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## **Active and Recently Completed Projects**

- Primary contact for DOGAMI's flood mapping and base flood elevation determination services.
- Vulnerability and risk assessments to produce loss estimations and population exposure to various natural hazards, including flood, earthquake, landslide, tsunami, coastal erosion, and wildfire. Work is ongoing in Tillamook, Lincoln, and Curry counties. Role: Project lead. Period: 2014 to present.
- Assessment of channel migration susceptibility for large streams in Oregon to establish a statewide screening resource to be used for prioritizing future channel migration mapping efforts. Role: Project lead. Period: 2014 to 2015.
- Compilation of the Oregon Statewide Flood Hazard Database, which includes flood study data, high water marks, and observed flood inundation zones. Role: Project lead. Period: 2013 to 2015.
- Revision of Flood Insurance Rate Maps (FIRMs) and development of maps and web tools for understanding exposure to flood hazard in Curry, Harney, Coos, Multnomah, Clackamas, Clatsop, Tillamook, and Lincoln counties. Funded through FEMA's Map Modernization and RiskMAP programs. Role: Technical lead. Period: 2008 to 2015.
- Modeling and mapping of tsunami inundation for Oregon's coastline. Funded through NOAA's National Tsunami Hazards Mitigation Program. Role: GIS support and cartography. Period: 2009 to 2013.
- Mapping exposure of buildings and infrastructure to Mount Hood's volcanic hazards. Funded through the USGS's Cascades Volcanic Observatory. Role: Hazard modeling, GIS support, and cartography. Period: 2009 to 2011.
- Miscellaneous lidar-based mapping projects, including the Lidar Imagery Series. Role: Cartographic design.

## **Interests**

- Hydrologic and hydraulic modeling
- Lidar applications
- Geomorphology
- Geovisualization
- Geospatial data management

## **Background Information**

### **Education:**

- 2005-2007, M.Sc. in Geography, Oregon State University, Corvallis, Oregon.
- 2003-2005, B.Sc. in Geography, Western Michigan University, Kalamazoo, Michigan.
- 1999-2002, A.A.Sc., Muskegon Community College, Muskegon, Michigan.

### **Professional Societies:**

- Association of State Floodplain Managers
- American Society for Photogrammetry and Remote Sensing

#### **Registration:**

- Certified Floodplain Manager, Oregon (# US-10-05162)

#### **Publications and Presentations**

##### **DOGAMI Publications:**

- Lidar imagery of various quadrangles in the Portland Metro area, by Jed Roberts, Rudie Watzig, John English, Sarah Robinson, Mathew Tilman, and Kaleena Hughes, 2009, scale 1:8,000.

##### **Other Publications:**

- Wright, D. J., and Roberts, J., Exploring the deeper reefs and volcanic provinces of American Samoa: Redlands, Calif., Esri Press, ArcNews, 2011.  
Online: <http://www.esri.com/news/arcnews/summer11/articles/exploring-the-deeper-reefs-and-volcanic-provinces-of-american-samoa.html>
- Roberts, J. T., Feature extraction from high-resolution lidar: The next generation of base maps, in Digital Mapping Techniques '09 - Workshop Proceedings, U.S. Geological Survey Open-File Report 2010-1335, 2010. Online: [http://pubs.usgs.gov/of/2010/1335/pdf/usgs\\_of2010-1335\\_Roberts.pdf](http://pubs.usgs.gov/of/2010/1335/pdf/usgs_of2010-1335_Roberts.pdf)
- Koppers, A. A. P., Russell, J. A., Roberts, J., Jackson, M., Konter, J., Wright, D. J., Staudigel, H., and Hart, S. R., Age systematics of two young en echelon Samoan volcanic trails: Geochem. Geophys. Geosyst. (G-Cubed), v. 12, Q07025, 40 p., 2011.  
Online: <http://www.agu.org/pubs/crossref/2011/2010GC003438.shtml>
- Wright, D.J., Roberts, J., Fenner, D., Smith, J.R., Koppers, A.A.P., Naar, D., Hirsch, E.R., Clift, L.W., and Hogrefe, K.R., Seamounts, ridges, and reef habitats of American Samoa, in Harris, P.T. and Baker, E.K. (eds.), Seafloor Geomorphology as Benthic Habitat: GeoHab Atlas of Seafloor Geomorphic Features and Benthic Habitats, Elsevier, Amsterdam, 2011.

##### **Presentations:**

- "Consideration of channel migration mapping under the National Flood Insurance Program and beyond," Oregon Law Institute, Portland, Oregon – November 7, 2014.
- "New service provided by state agency in Oregon: base flood elevation determinations," Association of State Floodplain Managers Annual Conference, Seattle, Washington – June 5, 2014.
- "Flood Insurance Rate Maps in Oregon: the latest science and mapping products," Public Land Surveyors of Oregon Annual Conference, Salem, Oregon – January 23, 2014.
- "New lidar-based tools for visualizing the flood hazard: A RiskMAP early demonstration project in Coos County, Oregon," Association of State Floodplain Managers Annual Conference, Louisville, Kentucky - May 19, 2011.
- "Mapping regulatory floodplains with Lidar and USGS StreamStats," Digital Mapping Techniques Workshop, Sacramento, California - May 17, 2010.
- "Feature Extraction from High-Resolution Lidar: The Next Generation of Base Maps" (Poster), Digital Mapping Techniques Workshop, Morgantown, West Virginia - May 11, 2009.
- "Morphological Interpretation of Seamounts in American Samoa: Inferring Genesis Mechanisms through Shape and Distribution Analysis," Annual Meeting of the Association of American Geographers, San Francisco, California - April 19, 2007.

**Thesis:**

- Roberts, Jed T., 2007, "The Marine Geomorphology of American Samoa: Shapes and Distributions of Deep Sea Volcanics," M.Sc. thesis, Oregon State University, Corvallis, Oregon.