

HELENA MITASOVA

Department of Marine, Earth & Atmospheric Sciences
North Carolina State University
1125 Jordan Hall, Raleigh, NC 27695-8208

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),
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 Labs,
Champaign, IL
1990 - 1991 Visiting Research Scientist, Illinois History Survey and Department of Forestry,
UIUC
1983 - 1990 Research Scientist, Department of Physical Geography and Cartography,
Comenius University, Bratislava, Czechoslovakia

SCHOLARLY AND PROFESSIONAL HONORS:

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 Geographic Information Systems Foundation,
1994

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Geological Society of America, 2001-present
American Geophysical Union, 1998-present

PROFESSIONAL SERVICE

Global ICA-ISPRS-OSGeo Research and Education Network, North America regional chair,
2011 - present
Member of the International Open Source GRASS GIS development team, 1991-present;
member of the GRASS GIS project steering committee, 2006-present
Charter Member Open Source Geospatial Foundation, member of the OSGeo Education and
Conference committees, 2006-present; member of the board of directors 2015-present
Member, Editorial Board for the journals: Computers and Geosciences 2013-present,
Geomorphology 2012-present, Transactions in GIS 1998-present;
Member, Scientific Board for the following conferences: Geomorphometry 2009, 2011, 2013 and
2015 (Zurich, Switzerland; Redlands, CA; Nanjing, China; Poznan, Poland); International

Open Source GIS conferences FOSS4G 2011, Denver, CO; FOSS4G 2010, Barcelona, Spain; FOSS4G 2006, Lausanne, Switzerland; International Conference on Geoinformatics 2009, Fairfax, VA; International GIS Planet Conference 2005, Lisbon, Portugal

SELECTED PUBLICATIONS

Books

- Petrasova, A., Harmon, B., Petras, V., Mitasova, H., 2015. Tangible modeling with Open Source GIS, 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 peer reviewed papers

- Petras, V., Petrasova A., Harmon, B., Mitasova H., 2015, Integrating Free and Open Source Solutions into Geospatial Science Education, ISPRS Int. Journal for Geo-Information 4(2), pp. 942-956.
- Petrasova, A., Harmon, B., Petras, V., Mitasova, H., 2014. GIS-based environmental modeling with tangible interaction and dynamic visualization. In: Ames, D.P., Quinn, N.W.T., Rizzoli, A.E. (Eds.), Proceedings of the 7th International Congress on Environmental Modelling and Software, June 15-19, San Diego, California, USA
- Paris P., Mitasova, H., 2014, Barrier Island Dynamics using Mass Center Analysis-A new way to detect and track large-scale change. ISPRS Int. Journal of Geo-Information 3(1), p.49-65.
- 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, Remote Sensing and GIScience in Geomorphology, pp. 228–258.
- Starek, M.J., Mitasova H., Wegmann, K, Lyons, N., 2013, Space-Time Cube Representation of Stream Bank Evolution Mapped by Terrestrial Laser Scanning, IEEE Geoscience and Remote Sensing Letters 10(6), p. 1369-1373.
- 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.
- Starek, M.J., Mitasova H., Hardin, E., Overton, M.F., and Harmon, R.S., 2011, Modeling and analysis of landscape evolution using airborne, terrestrial, and laboratory laser scanning, Geosphere, 7(6), p. 1340–1356
- Metz M., Mitasova H., and Harmon R.S., 2011, Efficient extraction of drainage networks from massive, radar-based elevation models with least cost path search , Hydrology and Earth System Sciences, 15(2), 667-678.
- Tateosian, L.G., Mitasova, H., Fogleman, B., Harmon, B., Weaver K., and Harmon R.S., 2010, TanGeoMS: Tangible geospatial modeling system, IEEE Transactions on Visualization and Computer Graphics 16(6), p. 1605-1612.
- Mitasova, H., Overton, M., Recalde, J.J., Bernstein, D., Freeman, C., 2009, Raster-based Analysis of Coastal Terrain Dynamics from Multitemporal Lidar Data, J. of Coastal Research, 25(2), p. 507-514.
- Mitasova, H., Mitas, L., Ratti, C., Ishii, H., Alonso J., and Harmon, R.S., 2006, Real-time Human Interaction With Landscape Models Using a Tangible Geospatial Modeling Environment, IEEE Computer Graphics & Applications, 26(4), pp 55-63.
- Mitasova, H., Overton, M., Harmon, R.S. 2005 Geospatial Analysis of a Coastal Sand Dune Field Evolution: Jockey's Ridge, North Carolina, Geomorphology, 72, pp 204-221.
- Mitasova, H., Mitas, L. and Harmon, R.S. 2005 Simultaneous spline interpolation and topographic analysis for lidar elevation data: methods for Open source GIS, IEEE GRSL, 2(4), pp. 375- 379.