, Tom Lind