

CURRICULUM VITAE


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ACADEMIC PREPARATION

- Ph.D.** Department of Geography, SUNY University at Buffalo, USA
 (2000-2008) Title: *Delineation, Characterization and Classification of Topographic Eminences.* (Advisors: Dr. Douglas Flewelling & Dr. David Mark)
- M. A.** Department of Geography, SUNY University at Buffalo, USA
 (2000-2005) Title: *Multicriteria Line Generalization (MCG): A Framework for Environmental Data Reduction.* (Advisor: Dr. Douglas Flewelling)
- M.Sc.*** Department of Applied Geology and Exploration Geophysics, Indian
 (*Discontinued*) Institute of Technology (IIT), Kharagpur, India
 (1999-2000) Program: *Master's in Exploration Geophysics*
- B.Sc.** Department of Applied Geology and Exploration Geophysics, Indian
 (1996-1999) Institute of Technology (IIT), Kharagpur, India
Program: *Bachelor's in Geological Sciences*

EMPLOYMENT

- 2015 - Present **Associate Professor**, Department of Geography, Ohio University, Athens, Ohio, USA
- 2008 - 2015 **Assistant Professor**, Department of Geography, Ohio University, Athens, Ohio, USA

2006 - 2008	Associate Consultant , Industrial Economics (IEc), Cambridge, Massachusetts, USA
2005 - 2006	Editor-in-Chief , Graduate Student Association, University at Buffalo-SUNY, Buffalo, New York, USA
2000 - 2005	Graduate Research Assistant , National Center for Geographic Information & Analysis (NCGIA) and Department of Geography, University at Buffalo-SUNY, Buffalo, New York, USA
2003 - 2005	Graduate Teaching Instructor , Department of Geography, University at Buffalo-SUNY, Buffalo, New York, USA
2003	Graduate Teaching Assistant , Department of Geography, University at Buffalo-SUNY, Buffalo, New York, USA

RESEARCH

PEER-REVIEWED ARTICLES IN JOURNALS

- Arundel ST, Sinha G, Chan A (2020). Automated location correction and spot height generation for named summits in the coterminous United States. *International Journal of Digital Earth*, 15(12). DOI: [10.1080/17538947.2020.1754936](https://doi.org/10.1080/17538947.2020.1754936)
- Villalobos JML, García VV, Trejo EO, McCall MK, Hernández JH, Sinha G (2019). Mapping from spatial meaning: bridging Hñahñu (Otomi) ecological knowledge and geo-information tools. *Journal of Ethnobiology and Ethnomedicine*, 15, 49. DOI: [10.1186/s13002-019-0329-9](https://doi.org/10.1186/s13002-019-0329-9)
- Arundel ST, Sinha G (2018). Validating the use of object-based image analysis to map commonly recognized landform features in the United States. *Cartography and GIS*, 46(5), 441-455. DOI: [10.1080/15230406.2018.1526652](https://doi.org/10.1080/15230406.2018.1526652)
- Clevenger KA, Sinha G, Howe CA (2018). Comparison of methods for analyzing global positioning system and accelerometer data during school recess. *Measurement in Physical Education and Exercise Science*. DOI: [10.1080/1091367X.2018.1512495](https://doi.org/10.1080/1091367X.2018.1512495)
- Howe CA, Clevenger KA, Plow B, Porter S, Sinha G (2018). Using video direct observation to assess children's physical activity during recess. *Pediatric Exercise Science*, 30(4), 516-523. DOI: [10.1123/pes.2017-0203](https://doi.org/10.1123/pes.2017-0203)
- Milillo TM, Sinha G, Gardella JA Jr. (2017). Determining site-specific background level with geostatistics for remediation of heavy metals in neighborhood soils. *AIMS Environmental Science*, 4(2), 323-347. DOI: [10.3934/environsci.2017.2.323](https://doi.org/10.3934/environsci.2017.2.323)
- Sinha G, Smucker TA, Lovell EJ, Velepenti K, Miller S, Weiner D, Wangui EE (2016). The pedagogical benefits of participatory GIS for geographic education. *Journal of Geography*, 116(4), 165-179. DOI: [10.1080/00221341.2016.1215488](https://doi.org/10.1080/00221341.2016.1215488)
- Smucker TA, Wisner B, Mascarenhas A, Munishi P, Wangui EE, Sinha G, Weiner D, Bwenge C, Lovell EJ (2015). Differentiated livelihoods, local institutions, and the adaptation imperative: assessing climate change adaptation policy in Tanzania. *Geoforum*, 59, 39-50. DOI: [10.1016/j.geoforum.2014.11.018](https://doi.org/10.1016/j.geoforum.2014.11.018)

- Farnsworth II JL, McElhiney D, David S, Sinha G, Ragan BG (2014). Objective functional assessment following a head injury using movement and activity in physical space (MAPS) scores. *Journal of Athletic Training*, 49(4), 568–575. DOI: [10.4085/1062-6050-49.3.07](https://doi.org/10.4085/1062-6050-49.3.07)
- Sinha G, Silavisesrith W (2012). Multicriteria generalization (MCG): a decision-making framework for formalizing multiscale environmental data reduction. *International Journal of Geographic Information Science*, 26(5), 899-922. DOI: [10.1080/13658816.2011.618132](https://doi.org/10.1080/13658816.2011.618132)
- Milillo TM, Sinha G, Gardella JA Jr. (2012). Use of geostatistics for remediation planning to transcend urban political boundaries. *Environmental Pollution*, 170, 52-62. DOI: [10.1016/j.envpol.2012.06.006](https://doi.org/10.1016/j.envpol.2012.06.006)
- Wangui EE , Smucker TA, Wisner B, Lovell EJ, Mascarenhas A, Maingi S, Weiner D, Munna A, Sinha G, Bwenge C, Meena H, Munishi P (2012). Integrated development, risk management and community-based climate change adaptation in a mountain-plains system in northern Tanzania. *Revue de géographie alpine/Journal of Alpine Research* [Online], 100-1 | 2012. URL: <http://rga.revues.org/1701>. DOI: [10.4000/rga.1701](https://doi.org/10.4000/rga.1701)
- Sinha G, Mark DM (2010). Cognition-based extraction and modelling of topographic eminences. *Cartographica: The International Journal for Geographic Information and Geovisualization*, 45(2), 105-112. DOI: [10.3138/carto.45.2.105](https://doi.org/10.3138/carto.45.2.105)
- Chang YS, Sinha G (2007). A Visual Basic program for ridge axis picking on DEM data using the profile-recognition and polygon-breaking algorithm. *Computers & Geosciences*, 33(2), 229-237. DOI: [10.1016/j.cageo.2006.06.007](https://doi.org/10.1016/j.cageo.2006.06.007)
- Gardella JA Jr., Milillo TM, Sinha G, Oh G, Manns DC, Coffey E (2007). Linking community service, learning, and environmental analytical chemistry. *Analytical Chemistry*, 2007, 79(3), 810-818. DOI: [10.1021/ac0718694](https://doi.org/10.1021/ac0718694)
- Rogerson PA, Sinha G, Han D (2006). Recent changes in spatial patterns of prostate cancer incidence and mortality. *American Journal of Preventive Medicine*, 30 (2S), 50-59. DOI: [10.1016/j.amepre.2005.09.006](https://doi.org/10.1016/j.amepre.2005.09.006)
- Sinha G, Mark DM (2005). Measuring similarity of geospatial lifelines for use in environmental health studies. *Journal of Geographical Systems: Geographical Information, Analysis, Theory, and Decision*, 7(1), 115-136. DOI: [10.1007/s10109-005-0153-8](https://doi.org/10.1007/s10109-005-0153-8)

PEER-REVIEWED BOOK CHAPTERS

- Mark DM, Sinha G (2019). The horizon: Ontology and conceptualization. In: SD Brunn and R Kehrein (eds.). *Handbook of the Changing World Language Map*. Dordrecht, Netherlands: Springer. DOI: [10.1007/978-3-319-73400-2_165-1](https://doi.org/10.1007/978-3-319-73400-2_165-1)
- Ferrier M, Sinha G, Outrich M (2016). Media deserts: Monitoring the changing media ecosystem. In: L Friedland, M Lloyd (eds.), *The Communication Crisis in America and How to Fix It*. Palgrave-McMillan, 215-232. DOI: [10.1057/978-1-349-94925-0_14](https://doi.org/10.1057/978-1-349-94925-0_14)
- Sinha G, Kronenfeld BJ, Brunskill JC (2015). Toward democratization of geographic information: GIS, remote sensing and GNSS applications in everyday life. In: PS Thenkabail (ed.), *Remote Sensing Handbook (Volume I): Data Characterization, Classification, and Accuracies*. CRC Press, 423-444. DOI: [10.1201/b19294-28](https://doi.org/10.1201/b19294-28)
- Sinha G, Mark DM, Kolas D, Varanka D, Romero BE, Feng C-C, Uesry EL, Liebermann J, Sorokine A (2014). An ontology design pattern for surface water features. In: M Duckham, E Pebesma, K Stewart, A Frank (eds.), *8th International Conference on Geographic*

- Information Science, GIScience 2014, LNCS 8728, Springer International Publishing, Switzerland, 187–203. DOI: [10.1007%2F978-3-319-11593-1_13](https://doi.org/10.1007%2F978-3-319-11593-1_13)*
- Gardella JA Jr., Milillo TM, Sinha G, Oh G, Manns DC, Coffey E (2009). Linking advanced public service learning and community participation with environmental analytical chemistry: lessons from case studies in Western New York. In: T Rice, D Relawask (eds.), *Civic Service: Service-Learning with State and Local Government Partners*, John Wiley & Sons, 98-122.

PEER-REVIEWED ARTICLES IN CONFERENCE/WORKSHOP PROCEEDINGS

- Sinha G, Arundel ST (2020). Automated extraction of areal extents for GNIS Summit features using the Eminence-Core Method. In: M Alvioli, I Marchesini, L Melelli, P Guth (eds.), *Proceedings of the Geomorphometry 2020 Conference*. Perugia, Italy, June 2021. DOI: [10.30437/GEOMORPHOMETRY2020_10](https://doi.org/10.30437/GEOMORPHOMETRY2020_10). (To be presented)
- Arundel ST, Sinha G (2020). Improving the positional and vertical accuracy of named summits above 13,000 ft in the United States. *Proceedings of the AutoCarto 2020 - 23rd International Research Symposium on Cartography and GIScience*, November 18-20, 2020.
- Sinha G, Arundel ST, Hahmann T, Stewart K, Utery EL, Mark DM (2018). The Landform Reference Ontology (LFRO): A foundation for exploring linguistic and geospatial conceptualization of landforms. In: S Winter, A Griffin, M Sester (eds.), *Proceedings of the 10th International Conference on Geographic Information Science (GIScience 2018), LIPICS Vol. 114*. DOI: [10.4230/LIPICS.GISCIENCE.2018.59](https://doi.org/10.4230/LIPICS.GISCIENCE.2018.59)
- Sinha G, Arundel ST, Stewart K, Mark DM, Hahmann T, Romero BE, Sorokine A, Utery EL, McKenzie G (2017). A reference landform ontology for automated delineation of depression landforms from DEMs. In: *Proceedings of Workshops and Posters at the 13th International Conference on Spatial Information Theory (COSIT 2017)*, 111–116, L'Aquila, Italy, September 4-8, 2017.
- Arundel ST, Sinha G (2017). Validating GEOBIA based terrain segmentation and classification for automated delineation of cognitively salient landforms. In: *Proceedings of Workshops and Posters at the 13th International Conference on Spatial Information Theory (COSIT 2017)*, 9–14, L'Aquila, Italy, September 4-8, 2017.
- Sinha G, Mark DM (2017) Exploring landforms in multiple representational spaces. In: *Proceedings of the International Conference on Spatial Boundaries and Transitions in Language and Interaction: Perspectives from Linguistics and Geography*, Monte Verità, Ascona, Switzerland, April 23-28, 2017.
- Mark DM, Sinha G (2017). Conceptualizations of the horizon: A fundamental experiential boundary. In: *Proceedings of the International Conference on Spatial Boundaries and Transitions in Language and Interaction: Perspectives from Linguistics and Geography*, Monte Verità, Ascona, Switzerland, April 23-28, 2017.
- Sinha G, Howe CA (2016). An ontology design pattern for semantic modeling of children's physical activities in school playgrounds. In: *Proceedings of the Workshop on Analysis of Movement Data (AMD), 9th International Conference on Geographic Information Science, GIScience 2016*, Montreal, Canada, September 27, 2016.

- Samira S, Malek MR Sinha G (2016). Toward a location-based service for assessing and recommending landscape views. In: *Proceedings of the 9th International Conference on Geographic Information Science, GIScience 2016, Short Papers*, Montreal, Canada, September 27-30, 2016.
- Sinha G, Howe CA (2016). An ontology pattern for semantic analysis of multi-sensor observations of children's activities in school playgrounds. In: *Proceedings of the Ontological Approaches to Sensor Data Analysis*, NCGIA, University at Buffalo, Buffalo, NY, May 19-20, 2016.
- Sinha G, Ragan B, Howe CA, Kronenfeld BJ (2014). Spatiotemporal modelling of physical activity for understanding function, disability and health. In: *Proceedings of the Workshop on Analysis of Movement Data (AMD), 8th International Conference on Geographic Information Science, GIScience 2014*, Vienna, Austria, September 23, 2014.
- Sinha G, Mark DM (2010). Toward a foundational ontology of the landscape. In: S I Fabrikant, T Reichenbacher, M Kreveld, C Schlieder (eds.), *6th International Conference on Geographic Information Science, GIScience 2010, Extended Abstracts*, Zürich, Switzerland, September 14-17, 2010.
- Sinha G, Mark DM (2009). Ontology of topographic eminences for The National Map. Position paper for the *UCGIS/USGS Specialist Meeting: Ontology for the National Map*, Washington DC, USA, February 3-4, 2009.
- Mark DM, Sinha G (2006). Ontology of landforms: Delimitation and classification of topographic eminences. In: M Raubal, H Miller, A Frank, M Goodchild (eds.), *Geographic Information Science, 4th International Conference, GIScience 2006, Extended Abstracts*, Münster, Germany, September 20 - 23, 2006.
- Sinha G (2005). Natural language based extraction of topographic features from digital terrain databases. (Extended Abstract) *Doctoral Colloquium, COSIT 05*, Ellicottville, NY, USA. Sep 15-18, 2005.
- Sinha G, Cosme S, Oh G, Manns DC, Milillo TM, Roberts A, Gardella JA Jr. (2004). Interactive community evaluation of surface soil contaminants in the Lewiston Porter schools using public participation and GIS methods. In: *Proceedings of the 3rd Annual Public Participation GIS Conference*, Madison, WI, USA, July 18-20, 2004.
- Sinha G, Silavisesrith W, Craig J, Flewelling DM (2004). Multicriteria line simplification for analytic element method for groundwater modeling. In: *Proceedings of the Accuracy 2004: The 6th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Science*, Portland, Maine, USA, June 28-July 1, 2004.
- Sinha G, Flewelling DM (2002). A framework for multicriteria line generalization to support scientific and engineering modeling. In: *2nd International Conference on Geographic Information Science, GIScience 2002, Extended Abstracts*, Boulder, Colorado, USA, September 25-28, 2002.

CONFERENCE & WORKSHOP PRESENTATIONS (NOT LISTED ABOVE)

- Sinha G, Gregorek I, Slee C, Arundel ST, Mark DM (2019). Geomorphometric and toponymic analysis of GNIS terrain feature classes. *Annual Meeting of the American Association of Geographers (AAG)*, Washington DC, USA, April 3 -7, 2019.

- Arundel ST, Sinha G (2019). An automated method for improving positional accuracy of GNIS summit features. *Annual Meeting of the American Association of Geographers (AAG)*, Washington DC, USA, April 3 -7, 2019.
- Horn A, Naik B, Matlack GR, Khoury I, Sinha G, McAvoy D (2019). A synthesis of practice on tree canopy and its safety related effects on rural highways. *98th Annual Meeting of the Transportation Research Board*, Washington, DC, January 13, 2019.
- Arundel ST, Sinha G (2017). Comparing terrain partitioning methods for national mapping. *28th International Cartographic Conference*, Washington, DC, USA, July 2-7, 2017.
- Sinha G, Ferrier M, Outrich M (2016). Mapping and modeling media deserts in the US. *Annual Meeting of the American Association of Geographers (AAG)*, San Francisco, CA, USA, March 29-April 2, 2016.
- Sinha G, Mark DM (2015). How to create an ontology of entity types from topographic standards. (Focus: Topographic eminences and convexities). *GeoVocampDC 2015*, USGS, Reston, VA, USA, November 30 – December 2, 2015.
- Ferrier M, Outrich M, Sinha G (2015). Media deserts: Using GIS technologies to map the Ohio media ecosystem. *2015 Ohio GIS Conference*, Columbus, Ohio, USA, September 21-23, 2015.
- Clevenger KA, Sinha G, Ragan BG, Jackson M, Howe CA. Accelerometry + GPS: assessment of children's free-play intensity and location during recess. *ICAMPAM*, Limerick, Ireland, June 2015.
- Howe CA, Clevenger KA, Ragan BG, Jackson M, Sinha G (2015). Children's free play physical activity intensity by playground location. *Annual Meeting of the American College of Sports Medicine (ACSM), Med Sci Sport Exer*, 47(5), San Diego, CA, USA, May 26-30, 2015.
- Sinha G, Mark DM (2015). Toward a unified terrain ontology. *Session on Conceptualizations of the Landscape: Cognitive, Computational and Cultural Dimensions, Annual Meeting of the American Association of Geographers (AAG)*, Chicago, IL, USA, April 21-25, 2015.
- Gardella JA Jr., Milillo TM, Sinha G, (2014). Service learning and community environmental work in Western New York. *23rd IUPAC International Conference on Chemistry Education (ICCE-23)*, Toronto, Canada, July 13-18, 2014.
- Sinha G (2014). Linked topographic data. *Session on Geospatial Ontology, Semantics, and Metadata, Annual Meeting of the Association of American Geographers (AAG)*, Tampa, FL, USA, April 8-12, 2014.
- Mark DM, Sinha G (2014). Conceptualizing the horizon. *Session on Geospatial Ontology, Semantics, and Metadata, Annual Meeting of the Association of American Geographers (AAG)*, Tampa, FL, USA, April 8-12, 2014.
- Jackson M, Clevenger KA, Ragan BG, Sinha G, Howe CA (2014). GPS and accelerometer evaluation of child play at recess. (*Poster Presentation*). *Ohio University Student Expo*, Ohio University, Athens, OH, USA, April 10, 2014.
- Mark DM, Sinha G (2013). Surface water: How water sits in (on) terrain? *GeoVocampDC 2013 / 6th Annual SOCoP Workshop*, NSF, Washington DC, USA, November 18-19, 2013.
- Howe CA, Ragan BG, Sinha G, Clevenger KA, Benigno JP (2013). Evaluating free-living physical activity: Context, cues, and causes. *Symposium and Panel Discussion, Midwest Chapter Meeting for the American College of Sports Medicine*, Merriville, IN, USA, November 8-9, 2013.

- Sinha G, Lovell EJ, Jones SJ, Velemeni K (2013). Local knowledge and climate change adaptation project (LKCCAP): Issues in geographic representation. *Annual Meeting of the Association of American Geographers (AAG)*, Los Angeles, CA, USA, April 9-13, 2013.
- Kraynik B, Sinha G (2013). Identifying potential flood risk areas using GIS and hydrological modeling tools. *Annual Meeting of the Association of American Geographers (AAG)*, Los Angeles, CA, USA, April 9-13, 2013.
- Jackson M, Mendel M, Lin L, Sinha G, Ragan BG (2013). Accuracy of GPS units in stationary and dynamic modes. *National Athletic Trainers Association (NATA) 64th Annual Meeting and Clinical Symposia*, Las Vegas, NV, USA, June 24-27, 2013.
- Mark DM, Sinha G (2012). Surface networks and the ontology of topography. *GeoVocamp 2012 / 5th Annual SOCoP Workshop*, USGS, Reston, VA, USA, November 29-30, 2012.
- Sinha G (2012). Are we ready for epistemology in GIScience 2.0? *University Consortium for Geographic Information Science (UCGIS) 2012 Symposium*, Washington DC, USA, May 30-June 1, 2012.
- Dyer J, Sinha G (2012). A new relative moisture demand index to assess field sites. *Annual Meeting of the Association of American Geographers (AAG)*, New York, NY, USA, April 9-13, 2012.
- Sinha G, Lovell EJ (2011). Representing Masaai pastoralism in space-time to explore climate change adaptation strategies. *Annual Meeting of the Association of American Geographers (AAG)*, Seattle, WA, USA, April 12-16, 2011.
- Battaglia M, Sinha G (2010). A critical comparison of conceptual and measurement models of urban forests. *33rd Annual Applied Geography Conference*, Forth Worth, TX, USA, October 20-23, 2010.
- Sinha G (2010). An object-field ontology for topographic eminences. *Annual Meeting of Association of American Geographers (AAG)*, Washington DC, USA, April 14-18, 2010.
- Dyer J, Sinha G (2010). Using spatial multi-attribute analysis to develop a field-based relative moisture index. *Annual Meeting of the Association of American Geographers (AAG)*, Washington DC, USA, April 14-18, 2010.
- Sinha G (2009). Toward a formal model of topographic eminences. *Annual Meeting of the Association of American Geographers (AAG)*, Las Vegas, USA, March 21-27, 2009.
- Sinha G (2008). Detection and delineation of topographic eminences. *Annual Meeting of the Association of American Geographers (AAG)*, Boston, MA, USA, April 13-19, 2008.
- Sinha G, Mark DM (2007). Extraction, characterization and classification of topographic eminences. *Annual Meeting of the Association of American Geographers (AAG)*, San Francisco, CA, USA, April 16-20, 2007.
- Gardella JA Jr., Sinha G, Cosme S, Oh G, Manns DC, Milillo TM, Roberts A (2004). Interactive community evaluation of surface soil contaminants in the Lewiston Porter schools using public participation and GIS methods. *Third Annual Public Participation GIS Conference*, Madison, WI, USA, July 18-20, 2004.
- Sinha G, Oh G, Cosme S, Gardella JA Jr., Roberts A (2004). GIS analysis of surface soil contaminants in the Lewiston Porter schools. (Poster presentation). *Environment and Society (ESI) Colloquium*, University at Buffalo, NY, April 16, 2004.
- Sinha G, Flewelling DM (2003). Exploring simple additive weighing for multicriteria line generalization (MCLG). *Annual Meeting of the American Association of Geographers (AAG)*, New Orleans, USA, March 5-8, 2003.

- Oh G, Sinha G, Manns D, Gardella JA Jr., Cosme S (2004). Role of GIS in sampling and detection of surface soil contaminants in the Lewiston Porter schools. *Third Annual Public Participation GIS Conference*, Madison, WI, USA, July 18-20, 2004.
- Millilo TM, Oh G, Sinha G, Coffey E, Gardella JA Jr. (2004). The use of kriging in the determination of arsenic concentrations in Hickory Woods. *Environment and Society (ESI) Colloquium*, University at Buffalo, NY, USA, April 16, 2004.
- Craig JR, Sinha G, Flewelling DM, Silavisesrith W, Rabideau AJ (2003). Automated geographic simplification tools for development of regional scale groundwater models. *AGU Fall Meeting 2003*, San Francisco, CA, USA, December 8-12, 2003.

INVITED TALKS / COLLOQUIA

- Sinha G (2020). Automated extraction of areal extents for GNIS Summit features using the eminence-core method. *Annual Research Meeting at the Center of Excellence for Geographic Information Science (CEGIS), United States Geological Survey (USGS)*, Rolla, MO, USA. September 8, 2020.
- Sinha G (2019). Geomorphometric and toponymic analysis of GNIS terrain feature classes. *Annual Research Meeting at the Center of Excellence for Geographic Information Science (CEGIS), United States Geological Survey (USGS)*, Rolla, MO, USA. August 27, 2019.
- Sinha G (2018). Using the Landform Reference Ontology (LFRO) to explore linguistic and computational representations of landforms. *Annual Research Meeting at the Center of Excellence for Geographic Information Science (CEGIS), United States Geological Survey (USGS)*, Rolla, MO, USA. June 26, 2018.
- Sinha G (2018). Geospatial data visualization. *Invited Speaker, VICO 1400 class, School of Visual Communication, Scripps College of Communication, Ohio University*, Athens, OH, USA, March 20, 2018.
- Sinha G (2018). Making the case for ontology and naïve geography in digital terrain modeling. *Colloquium Speaker, Department of Geology, Ohio University*, Athens, OH, USA, February 23, 2018.
- Sinha G (2017). Ontological Methods for Terrain Modeling and Analysis. *Colloquium Speaker, Department of Geography, Eastern Illinois University*, Charleston, IL, USA, September 22, 2017.
- Sinha G (2017). Ontology based methods for delineating and characterizing landforms. *Annual Research Meeting at the Center of Excellence for Geographic Information Science (CEGIS), United States Geological Survey (USGS)*, Rolla, MO, USA. (Online presentation). June 24, 2017.
- Sinha G (2017). Representing space in geospatial sciences. *Modeling and Spatial Reasoning Geometry Workshop, Ohio University, Department of Teacher Education*, Athens, OH, USA, July 18-19, 2017.
- Sinha G, Foley G (2017). Mapping mathematics to social science. *Webinar presentation made to participants of the Modeling and Spatial Reasoning (Modspar) Project, Ohio University, Department of Teacher Education*, Athens, OH, USA, February 1, 2017.
- Foley G, Sinha G (2016). People's capabilities to understand and use physical and abstract spaces: What we have learned so far. *Mathematics Education Seminar, Ohio University*, Athens, OH, USA, September 8, 2016.

- Sinha G (2016). Math in my life...the story so far. *Modeling and Spatial Reasoning Algebra Workshop, Ohio University, Department of Teacher Education, Athens, OH, USA, June 20, 2016.*
- Sinha G (2016). Representing space in geospatial sciences. *Modeling and Spatial Reasoning Geometry Workshop, Ohio University, Department of Teacher Education, Athens, OH, USA, July 12, 2016.*
- Foley G, Sinha G (2015). Spatial literacy, reasoning, and thinking: Cross-curricular connections. *Mathematics Education Seminar, Department of Teacher Education, Ohio University, Athens, OH, USA, October 13, 2015.*
- Sinha G (2015). Promoting spatial thinking in K-12 education through geospatial technologies. *Colloquium Speaker, Patton College of Education, Ohio University, Athens, OH, USA, March 27, 2015.*
- Howe CA, Ragan BG, Sinha G, Clevenger KA, Benigno JP (2013). Measurement of children's physical activity and social interactions. *Inter Professional Research Colloquium, School of Applied Sciences and Wellness, Ohio University, Athens, OH, USA, March 13, 2013.*
- Sinha G (2013). Using principles of geospatial ontology to explore scientific and "naïve" conceptualizations of the landscape. *Colloquium Speaker, Department of Geography, Ohio University, Athens, OH, USA, April 26, 2013.*
- Sinha G (2010). Mountains, hills, & ... hilly mountains? Exploring linguistic, cognitive and computational strategies for landscape representation. *Invited Speaker, International GIS Day & Geography Awareness Week at Appalachian State University, November 18, 2010, Boone, NC, USA.*
- Sinha G (2008). Topographic eminences: an object based approach to topographic analysis. *Colloquium Speaker, Department of Geography, Ohio University, Athens, OH, February, 2008.*

WORKSHOP PARTICIPATION

- GeoVoCampDC2018*. NIH, Washington DC, October 22-24, 2018. <http://vocamp.org/wiki/DCVoCamp2018>
- GeoVoCampDC 2017*. Department of Interior, Washington DC, November 28 – 30, 2017. <http://vocamp.org/wiki/DCVoCamp2017>
- GeoVoCampDC2016*. University of Maryland, College Park, MD, USA, November 29 – December 1, 2016. <http://vocamp.org/wiki/GeoVoCampDC2016>
- Workshop on Analysis of Movement Data (AMD), 9th International Conference on Geographic Information Science, GIScience 2016*, Montreal, Canada, September 27, 2016. http://giscience.geog.mcgill.ca/?page_id=258
- GeoVoCampDC2015*. USGS, Reston, VA, USA, November 30 – December 2, 2015. <http://http://vocamp.org/wiki/GeoVoCampDC2015>
- Spatial Ontologies for e-Science, The Vespucci Institutes 2015*, Bar Harbor, ME, USA, June 21-27, 2015. <http://vespucci.org/programme#week1>
- Analysis of Movement Data (AMD), Geographic Information Science, 8th International Conference, GIScience 2014*, Vienna, Austria, September 23, 2014. <http://blogs.utexas.edu/amd2014/cfp>

- GeoVoCamp2013/Sixth Annual SoCOP Workshop*. NSF, Washington DC, USA, November 18-19, 2013. <http://vocamp.org/wiki/GeoVoCampDC2013>
- Introduction to Geospatial Semantics and Technology*. Workshop organized by University Consortium for Geographic Information Science (UCGIS) & US Geological Survey (USGS), Washington DC, USA, May 28, 2012.
- GeoVoCamp2012/Fifth Annual SoCOP Workshop*. USGS, Reston, VA, USA, November 29-30, 2012. <http://vocamp.org/wiki/GeoVoCampSOCoP2012>
- GeoVoCamp2012*. UCSB, Santa Barbara, CA, USA, February 4-5, 2012. <http://vocamp.org/wiki/GeoVoCampSB2012>
- GeoVoCamp2011/Fourth Annual SoCOP Workshop*. Washington, DC, USA, June 4-5, 2011. <http://vocamp.org/wiki/GeoVoCampDC2011>
- Second Annual SoCOP Workshop*. 2009. MITRE, McLean, VA, USA, November 12, 2009. http://ontolog.cim3.net/cgi-bin/wiki.pl?SOCoP/Workshop_2009_11_12
- Climate Change and Livelihoods in Sub-Saharan Africa*. John Glenn School of Public Affairs, Ohio State University, Columbus, OH, USA, May 15, 2009.
- Ontology for The National Map*. UCGIS/USGS Specialist Meeting, Washington DC, USA, February 3-4, 2009.

GRANT PROPOSALS

FUNDED

- Ontology based methods for delineating and characterizing landforms*. United States Geological Survey (USGS), PI, \$41,245, 2017-18.
- Phase 2: The Effects of Tree Canopy on Pavement Condition, Safety and Maintenance*. Co-PI, \$347,995. Ohio Department of Transportation/Federal Highway Administration, 2017-19.
- The Effects of Tree Canopy on Pavement Condition, Safety and Maintenance*. Co-PI, \$72,803. Ohio Department of Transportation/Federal Highway Administration, 2016-17.
- New Measures Research Project*. Co-PI, \$25,000. Democracy Fund/ Duke University, 2017-18.
- Mathematical modeling and spatial reasoning (Modspar): Developing advanced teacher capacity for high school mathematics*. Co-PI, \$185,142, Ohio Department of Higher Education, 2017-2018.
- Mathematical modeling and spatial reasoning (Modspar): Developing advanced teacher capacity for high school mathematics*. Co-PI, \$175,598, Ohio Department of Higher Education, 2016-2017.
- Linking local knowledge and local institutions for the study of adaptive capacity to climate change: Participatory GIS in northern Tanzania*. Co-PI, \$571,859, US National Science Foundation (US NSF), 2009-2014.
- PACE: Program to Aid Career Exploration (Student research assistant positions from Ohio University)*. PI, ~\$30,000 (for 15 students positions funded so far), Ohio University, 2010 – Present.

TEACHING EXPERIENCE

OHIO UNIVERSITY (2008 - PRESENT) (AS FACULTY MEMBER)

GEOG 2680	Introduction to GIS & Mapping Sciences
GEOG 4730/5730	Principles of Geographic Information Systems
GEOG 4760/5760	Geographic Information Analysis
GEOG 4760/5760	Advanced Spatial Analysis and GIS Applications
GEOG 6730	Seminar in GIScience
CAS 2600	Tech Matters (2015 only)

UNIVERSITY AT BUFFALO (2003 – 2005) (AS GRADUATE STUDENT)

GEO 481/506	Introduction to Geographic Information Systems
GEO 410/505	Univariate Statistics in Geography
GEO 101	Introduction to Physical Geography

PROFESSIONAL SERVICE

COMMITTEES AT OHIO UNIVERSITY

UNIVERSITY

Core Faculty, Technology and Society, Theme, College of Arts & Sciences
 Member, Graduate Council
 Member, Program Review Committee, Graduate Council
 Member, Dean's Advisory Committee for Promotion/Tenure, College of Arts and Sciences
 Member, Faculty Fellowship Leave Committee, College of Arts and Sciences
 Member, Center for South-East Asian Studies
 Member, Consortium for Energy, Economics and Environment

DEPARTMENT OF GEOGRAPHY

Director, Undergraduate/Graduate Certificates in GIScience
 Faculty Coordinator, Student Internship/Jobs, Department of Geography
 Chair, Curriculum Committee, Department of Geography
 Chair, Evaluation Committee, Department of Geography
 Chair, Media and Communications Committee, Department of Geography
 Chair, Geovisualization Ad-Hoc Committee, Department of Geography
 Chair, Group II Faculty Search Committee, Department of Geography
 Member, Assessment Committee, Department of Geography
 Member, Evaluation Committee, Department of Geography
 Member, Policy and Procedures Committee, Department of Geography

Member, Workload Policy Ad-Hoc Committee, Department of Geography
 Member, Colloquium Committee, Department of Geography
 Member, Curriculum Committee, Department of Geography
 Member, Graduate Committee, Department of Geography
 Member, Undergraduate Committee, Department of Geography

PROFESSIONAL COMMITTEES

Panel Member, Statewide Transfer Assurance Guide (TAG) faculty review panel for Geographic Information System (GIS), State of Ohio, 2019 – Present
 Member, Committee on College Geography and Careers, Association of American Geographers (AAG), 2013 – 2016
 Member, GIS Advisory Board, Sinclair Community College, Dayton, OH, USA, 2014 - Present
 Member, Geosciences/Geotechnical Drafting Advisory Committee, Washington State Community College, Marietta, OH, USA, 2010 -Present
 Member, Student Grievances Committee, College of Arts & Sciences, University at Buffalo, NY, USA, 2003 - 2004
 Senate Member, Graduate Student Association. University at Buffalo, NY, USA, 2003 - 2004
 Editor, Annual Magazine, LLR Hall of Residence, Indian Institute of Technology (IIT) - Kharagpur, West Bengal, India, 1998 – 1999

ORGANIZATION OF CONFERENCES/WORKSHOPS/ PANEL SESSIONS

Co-Organizer, *GeoVoCampDC 2017*. Department of Interior, Washington DC, November 28 – 30, 2017. <http://vocamp.org/wiki/DCVoCamp2017>
 Co-Organizer, *GeoVoCampDC 2016*. University of Maryland, College Park, MD, USA, November 29 – December 1, 2016. <http://vocamp.org/wiki/GeoVoCampDC2016>
 Sponsorship Executive Committee, *9th International Conference on Geographic Information Science (GIScience 2016)*. <http://giscience.geog.mcgill.ca>
 Co-Organizer, *GeoVoCampDC 2015*. USGS, Reston, VA, USA, November 30 – December 2, 2015. <http://vocamp.org/wiki/GeoVoCampDC2015>
 Organizer (with Alexandre Sorokine and Chen-Chieh Feng) and Chair, 4 Sessions on Geospatial and Spatiotemporal Ontology and Semantics, *Annual Meeting of the American Association of Geographers (AAG)*, Chicago, IL, USA, April 21-25, 2015.
 Organizer (with Alexandre Sorokine and Chen-Chieh Feng) and Chair, Session on Geospatial Ontology, Semantics, and Metadata. *Annual Meeting of the Association of American Geographers (AAG)*, Tampa, FL, USA, April 8-12, 2014.
 Organizer (with Alexandre Sorokine and Chen-Chieh Feng) and Moderator, GeoVocamp: A bottom-up and participatory method for developing lightweight geospatial vocabularies and ontologies. Panel Session on Geospatial Ontology, Semantics, and Metadata. *Annual Meeting of the Association of American Geographers (AAG)*, Tampa, FL, USA, April 8-12, 2014.
 Co-Organizer, Panel on IGERT students honoring David Mark. *Annual Meeting of the Association of American Geographers (AAG)*, Los Angeles, CA, USA, April 9-13, 2013.

- Co-Organizer, *GeoVoCampDC 2013/Sixth Annual SoCOP Workshop*. NSF, Washington DC, USA. November 18-19, 2013. <http://vocamp.org/wiki/GeoVoCampDC2013>
- Co-Organizer, *GeoVoCampDC 2012/Fifth Annual SoCOP Workshop*. USGS, Reston, VA, USA. November 29-30, 2012. <http://vocamp.org/wiki/GeoVoCampSOCoP2012>
- Co-Organizer, *GeoVoCampDC 2012*. UCSB, Santa Barbara, CA, USA. February 4-5, 2012. (Co-organizer). <http://vocamp.org/wiki/GeoVoCampSB2012>

REVIEWS OF SCHOLARLY WORKS

CONFERENCE PROGRAM COMMITTEES

- Formal Ontology and Information Systems (FOIS) (2016, 2018, 2020)
 International Conference on Geographic Information Science (GIScience) (2016, 2018)
 Conference on Spatial Information Theory (COSIT) (2019)
 AutoCarto (2020)

GRANTS / JOURNALS / BOOKS

- US National Science Foundation
 Annals of the American Association of Geographers
 Catena
 Computers, Environment & Urban Systems
 Earth Science Informatics
 Environmental Practice
 Environment Protection Engineering
 Ecotoxicology and Environmental Safety
 International Journal of Geographic Information Science
 International Journal of Environmental Research and Public Health
 Journal of Applied Geography
 Journal of Complex Networks
 Journal of Contingencies and Crisis Management
 Journal of Geography
 Journal of Geographical Systems
 Journal of Hydroinformatics
 Journal of Spatial Information Science
 Journal of Spatial Science
 Measurement in Physical Education and Exercise Science
 PLOS One
 Remote Sensing
 Semantic Web
 The Professional Geographer
 Flat World Publications

HONORS & AWARDS

- 2001 - 2006 Associate Fellow, NSF IGERT program in GIScience, University at Buffalo-SUNY, Buffalo, New York, USA
- 2000 - 2004 Presidential Fellowship, College of Arts and Sciences, University at Buffalo-SUNY, Buffalo, New York, USA
- 2019 - Present [Affiliate Faculty Partner](#), Center of Excellence in Geospatial Information Science (CEGIS), U.S. Geological Survey, USA

PROFESSIONAL MEMBERSHIPS

- Association of American Geographers (AAG) (Cartography and GIS, Geographic Information Science and Systems specialty groups)
- Spatial Ontology Community of Practice (SOCoP)
- Spatial Intelligence and Learning Center (SILC)