Peer-Reviewed and Other Publications based on OpenTopography Facility Support

Updated: January 31, 2018

This is a bibliography of peer-reviewed publications and other published documents (reports, theses, etc.) enabled by data access, online data processing, and education and training materials available through the National Science Foundation supported OpenTopography Facility (including the GEON Lidar Workflow, the predecessor to OpenTopography) since about 2006.

The impact of OpenTopography spans numerous disciplines spanning the earth and natural sciences, remote sensing, computer science, and geographic information science. OpenTopography has also enabled technical reports and other publications from government agencies and commercial-sector organizations.

The bibliography compiled below is based on Web of Science and Google Scholar searches as well as reports from members of the OpenTopography community. Citations are in GSA format with accompanying DOIs and an italicized description of what subject, application and/or dataset was used in the publication.

**Total Peer-Reviewed Publications:** 233  
**Total Other Publications:** 58

![OpenTopography Publication Growth by Year](image)
Peer Reviewed Publications

2018

i. Earth Science (Specific Dataset)

2.

   i. Computer Science (Mentions OpenTopography as a resource)
   ii.

   i. Remote Sensing (Mentions OpenTopography as a resource)
   ii.

   i. Remote Sensing (Shuttle Radar Mission Topography)

2017


   Earth Science


   Earth Science (Shuttle Radar Topography Mission)


   Remote Sensing (Mentions OpenTopography as a resource)


   Earth Science (Hawaii Big Island Survey, 2009)


   Computer Science (Mentions OpenTopography as a resource)


Earth Science


Computer Science (Mentions OpenTopography as a resource)


Earth Science (PG&E Diablo Canyon, CA, 2010)


Remote Sensing


Earth Science (El Mayor-Cucupah, 2014 Napa)


Remote Sensing (Napa)


Earth Science (Mentions OpenTopography as a resource)


Computer Science (Mentions OpenTopography as a resource)


Earth Science (McMurdo, Antarctica, 2014-2015)

   Earth Science


   Earth Science


   Earth Science (Lake Tahoe 2010)


   Earth Science (Mentions OpenTopography as a resource)


   Earth Science (North Sister, OR, 2008)


   Remote Sensing


   Remote Sensing (Mentions OpenTopography as a resource)


   Earth Science (Yellowstone, 2008)


   Earth Science (El Mayor-Cucapah terrestrial lidar 2010)


Remote Sensing (Mentions OpenTopography as a resource)


Computer Science (Mentions OpenTopography as a data source)


City Planning (Shuttle Radar Mission Topography 30m)


Remote Sensing (Iowa River, 2008)


Earth Science (Shuttle Radar Topography Mission)


Remote Sensing


Earth Science


Earth Science (Raplee Ridge, Utah 2005)


Computer Science

Computer Science (Mentions OpenTopography as a data source)


Earth Science (Specific)


Remote Sensing (Mentions OpenTopography as a Resource)


Earth Science


Remote Sensing (Shuttle Radar Topography Mission 30m)


Urban Planning (Mentions OpenTopography as a resource)


Computer Science (Mentions OpenTopography as a resource)


Computer Science/Earth Science (Mentions OpenTopography as a resource)


*Earth Science (Marlborough Fault Zone, New Zealand, 2014)*


*Remote Sensing (Granite Dells, AZ, 2009)*

**2016**


*Earth Science*


*Computer Science*


*Earth Science*


*Earth Science*


*Earth Science (South Napa Earthquake)*


*Earth Science*


Remote Sensing


Earth Science


Earth Science


Earth Science


Computer Science


Earth Science


Earth Science


Computer Science


Earth Science

Earth Science


Earth Science


Earth Science (EarthScope 2008)


Remote Sensing


Earth Science (Big Creek, California)


Earth Science


Remote Sensing


Computer Science
   Earth Science (Bear Creek, CA)

   Earth Science

   Remote Sensing (SRTM, Luqillo)

   Earth Science

2015

   Earth Science

   Computer Science

   Earth Science (El Mayor-Cucapah)

   Earth Science
   Earth Sciences

   Remote Sensing

   Remote Sensing

   Earth Science (San Gabriel, CA)

   Earth Sciences

   Computer Science

   Earth Science (B4 Project- Southern San Andreas and San Jacinto Faults)

   Earth Science

   Earth Science

Earth Science


Earth Science (Oregon Department of Geology and Mineral Industries Lidar Program Data)


Earth Science (Eel River, CA)


Earth Science


Computer Science/Earth Science (SRTM Croatia)


Computer Science


Earth Science


Computer Science

Earth Science (Grass Lake, Lake Tahoe, CA)


Earth Science


Earth Science (Krycklan, Sweden)


Computer Science


Computer Science


Earth Science (Salmon River Idaho, Bald Rock Basin, California, etc.)


Earth Science (Tenderfoot creek, Montana)


Earth Science/Remote Sensing (Jemez, NM)


Earth Science
   *Earth Science (El Mayor-Cucapah)*

   *Remote Sensing*

   *Earth Science/Remote Sensing*

   *Earth Sciences (EarthScope Northern California LiDAR Project)*

2014

   *Computer Science/Earth Science (EarthScope Intermountain Seismic Belt Lidar Project: San Diego, 2005)*

   *Earth Science (SW flank of Mt. Rainier, uses seed grant data, but not seed grant PI)*

   *Remote Sensing (San Diego 2005)*

   *Remote Sensing (San Diego, 2005: OT lidar to compare to point clouds created from aerial photos/photogrammetry)*

   Computer Science (Mentions OpenTopography as a resource)


   Computer Science (Gridding using tools from OT)


   Geography (South Fork Eel River, CA Watershed Morphology, South Fork Eel River, CA)


   Earth Science/Remote Sensing (Shale Hills CZO leaf off)


   Earth Science/Remote Sensing (Truckee CA, Sagehen Creek Snowpack (Seed grant))


   Geography (Southern Sierra Nevada Critical Zone Observatory: Snow Off)


   Computer Science


   Earth Science (Hawaii Big Island lidar survey)


   Earth Science

   Earth Science/Computer Science (Lake Tahoe Basin LiDAR)


   Computer Science


   Earth Science (El Mayor-Cucapah, Mexico)


   Earth Science (EMC pre (private) and post event lidar).


   Earth Science (Walker Lane USGS. Mentions that data are available on OpenTopo)


   Earth Science (EarthScope Alaska Denali Totschunda LiDAR Project)


   Earth Science (CZOs Jemez Basin, Boulder Creek, Southern Sierra)


   Remote Sensing


Earth Science/Remote Sensing (Christiana River basin, Iowa river, NMSZ, Owyhee River, Mojave, CA)


Computer Science (DEM access and use of Opal2 SOAP, OGC WPS and OGC CSW)


Earth Science (DOGAMI)


Earth Science/Remote Sensing (B4 Project- Southern San Andreas and San Jacinto Faults)


Earth Science


Remote Sensing (Oregon Department of Geology and Mineral Industries Lidar Program Data, San Gabriel Mountains, CA: Tectonics and Topography, Shuttle Radar Topography Mission)


Computer Science


Earth Science (B4 Project- Southern San Andreas and San Jacinto Faults)
*Earth Science*

*Earth Science (Jemez River Basin Snow-off & Snow-on Lidar Surveys, CZO)*

*Geography (Shuttle Radar Topographic Mission)*

*Computer Sciences/Remote Sensing (B4 Project, Southern San Andreas & San Jacinto Faults)*

*Earth Science (Northern San Andreas Fault, EarthScope Northern California LiDAR Project)*

*Earth Science (B4 Project- Southern San Andreas and San Jacinto Faults)*

*Earth Science*

*Computer Science/Remote Sensing*

*Computer Science*
2013

   \textit{Remote Sensing (OT as means for testing mobile lidar units)}

   \textit{Remote Sensing (OT as an effort to make lidar data and processing more accessible.)}

   \textit{Earth Science (North Sister, OR: Collier Cone Lava Flow)}

   \textit{Earth Science}

   \textit{Earth Science (Dragon’s Back Ridge, and EarthScope Yakima LiDAR Project, Yakima)}

   \textit{Remote Sensing}

   \textit{Earth Sciences (El Mayor-Cucapah Earthquake (4 April 2010) Rupture LiDAR Scan, TLS data)}

   \textit{Remote Sensing}

   \textit{Computer Science}

   Computer Science


   Computer Science (OpenTopo mentioned as a group using .laz files for point clouds)


   Earth Science (EarthScope Intermountain Seismic Belt Lidar Project)


   Remote Sensing (Yosemite National Park: Poopenaut Valley and Wawona)


   Computer Science


   Earth Science (B4 Project- Southern San Andreas and San Jacinto Faults)


   Earth Science/Remote Sensing


   Remote Sensing


   Remote Sensing

   *Earth Science (2010 Salton Sea Lidar Collection)*

   *Earth Science (EarthScope Northern California LiDAR Project)*

   *Computer Science Yosemite (National Park, CA: Rockfall Studies)*

   *Remote Sensing (Utah and CA)*

   *Remote Sensing*

   *Earth Science (Meteor Crater, AZ)*

   *Remote Sensing (Northern San Andreas Fault, CA and EarthScope Northern California LiDAR Project)*

   *Remote Sensing*
   Earth Sciences (Idaho Lidar Consortium)

   Geography/Computer Science

   Computer Science/Earth Science

   Earth Science (Northern San Andreas Fault, CA and EarthScope Northern California LiDAR Project)

2012

   Earth Sciences (Boulder Creek CZO August 2010 Snow-Off Lidar Survey)

   Computer Science

   Computer Science

   Earth Science (B4 Project- Southern San Andreas and San Jacinto Faults)

   Earth Science/Computer Science

   Earth Sciences (World Bank- ImageCat Inc.- RIT Haiti Earthquake Lidar Dataset)


   Earth Science/Education (Lake Tahoe Basin LiDAR)


   Earth Science (Northern San Andreas Fault, & EarthScope Northern CA LiDAR Project)


   Earth Science (San Gabriel, CA, Mount Baden Powell)


    Earth Science (EarthScope Northern California LiDAR Project & EarthScope Southern and Eastern California Lidar Project)


    Earth Science (B4 Project- Southern San Andreas and San Jacinto Faults)


    Earth Science (Granite Dells, AZ)


    Earth Sciences (EarthScope Intermountain Seismic Belt Lidar Project)

Remote Sensing


Remote Sensing


Earth Science (Chalk Basin, CO)


Earth Sciences


Earth Science/Remote Sensing (B4 Project- Southern San Andreas and San Jacinto Faults)


Earth Science (El Mayor-Cucapah)


Earth Science


Earth Science (Alaska Denali Rupture GeoEarthScope)

Science and Engineering Discovery Environment: Bridging from the extreme to the campus and beyond, 1st, p. 3. ACM, doi:10.1145/2335755.2335789.

Computer Science


Earth Science (B4 Project- Southern San Andreas and San Jacinto Faults)


Earth Science (B4 Project- Southern San Andreas and San Jacinto Faults)

2011


Computer Science


Computer Science (EarthScope Northern, Southern & Eastern CA Lidar Project)


Remote Sensing (World Bank- ImageCat Inc.- RIT Haiti Earthquake Lidar Dataset)


Geography


Computer Science

2010


   Earth Science (B4 Project- Southern San Andreas and San Jacinto Faults)


   Computer Science (EarthScope Northern California LiDAR Project)


   Earth Science (EarthScope Northern California LiDAR Project)


   Geography

2007

2006


   Earth Science (South Fork Eel River, CA Watershed Morphology)


   Computer Science


   Earth Science (Death Valley National Park: Badwater Basin)

Theses

2018


   Earth Science (B4 Project)

2017
   *Computer Science*

   *Earth Science (Mentions OpenTopography as a resource)*

   *Earth Science (Salton Sea, CA 2010)*

4. Murphy, B. P., 2017. Feedbacks among chemical weathering, rock strength and erosion with implications for the climatic control of bedrock river incision, Ph. D.
   *Earth Science (Kohala Peninsula, HI 2013)*

   *Earth Science*

   *Earth Science (Lake Bonneville 2014)*

   *Computer Science*

2016

   *Computer Science*

   *Earth Science*
   
   *Earth Science (PG&E Diablo canyon)*

   
   *Earth Science*


**2015**

   
   *Earth Science/Computer Science (Santa Cruz)*

   
   *Earth Science (Tenderfoot Creek)*

3. Peng, K., 2015, Analysis and modelling of recent large floods on the river Gaula, Norwegian University of Science and Technology, [M.S. thesis]: NTNU.
   
   *Earth Science*

   
   *Urban Planning/Geography/Remote Sensing*

**2014**

   
   *Earth Science (SRTM)*

   
   *Earth Science (Sierra Nevadas)*
   *Earth Science (Hector Mine)*

   *Earth Science (B4)*

2013

   *Computer Science (San Diego, 2005, Haiti)*

   *Earth Science/Remote Sensing (EarthScope NoCal)*

   *Remote Sensing/Earth Science (DOGAMI)*

4. Gorum, T., 2013, Towards a better understanding of earthquake triggered landslides: An analysis of the size, distribution pattern and different tectonic and geomorphic environments [Ph.D. Thesis]: Mus, Turkey, University of Twente.
   *Earth Science (EarthScope Alaska Denali Totschunda LiDAR Project)*

   *Earth Science (B4)*

   *Earth Science (Valles Caldera CZO)*

   *Earth Science (ECSZ)*

2012

   *Computer Science*
   *Computer Science*

   *Earth Science*

2011

   *Earth Science/Remote Sensing*

2010

   *Earth Science (B4)*

   *Earth Science (Eel River, CA)*

2006

   *Earth Science/Computer Science*

Reports & White Papers

2018

1. Fraiss, S. M. Rendering Large Point Clouds in Unity.
   *Computer Science (Uses OpenTopography as a resource)*

2017

   *City Planning*


2016

APPROACH TO GEOLOGIC-HAZARD ORDINANCES IN UTAH (Vol. 122). Utah Geological Survey.

Earth Science (State of Utah, Wasatch Front)

2015


2. Niemi, N., Wang, B. The Role of UNAVCO in Geodesy and Field Education. Earth Science


2014


2013


2. Scharer, K., & Fumal, T., 2013, Determining slip per event on the San Andreas fault from fold deformation at the Frazier Mountain site. Earth Science (B4)
   Earth Science (GeoEarthScope NorCal)

2011

   Earth Science

   Earth Science

   Computer Science


   Earth Science

   Computer Science

2010

   http://www.geerassociation.org/GEER_Post%20EQ%20Reports/Baja%20California_2010/Baja_Index_2010.html


3. Manners, R., and Kilham, N., 2010, How 1D and 2D models can be used to test design hypotheses related to floodplain inundation.
   http://cnr.usu.edu/streamrestoration/files/uploads/Part%202%202010%20Resources/Manners_Kilham.pdf


2009

   Earth Science

   Earth Science