

## **HELENA MITASOVA**

Department of Marine, Earth and Atmospheric Sciences, North Carolina State University  
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### **PROFESSIONAL PREPARATION:**

Slovak Technical University, Bratislava, Czechoslovakia, Geodesy/Cartography, M.S., 1981  
Slovak Technical University, Bratislava, Czechoslovakia, Geodesy/Cartography, Ph.D., 1987

### **APPOINTMENTS:**

2014 - present Professor, Department of Marine, Earth and Atmospheric Sciences (MEAS),  
Faculty Fellow and Associate Director for Geovisualization, Center for Geospatial  
Analytics, North Carolina State University (NCSU), Raleigh, NC  
2008 - 2014 Associate Professor, MEAS NCSU, Geospatial Information Science faculty  
2004 - 2007 Research Assistant Professor, MEAS, NCSU  
2001 - 2004 National Research Council Senior Research Associate, Associate Adjunct  
Professor, MEAS, NCSU; Associate Adjunct Professor, Department of  
Geography, University of North Carolina, Chapel Hill  
1995 - 2001 Research Scientist, Geographic Modeling Systems Laboratory, Department of  
Geography, University of Illinois, Urbana-Champaign (UIUC)  
1991 - 1995 Research Scientist, U.S. Army Construction Engineering Research Laboratories,  
Champaign, IL  
1990 - 1991 Visiting Research Scientist, Illinois History Survey and Dept. of Forestry, UIUC  
1983 - 1990 Research Scientist, Department of Physical Geography and Cartography,  
Comenius University, Bratislava, Czechoslovakia

### **SCHOLARLY AND PROFESSIONAL HONORS:**

University Consortium for Geographic Information Science Research Award, 2020  
Waldo Tobler GIScience Prize by Austrian Academy of Sciences, 2018  
Sol Katz award for exceptional Open Source Geospatial community service, 2010  
Biennial Medal from the International Environmental Modeling and Software Society for  
outstanding contributions to environmental modeling and software, 2006  
Elected charter member of Open Source Geospatial Foundation (OSGeo), 2006  
National Research Council Senior Research Associate Fellowship, 2001 - 2003  
Excellence in development award from Open GIS Foundation, 1994

### **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

Geological Society of America, 2001-present  
American Geophysical Union, 1998-present  
International Association for Landscape Ecology, 1993-2004, 2016-present

### **PROFESSIONAL SERVICE**

OSGeo foundation: Vice-president and member of the Board of Directors, 2015 - present;  
Charter member, 2006 - present; member of the OSGeo Education and Conference  
committees, 2006 - 2014; GeoForAll global initiative, NA regional chair, 2011 - present  
Member, International Open Source GRASS GIS development team, 1991 - present; member of  
the GRASS GIS project steering committee, 2006 - present  
Member, Editorial Board: Computers and Geosciences 2013-2021, Geomorphology 2012-2021,  
Transactions in GIS 1998-2016; Applied Geomatics 2006-2014

## **SELECTED PUBLICATIONS**

### **Books**

- Petrasova, A., Harmon, B., Tabrizian, P., Petras, V., Mitasova, H., 2018. Tangible modeling with Open Source GIS, Second edition, Springer monograph, 138p.
- Hardin, E., Mitasova, H., Tateosian, L., Overton, M., 2014, GIS-based Analysis of Coastal Lidar Time-Series, Springer Briefs in Computer Science, Springer, New York, 84 p.
- Neteler, M. and Mitasova, H. 2008, Open source GIS: A GRASS GIS Approach, Third Edition. Springer, New York, 406p.

### **Selected recent peer reviewed publications**

- Millar G., O Mitas, W Boode, L Hoeke, J de Kruijf, A Petrasova, H Mitasova, 2021, Space-time analytics of human physiology for urban planning, *Computers, Environment and Urban Systems* 85, 101554
- Coetzee, S.; Ivánová, I.; Mitasova, H.; Brovelli, M.A., 2020. Open Geospatial Software and Data: A Review of the Current State and A Perspective into the Future. *ISPRS Int. J. Geo-Information*, 9(2), 90
- Montgomery, K.; Henry, J.B.; Vann, M.C.; Huseeth, A.S.; Mitasova, H., 2020. Measures of Canopy Structure from Low-Cost UAS for Monitoring Crop Nutrient Status. *Drones* 4, 36.
- Starek, M.J., Tianxing Chu, Mitasova H., and Harmon R.S., 2020, Viewshed simulation and optimization for digital terrain modelling with terrestrial laser scanning, *International Journal of Remote Sensing*, 41:16, 6409-6426
- Tabrizian P., Baran P., Van Berkel D., Mitasova H., Meentemeyer E., 2020. Modeling restorative potential of urban environments by coupling viewscape analysis of lidar data with experiments in Immersive VE. *Landscape and Urban Planning* 195, 103704.
- Petrasova A., Gaydos D. A, Petras V., Jones C. M., Mitasova H., Meentemeyer R. K. 2020. Geospatial simulation steering for adaptive management. *Environmental Modelling & Software* 133, 104801
- Petrasova A., Hipp. J.A., Mitasova, H., 2019. Visualization of pedestrian density dynamics using data extracted from public webcams. *ISPRS Int. Journal of Geo-Information* 8 (12), 559
- Paris, P., Mitasova H., 2018, Geospatial Contrasts between Natural and Human-Altered Barrier Island Systems: Core Banks and Ocracoke Island, NC, *J. Coastal Conservation*, 1-16.
- Petras V, Newcomb D.J, Mitasova H., 2017, Generalized 3D fragmentation index derived from lidar point clouds. *Open Geospatial Data, Software and Standards*, 2:9.
- Petrasova, A., Mitasova, H., Petras, V., Jeziorska, J., 2017, Fusion of high-resolution DEMs for water flow modeling, *Open Geospatial Data, Software and Standards* 2(6).
- Gilmore, T. E., D. P. Genereux, D. K. Solomon, K. M. Farrell, and H. Mitasova, 2016, Quantifying an aquifer nitrate budget and future nitrate discharge using field data from streambeds and well nests, *Water Resources Research*, 52, 9046–9065.
- Jeziorska, J; Mitasova, H; Petrasova, A; Petras, V; Divakaran, D; Zajkowski, T., 2016, Overland flow analysis using time series of sUAS-derived elevation models, *ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Science*, III-8, 159-166
- Petras, V., Petrasova A., Harmon, B., Mitasova H., 2015, Integrating Free and Open Source Solutions into Geospatial Science Education, *ISPRS Int. J. for Geo-Information* 4(2), 942-956.
- Lyons, N.J., Mitasova, H., Wegmann K.W., 2014, Improving mass-wasting inventories of debris flow-dominated channels in non-glaciated terrains, *Landslides* 11(3), pp. 385-397.
- Mitasova H., Hofierka, J., Harmon R.S., Barton M.C., Ullah, I., 2013, GIS-based Soil Erosion Modeling, In: Shroder, J. (Chief.Ed.), Bishop, M.P. (Ed.), *Treatise on Geomorphology*. Academic Press, San Diego, CA, vol. 3, RS&GIScience in Geomorphology, pp. 228–258.
- Mitasova H., Harmon R.S., Weaver K.J., Lyons, N.J. and Overton, M.F., 2012, Scientific visualization of landscapes and landforms, *Geomorphology* 137(1), p. 122-137.