

Timothy M. Murtha, PhD (tmurtha@ufl.edu)

Department of Landscape Architecture
Center for Latin American Studies
School of Landscape Architecture and Planning
College of Design, Construction, and Planning
University of Florida
Gainesville, FL USA

I. RESEARCH INTERESTS

Settlement Ecology, Urbanism, Landscape, Ecological Urbanism and Coupled Natural and Human Systems Dynamics; Landscape Anthropology and Archaeology; GIS, Remote Sensing, Urban/Regional Design, and Landscape Simulation and Modeling; Lowland Mexico, Guatemala, and Belize.

II. CURRENT APPOINTMENTS AND AFFILIATIONS

UNIVERSITY OF FLORIDA (August, 2017 to present):

Associate Professor, Center for Latin American Studies
Associate Professor, Landscape Architecture
Affiliate Associate Professor, Anthropology
Core Faculty, Florida Institute for Built Environment Resilience
Graduate Faculty, Landscape Architecture, DCP-PhD, and Latin American Studies

III. PREVIOUS APPOINTMENT AND AFFILIATIONS

PENN STATE (2017 to 2019):

Adjunct Associate Professor, Landscape Architecture
Research Associate, Hamer Center for Community Design

PENN STATE (2004 to 2017):

Director, Hamer Center for Community Design (January, 2014 to August, 2017)
co-Director, Center for Human Ecology (January, 2017 to August, 2017)
Associate Professor, Landscape Architecture (July, 2010 to August, 2017)
Assistant Professor, Landscape Architecture (July, 2004 to July, 2010)

Additional Penn State Affiliations:

Latin American Studies, Faculty
Human Dimensions of Natural Resources and the Environment, Graduate Faculty
Architecture PhD, Graduate Faculty
Landscape Architecture, Graduate Faculty
Penn State Institute of Energy and the Environment, Faculty

IV. EDUCATION

- 2002 Penn State - Ph.D., Anthropology
Land and Labor: Classic Maya Terraced Agriculture at Caracol, Belize
(Chair: David Webster; Committee: William Sanders, Ken Hirth, George Milner, Arlen Chase and Barry Scheetz)
- 1997 Penn State - M.A., Anthropology
- 1994 University of Central Florida - B.A., Anthropology

V. RESEARCH FUNDING Total: \$3,368,717

EXTERNAL (Federal): (Total: \$2,209,450; NSF: \$1,799,655)

2020 – 2023 (PENDING – SUBMITTED 11/15/2019): **The Ancient Maya Landscape: Households, Settlement, and Ecology of the Lowlands.** NASA (19-IDS19-0060), **PI**, with Co-Is: A. Almeyda Zambrano (UF), E. Broadbent (UF), R. Griffin (UAH), K. Herndon (UAH), T. Sever (UAH), A. O'Connor (Teledyne), C. Golden (Brandeis). **\$741,346.**

2019 – 2022: **Dynamic Landscapes of Warfare and Agricultural Intensification in the Western Maya Lowlands.** NSF (BCS#1917671), **Co-PI with C. Golden (PI)**, A. Scherer (Co-PI). **\$177,054.**

2019 – 2021: **Resilient Landscapes: Terracing and Settlement Ecology across the Maya Lowlands.** NSF (BCS#1849921). **PI**, with Co-PIs: C. Golden (Brandeis), A. Scherer (Brown), A. Anaya (U. Campeche), A. Zambrano (UF), S. Morrell-Hart (McMaster), and E. Broadbent (UF). **\$263,353.**

2017 – 2020: **Comparative Landscape Scale Cultural Resource Planning, MD and VA.** *Multiple awards:* Department of the Interior and National Park Service (PRO00015347 and P0059082). **PI (UFL), \$185,176; co-PI (PSU), \$24,287. Total: \$209,463.**

2015 – 2019: **Appalachian Landscape Conservation Cooperative – Cultural Resource Preservation Priorities at a Landscape Scale.** *Multiple awards:* Wildlife Management Institute (Contract # APPLCC2016-1). **PI**, \$42,587. The National Park Service (Cooperative Agreement 135414 P11AC30805). **PI**, \$63,501. National Center for Preservation Education (1212). **coPI**, with D. Odess (PI) \$26,400. Wildlife Management Institute (Contract # APPLCC2015-1). **PI**, \$28,000. The National Park Service (Cooperative Agreement 135414 P11AC30805). **PI**, \$36,844. **Total: \$197,332.**

2012 – 2016: **CNH-Ex: Land, Water and Territory: A 3,000 Year Study of Settlement Patterns and Niche Inheritance at the Tikal, Guatemala.** NSF (CNH#1211809). **PI**, with C. Duffy, K. French, D. Webster and R. Terry, **\$249,797.**

2011 – 2016: **Full Scale Development Project: Marcellus Matters, Engaging Adults in Science and Energy.** NSF (EASE DRL 1114670). **col 2011-12; coPI 2012-16**, with M. Arthur (PI), coPIs: B. Orland, D. Miller, E. Prins and K. Brasier, (Total Project: \$2,541,418; **Murtha: \$211,682**)

2005 – 2010: **HSD: Spatiotemporal Dimensions of Population Change in the Northern Orkney Islands from About 1735 to 2000.** NSF (HSD 0527539). **coPI**, with J. Wood (PI), P. Johnson, and S. Matthews, **\$526,000.**

2007: **HSD: Spatiotemporal Dimensions of Population Change in the Northern Orkney Islands from About 1735 to 2000.** NSF (REU Supplement). **coPI**, with J. Wood (PI), P. Johnson, and S. Matthews, **\$7,500.**

2004 – 2007: **Re-evaluation of the Earthworks at Tikal, Guatemala, Phase 2.** NSF (BCS-0443820). **coPI** with D. Webster (PI), **\$172,494.**

2004 – 2007: **REU Site: The North Orkney, Scotland, Population History Project.** NSF (REU-0353527). **coPI** with P. Johnson (PI) and J. Wood, **\$191,775.**

2004 – 2006: **Application of AIRSAR mini grant to obtain remote sensing data.** National Geographic. **PI, \$3,000.**

EXTERNAL (CRM): \$254,390

2009 - 2010: **Musser Gap Phase 1.** Clearwater Conservancy. **PI**, \$4,240.

2005 – 2006: **Slab Cabin Run Phase 1.** Water's Edge Hydrology. **PI** \$33,150.

2001 – 2002: **Nesquohoning Phase II Research.** The Wildlands Conservancy. **coPI** with B. Chiarulli,(PI) \$74,000.

2001: **Compost Facility Phase 1.** Office of the Physical Plant. **PI**, \$18,000.

1999 – 2000: **Tudek (Hatch) Quarry Phase II.** **coPI** with J. Hatch (PI), \$125,000.

EXTERNAL (Endowed): \$617,574

2016 – 2017: Hamer Center for Community Design and Research Endowment. Director, \$196,875.

2015 – 2016: Hamer Center for Community Design and Research Endowment. Director, \$232,467.

2014 – 2015: Hamer Center for Community Design and Research Endowment. Director, \$188,232.

INTERNAL: \$287,303

@ the University of Florida

2018 – 2019: Center for Latin American Studies Course Development, \$1915.

2017 – 2018: Center for Latin American Studies Invited Scholar Support, \$1,000.

@ Penn State

2017 – 2019: **Landscape, Culture and Community in the Northern Yucatan: Engaged Geodesign and Planning.** Stuckeman Collaborative Design Research Grant. Stuckeman School. **Co-PI**, with N. Korostoff (PI), J. Glover and D. Rissolo, \$36,500.

2014: **Sustainable Campus Planning and Design: GIS+BIM Initiative.** Bowers Program, College of Engineering. **PI**, with J. Messner and L. Kalisperis, \$20,000.

2013: **Landscape and City in the Ancient New World.** Incentives and Innovations, College of Arts and Architecture. **PI**, \$13,077.

2012: **The Ancient Maya Landscape: Early Perceptions.** College of Arts and Architecture. **PI**, \$12,500.

2010: **The Impact of Marcellus Gas Development on the Rural Transportation Infrastructure.** Social Science Research Institute. **coPI**, with B. Sheetz (PI), P. Jovanis, E. Coulson, D. Linzell, M. Pietrucha and E. Donnell, \$50,000.

2010: **Mobile Augmented Reality: Geospatial Tools for iOS and Android.** Bowers Program, College of Engineering. **coPI**, with K. Muramoto (PI) and J. Messner, \$24,000.

2010: **An Experience Based Virtual Prototyping Simulator (EVPS) to Improve Houseing and Community Design for the Aging Population.** Bowers Program, College of Engineering. **coPI**, with J. Messner (PI), K. Muramoto and D. Willis, \$20,000.

2009: **Building Integrated Wind Energy: Connecting Aesthetics and Performance.** Bowers Program, College of Engineering. **coPI**, with U. Poerschke (PI), J. Srebric, S. Haupt and S. Stewart, \$15,711.

2009: **geoSpatial Design: GIS, Relational Databases, and Dedicated Computing.** Stuckeman Endowment for Design Computing. **PI**, with L. Kalisperis and L. Gorenflo, \$23,350.

2008: **Integrating Information: Bridging the Gap between Geographic Information Systems and Building Information Modeling.** Bowers Program, College of Engineering. **PI**, with J. Messner and K. Muramoto, \$19,700.

2008: **West End: Integrating Information for Public, Adaptive, and Informed Community Planning.** Hamer Center for Community Design. **PI**, with J. Messner, L. Kalisperis and K. Muramoto, \$7,000.

2006: **Real3D – Auto-Stereo Visualization for the IEL.** Stuckeman Endowment for Design Computing. **PI**, with L. Kalisperis and K. Muramoto, \$24,600.

2006: **Remote Sensing Enhancement for LARCH and Heritage Management.** Stuckeman Endowment and the College of Arts and Architecture. **PI**, \$10,500.

2005: **Digital LEAP.** Stuckeman Endowment for Design Computing. **coPI**, with K. Tamminga (PI) and T. Yahner \$8,450.

FELLOWSHIPS AND AWARDS

2018: Dumbarton Oaks Research Library, One Month Research Award, Washington, DC.

2011: Dumbarton Oaks Research Library, Pre-Columbian Fellow, Washington, DC.

2008: Institute of the Arts and Humanities, Resident Scholar, Penn State, University Park, PA.

2007: Astorino Fellowship, Stuckeman School, Penn State, University Park, PA.

2001: Matson Benson Award, Matson Museum of Anthropology, Penn State, University Park, PA.

1999: Matson Ceramic Studies Award, Matson Museum of Anthropology, Penn State, University Park, PA

VI. PUBLICATIONS AND REPORTS

MONOGRAPHS, BOOKS, and SPECIAL ISSUES EDITED:

1. Brown, Madeline and Timothy Murtha. 2019. Cultural Resources and Landscape Conservation Design and Planning. (Guest Editors) Environmental Practice. Volume 21: 4.
2. Cyphers, Ann, Timothy Murtha, Judith Noguera, Gerardo Jimenez, Elvia Guevara, Anna Di Castro, Brizio Gracia, Virginia Baizabal, Roberto Lunagomez, Joshua Borstein, Stacey Simonds, Mario Ortiz and Jose Figueroa. 2014. Atlas Digital de la Zona Arqueologica de San Lorenzo, Vera Cruz. Universidad Nacional Autonoma de Mexico. Ciudad Universitaria, Mexico DF. 56 pages and 1 DVD (4.7GB). ISBN: 978-6070263262.
3. Murtha, Timothy. 2009. Land and Labor: Classic Maya Agriculture at Caracol, Belize. VDM Verlag Dr. Müller, Berlin. 428 pages. ISBN: 978-3639047721.
4. Webster, David, Jay Silverstein, Timothy Murtha, Horacio Martinez and Kirk Straight. 2005. The Tikal Earthworks Revisited, Occasional Papers in Anthropology No. 28, Department of Anthropology, University Park, PA. 132 pages. ISBN: 978-1881968092.

ARTICLES, PARTS OF BOOKS & PROCEEDINGS:

1. Murtha, Timothy. 2020 (accepted). Livelihoods and Opportunities: Household, Land Use and Landscape Change in the Maya Lowlands. In Lowland Maya Cities, edited by D. Marken. University of Colorado Press, Boulder, CO. 32 pgs.
2. Wang, Luwei, Timothy Murtha, and Madeline Brown. 2020. Park Suitability Index: Developing a Landscape Metric for Analyzing Settlement Patterns in the Context of a Rapidly Urbanizing Area in Central Florida, USA. Journal of Digital Landscape Architecture, 5-2020, pp. xxx-xxx. doi:10.14627/537690xxx. (in print)
3. Brown, Madeline, Luwei Wang, and Timothy Murtha. 2020. Mapping Landscape Values with Social Media. In: Journal of Digital Landscape Architecture, 5-2020, pp. xxx-xxx. © Wichmann Verlag, VDE VERLAG GMBH · Berlin · Offenbach. ISBN 978-3-87907-690-1, ISSN 2367-4253, doi:10.14627/537690xxx. (in print)
4. Schroder, Whittaker, Charles Golden, Andrew Scherer, Timothy Murtha, and Omar Firpi. 2019. Remote Sensing and Reconnaissance Along the Lacantún River: The Lakamtun Dynasty and the Sites of El Palma and Benemérito de las Américas, Primera Sección. Mexican. Vol. XLI. Pp 157 – 167.
5. Murtha, Timothy and Madeline Brown (2019) Cultural resources and landscape conservation design and planning, Environmental Practice, 21:4, 176-178, DOI: [10.1080/14660466.2019.1688060](https://doi.org/10.1080/14660466.2019.1688060)
6. Brown, Madeline and Timothy Murtha. 2019. Anthropological approaches for cultural resource conservation design and planning, Environmental Practice, 21:4, 179-188, DOI: [10.1080/14660466.2019.1688083](https://doi.org/10.1080/14660466.2019.1688083)

7. Lawres, Nathan, Andrew Carter, Timothy Murtha, Madeline Brown & Tara Mazurczyk. 2019. Back to the front: Archaeological resources and the planning process, *Environmental Practice*, 21:4, 189-200, DOI: [10.1080/14660466.2019.1686914](https://doi.org/10.1080/14660466.2019.1686914)
8. Murtha, Timothy, E. Broadbent, C. Golden, A. Scherer, W. Schroder, B. Wilkinson, and A. Almeyda. 2019. Precision Drone Lidar Survey of Ancient Maya Settlement and Landscape. *Latin American Antiquity*. Volume 30, Issue 3: 630-636. DOI: <https://doi.org/10.1017/laq.2019.51>
9. Murtha, T., Lawres, N., Mazurczyk, T., & Brown, M. 2019. Investigating the Role of Archaeological Information and Practice in Landscape Conservation Design and Planning in North America. *Advances in Archaeological Practice*, 7(4), 382-394. <https://doi.org/10.1017/aap.2019.32>
10. Jennings, Julia, Corey Sparks, and Timothy Murtha. 2019. Interdisciplinary Approach to Spatiotemporal Population Dynamics. The North Orkney Population History Project. *Historical Life Course Studies*, 9, 27-50. <http://hdl.handle.net/10622/23526343-2019-0002?locatt=view:master>
11. Brown, Madeline and Timothy Murtha. 2019. Integrating natural and cultural resources in North American large-landscape conservation, *Environmental Practice*, 21:2, 57-68, DOI: [10.1080/14660466.2019.1601935](https://doi.org/10.1080/14660466.2019.1601935)
12. Brown, Madeline, Timothy Murtha, Yan Wang, and LuWei Wang. 2019. ILAS: Intrinsic Landscape Assessment System for Landscape Design and Planning in the National Capital Region. *Journal of Digital Landscape Architecture*. Vol. 4. Pp 84-94. <https://doi.org/10.14627/537663009>
13. Murtha, Timothy, LuWei Wang, and LeiLei Duan. 2019. Historical Analysis of Land Use Change and Geodesign of Rapid Urbanization: Orlando, Florida, USA. *Journal of Digital Landscape Architecture*. Vol. 4. Pp 205-212. doi:10.14627/537663022
14. Scherer, A., C. Golden, O., Alcover Firpi, W. Schroder, T. Murtha, M. Urquizú. 2019. Patrones de asentamiento y la organización social del territorio al nexo de Piedras Negras y Yaxchilan. XXXII Simposio de Investigaciones Arqueológicas en Guatemala, 2018. Museo Nacional de Arqueología y Etnología, Guatemala. In press. submitted July 2018.
15. Goldberg, Lacey, Timothy Murtha, and Brian Orland. 2018. The Use of Crowdsourced and Georeferenced Photography to Aid in Visual Resource Planning and Conservation. In Gobster, Paul H.; Smardon, Richard C., eds. *Visual resource stewardship conference proceedings: landscape and seascape management in a time of change*. Gen. Tech. Rep. NRS-P-183. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. PP 116-127. <https://doi.org/10.2737/NRS-GTR-P-183>
16. Mazurczyk, Tara, L. Goldberg and T. Murtha. 2018. Integrating Visual and Cultural Resource Evaluation and Impact Assessment for Landscape Conservation Design and Planning. In Gobster, Paul H.; Smardon, Richard C., eds. *Visual resource stewardship conference proceedings: landscape and seascape management in a time of change*. Gen. Tech. Rep. NRS-P-183. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. PP 149-161. <https://doi.org/10.2737/NRS-GTR-P-183>
17. Orland, Brian, J. Calabria, Lacey Goldberg, Tara Mazurczyk, Timothy Murtha, M. Thomas, M. Welch-Devine, and A. Wolfe. 2018. Identifying the Valued Ordinary, as a Step toward Scenic Landscape Conservation. In Gobster, Paul H.; Smardon, Richard C., eds. *Visual resource stewardship conference proceedings: landscape and seascape management in a time of change*. Gen. Tech. Rep. NRS-P-183. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. PP 136-149. <https://doi.org/10.2737/NRS-GTR-P-183>

18. Murtha, Timothy, Ann Cyphers, Charles Golden, and Alex Klippel. 2018. Beyond Inventory and Mapping: LIDAR, Landscape, and Digital Landscape Architecture. *Journal of Digital Landscape Architecture*. Volume 3: Pp 249-261. <https://doi.org/10.14627/537642027>
19. Orland, Brian, Micah Taylor, Tara Mazurczyk, Meredith Welch-Devine, Lacey Goldberg, Mary Candler Scales, Timothy Murtha, and Jon Calabria. 2018. Augmented reality and the scenic drive. *Journal of Digital Landscape Architecture*. Volume 3. Wichmann/VDE Publisher Berlin and Offenbach and Berlin. Pp 140-149. <https://doi.org/10.14627/537642027>
20. Wallgrün J.O. Jiawei Huang, Jiayan Zhao, Claire Ebert, Paul Roddy, Jaime Awe, Timothy Murtha, Alexander Klippel. 2018. Immersive Technologies and Experiences for Archaeological Site Exploration and Analysis. In: Fogliaroni P., Ballatore A., Clementini E. (eds) Proceedings of Workshops and Posters at the 13th International Conference on Spatial Information Theory (COSIT 2017). COSIT 2017. Lecture Notes in Geoinformation and Cartography. Springer, Cham. https://doi.org/10.1007/978-3-319-63946-8_48.
21. Murtha, Timothy, 2017. Rethinking urban density: Archaeology, low density urbanism and sustainability. In: Dixon, James, Verdiani, Giorgio, Cornell, Per (Eds.), *Architecture, Archaeology and Contemporary City Planning: Issues of Scale*. Museum of London Archaeology, London/Architecture Department, Florence University, Florence/Department of Historical Studies, University of Gothenburg, Gothenburg, pp. 92–100.
22. Marken, D. and T. Murtha. 2017. *Maya Cities, People and Place: Comparative Perspectives from El Peru and Tikal*. In *Research Reports in Belizean Archaeology* V14: 177-187.
23. Charles Golden, Timothy Murtha, Bruce Cook, Derek S. Shaffer, Whittaker Schroder, Elijah J. Hermitt, Omar Alcover Firpi, Andrew K. Scherer. 2016. Reanalyzing environmental lidar data for archaeology: Mesoamerican applications and implications, *Journal of Archaeological Science: Reports*, Volume 9, October 2016, Pages 293-308, ISSN 2352-409X, <http://dx.doi.org/10.1016/j.jasrep.2016.07.029>
24. Murtha, T., D. Webster, K. French, C. Duffy, R. Terry, A. Parker and C. Balzotti. 2016. Tikal's Landscape: Four Decades of Soil, Settlement and the Earthworks. *Research Reports in Belizean Archaeology*. V13: 181 – 189.
25. Murtha, Timothy. 2015. Negotiated Landscapes: Comparative Settlement Ecology of Tikal and Caracol. In *Ancient Maya Polities*. ed by D. Marken and J. Fitzpatrick. University of Colorado Press. Pp 75 – 98.
26. Orland, Brian and Timothy Murtha. 2015. Show Me: Engaging Citizens in Planning for Shale Gas Development. *Environmental Practice*. Volume 17, Issue 4. Pp 245-255.
27. Murtha, Timothy, Richard Hammond, Brian Orland and Lacey Goldberg. 2015. Probabilistic Modelling and Complex Energy Landscape Design and Planning: an experimental approach. Peer Reviewed Proceedings of Digital Landscape Architecture Conference 2015 at Bernburg. Ed by, Erich Buhmann. Anhalt University of Applied Sciences. Wichmann/VDE Publisher Berlin and Offenbach and Berlin. Pp 238 – 246.
28. Webster, David and Timothy Murtha. 2015. Fractious Farmers at Tikal. In *Tikal and Maya Paleocology* ed by David Lentz. Cambridge University Press. Pp 212 – 238.
29. Cyphers, Ann and Timothy Murtha. 2014. Early Olmec Spaces at San Lorenzo, Vera Cruz. In *Mesoamerican Plazas: Arenas of Community Building and Power Negotiation*. ed by Kenichiro Tsukamoto and Takeshi Inomata. University of Arizona Press. Pp 71 – 89.
30. Murtha, Timothy and Brian Orland. 2014. "Local lessons for a global landscape challenge: Design and planning responses to unconventional shale gas development." In Peer Reviewed Proceedings of Digital

Landscape Architecture Conference 2014 at ETH Zurich. Ed by, Wissen Hayek, Fricker and Buhmann. Wichmann-verlag, Berlin. Pp. 95-105.

31. Balzotti, Chris, David L. Webster, Timothy Murtha, Steven L. Petersen, Richard L. Burnett, Richard E. Terry. 2013. Modelling the ancient maize agriculture potential of landforms in Tikal National Park, Guatemala. *International Journal of Remote Sensing*. Vol. 34, Iss. 16: 5868 – 5891.
32. Orland, Brian and Timothy Murtha. 2013. Here Comes the Boom: Shale gas, landscapes and an ecological planning imperative. In Fábos, J.G., Lindhult, M., Ryan, R.L., & Jacknin, M. (Eds). 2013. Proceedings of Fábos Conference on Landscape and Greenway Planning 2013: Pathways to Sustainability. University of Massachusetts, Amherst, April 12-13, 2013. Full papers. Amherst, MA: Department of Landscape Architecture and Regional Planning, University of Massachusetts, Amherst. Pp 91 – 99.
33. Burnett, R.L., Terry, R.E., Sweetwood, R.V., Murtha, T., Webster, D., Silverstein, J. 2012. Upland and lowland soil resources of the ancient Maya at Tikal, Guatemala, *Soil Science Society of America Journal* Vol. 76 No. 6, p. 2083-2096.
34. Burnett, R.L., Terry, R.E., Alvarez, M., Balzotti, C., Murtha, T., Webster, D., Silverstein, J. 2012. The ancient agricultural landscape of the satellite settlement of Ramonal near Tikal, Guatemala, *Quaternary International* 265, 101-115.
35. Poerschke, U., Woollen, M., Stewart, S., Srebric, J., Murtha, T. 2011. "Design Investigations on Building-Integrated Wind Energy: Observations from an Architecture Studio." In: *Wind Turbine Integration In Architecture and The Built Environment*, ed by Ute Poerschke. Penn State University, University Park, PA. pp. 3 – 19. ISBN 978-0-615-54244-7.
36. Poerschke, U., Woollen, M., Stewart, S., Srebric, J., Murtha, T. 2011. "Design Investigations on Building-Integrated Wind Energy: Lessons from an Architecture Studio." In: *Proceedings of 2011 ASES Conference*, American Solar Energy Society, pp. 955-962.
37. Cyphers, Ann, Timothy Murtha, Joshua Borstein, Judith Zurita-Noguera, Roberto Lunagómez, Stacey Symonds, Gerardo Jiménez, Mario Arturo Ortiz y José Manuel Figueroa. 2010. Arqueología digital en la primera capital olmeca, San Lorenzo. *Thule del Centro Studi Americanistici* 22-5: 121-144.
38. Murtha, Timothy. 2009. Beneath the Canopy: Deciphering the Narrative of the Ancient Maya Landscape. *Proceedings of the 2008/9 CELA Conference*. Tucson, Az, pp. 241-247.
39. Webster, David, Timothy Murtha, Jay Silverstein, and Kirk Straight. 2008. Political Ecology of the Tikal Earthworks: A Maya Altepétl Boundary in Urbanism in Mesoamerica Vol. II, ed by A. Masta, R. Cobean, Garcia Cook and K. Hirth. Instituto Nacional de Antropología e Historia, Mexico City, Mexico, pp. 349-376.
40. Webster, David, Timothy Murtha, Kirk Straight, Jay Silverstein, and Richard Terry. 2007. The Great Tikal Earthworks Revisited, *Journal of Field Archaeology*, Vol. 32: 1 -19.
41. Webster, David, Timothy Murtha, Horacio Martínez, Kirk Straight, Jay Silverstein, Álvaro Soto, Richard Terry, Rich Burnett e Irinna Montepeque. 2007. Los terraplenes de Tikal: Perspectivas después de tres temporadas de campo. En *XX Simposio de Investigaciones Arqueológicas en Guatemala, 2006* (editado por J. P. Laporte, B. Arroyo y H. Mejía), pp.368-379. Museo Nacional de Arqueología y Etnología, Guatemala (versión digital). http://www.asociaciontikal.com/wp-content/uploads/2017/01/23.06_-_Horacio.06_-_www.pdf
42. Webster, David, Timothy Murtha, Kirk Straight, Horacio Martínez, Richard Terry, Rich L. Burnett, Ryan V. Sweetwood, Walter Alvarado, Irinna Montepeque y Jay Silverstein. 2006. Nuevos trabajos e

interpretaciones de los terraplenes de Tikal: Segunda temporada de campo. En *XIX Simposio de Investigaciones Arqueológicas en Guatemala, 2005* (editado por J.P. Laporte, B. Arroyo y H. Mejía), pp.752-760. Museo Nacional de Arqueología y Etnología, Guatemala (versión digital).

<http://www.asociaciontikal.com/wp-content/uploads/2017/01/69 - Horacio.05 - Digital.pdf>

43. Martinez, Horacio, Timothy Murtha, David Webster and Kirk Straight. 2005. La Periferia de Tikal: Política y Económica, in XVIII Simpósio de Investigaciones Arqueológicas en Guatemala, 2005, edited by J. P. Laporte, B. Arroyo, H. L. Escobedo and H, Mejia. Museo Nacional de Arqueología y Etnología, Guatemala City.
44. Andrews, Bradford, Timothy Murtha, and Barry Scheetz. 2004. Approaching the Hatch Jasper Quarry from a Technological Perspective: A Study of Prehistoric Stone Tool Production in Central Pennsylvania. *Midcontinental Journal of Archaeology* 29: 1 -34.
45. Martinez, Horacio, Timothy Murtha, David Webster and Kirk Straight. 2004. Reconocimiento del Proyecto EFAT, in XVI Simpósio de Investigaciones Arqueológicas en Guatemala, 2003, edited by J. P. Laporte, B. Arroyo, H. L. Escobedo and H, Mejia. Museo Nacional de Arqueología y Etnología, Guatemala City. <http://www.asociaciontikal.com/simposio-17-ano-2003/56-03-horacio-doc/>
46. Kirker, Jennifer, David Webster, Amy Kovak y Timothy Murtha. 1999. Investigaciones de población y ecología en Piedras Negras, Petén. En XII Simposio de Investigaciones Arqueológicas en Guatemala, 1998 (editado por J.P. Laporte y H.L. Escobedo), pp.376-389. Museo Nacional de Arqueología y Etnología, Guatemala. <http://www.asociaciontikal.com/wp-content/uploads/2016/11/26.98-Kirker-et-al.pdf>

BOOK REVIEWS:

1. Murtha, Timothy. 2015. Review of Hakansson, N. Thomas and Mats Widgren, eds. 2014. *Landesque Capital: The Historical Ecology of Enduring Landscape Modifications*. 281 pp. Walnut Creek, CA: Left Coast Press. ISBN: 978-1-61132-386-3. In *Environment and Society: Advances in Research (6)*: 176 – 178.
2. Murtha, Timothy. 2014. Review of *Negotiated Settlements: Andean Communities and Landscapes under Inka and Spanish Colonialism*. 2013. by Steven A. Wernke. University Press of Florida. 390 pp. in *American Anthropologist (v116 n1: 242-243)*.

TECHNICAL REPORTS:

1. **2020:** Murtha, T., C. Golden, A. Scherer, A. Anaya, A. Zambrano, S. Morrell-Hart, and E. Broadbent. *Resilient Landscapes: Terracing and Settlement Ecology across the Maya Lowlands*. NSF (BCS#1849921). Annual Report submitted to the National Science Foundation.
2. **2019:** Murtha, T., M. Brown, L. Goldberg, and N. Lawres. *Cultural Resources in the National Capital Region*. Report to the National Park Service, National Capital Region.
3. **2015 to 2017:** Murtha, T. Quarterly reports to the Wildlife Management Institute.
4. **2016:** Murtha, T., C. Duffy, K. French and D. Webster. *Land, Water and Territory Final Outcomes and Report* submitted to the National Science Foundation, (September - Washington, DC).
5. **2015:** Murtha, T., C. Duffy, K. French and D. Webster. *Land, Water and Territory Annual Report* submitted to the National Science Foundation, (September - Washington, DC).
6. **2014:** Murtha, T., C. Duffy, K. French and D. Webster. *Land, Water and Territory Annual Report* submitted to the National Science Foundation, (September - Washington, DC).
7. **2013:** Sheetz, B., D. Linzell, T. Murtha, E. Donnell, P. Jovanis, M. Pietrucha. *The Impact of Marcellus Gas Development on the Rural Transportation Infrastructure*. Transportation Research Board. Accession No.

01489993. Monograph. PSU-2010-05; LTI 2013-13. 79pp. <http://www.mautc.psu.edu/docs/PSU-2010-05.pdf> and <http://trid.trb.org/view.aspx?id=1258473>

8. **2013:** Murtha, T., C. Duffy, K. French and D. Webster. Land, Water and Territory Annual Report submitted to the National Science Foundation, (September - Washington, DC).
9. **2011:** Murtha, T., P. Johnson, S. Matthews, and J. Wood. The North Orkney Population History Project, Final report submitted to the National Science Foundation, (February - Washington, DC).
10. **2010:** Murtha, T., P. Johnson, S. Matthews, and J. Wood. The 2010 HSD Field Season, Report submitted to the National Science Foundation, (Washington, DC).
11. **2009:** Murtha, T., P. Johnson, S. Matthews, and J. Wood. The 2009 HSD Field Season, Report submitted to the National Science Foundation, (Washington, DC).
12. **2009:** Murtha, T. Musser Gap Site Assessment and Phase I Survey, Report submitted to the Pennsylvania Historic and Museum Commission, Commonwealth of Pennsylvania, (Harrisburg, PA).
13. **2008:** Wood, J., P. Johnson, T. Murtha and S. Matthews. The 2008 HSD Field Season, Report submitted to the National Science Foundation, (Washington, DC).
14. **2007:** Wood, J., P. Johnson, T. Murtha and S. Matthews. The 2007 HSD Field Season, Report submitted to the National Science Foundation, (Washington, DC).
15. **2007:** Webster, D., T. Murtha, J. Silverstein, K. Straight, H. Martinez, R. Terry and R. Burnett. A Re-evaluation of the Defensive Earthworks of Tikal Phase 2 Final Report, Report submitted to the National Science Foundation, (Washington, DC) 81 pages.
http://www.researchgate.net/publication/265029686_RE-EVALUATION_OF_THE_EARTHWORKS_AT_TIKAL_GUATEMALA_PHASE_2
16. **2007:** Johnson, P., J. Wood and T. Murtha. North Orkney Population History REU Final Report, Report submitted to the National Science Foundation, (Washington, DC).
17. **2006:** Johnson, P., J. Wood and T. Murtha. The 2006 HSD Field Season, Report submitted to the National Science Foundation, (Washington, DC).
18. **2006:** Wood, J., T. Murtha, P. Johnson and S. Matthews. The 2006 REU Report, Report submitted to the National Science Foundation, (Washington, DC).
19. **2006:** Murtha, T. Phase I Archaeological Research, Slab Cabin Run, PA, Report submitted to the Pennsylvania Museum and Historic Commission - Bureau for Historic Preservation (Harrisburg, PA).
20. **2005:** Webster, D., T. Murtha, J. Silverstein, H. Martinez and K. Straight. The 2005 Tikal Defensive Earthwork Season, Report submitted to the National Science Foundation, (Washington, DC).
21. **2005:** Johnson, P., J. Wood and T. Murtha. The 2005 REU Report, Report submitted to the National Science Foundation, (Washington, DC).
22. **2004:** Johnson, P., J. Wood and T. Murtha. The 2004 REU Report, Report submitted to the National Science Foundation, (Washington, DC).
23. **2003:** Webster, D., J. Silverstein, T. Murtha, H. Martinez and K. Straight. The 2003 Tikal Defensive Earthwork Final Report, Report submitted to the National Science Foundation, (Washington, DC).
24. **2003:** Hankin, Joseph, Nelson Huang, Timothy Murtha, Barbara Connolly and Marcia Lee. 2003. Demographic Changes in Westchester County 1990-2000, Westchester Public Issues Institute, White Plains, NY.
25. **2003:** Webster, D., J. Silverstein, T. Murtha, H. Martinez and K. Straight. The 2003 Tikal Defensive Earthwork Field Season, Report submitted to the National Science Foundation, (Washington, DC).

26. **2002:** Murtha, T. and B. Chiarulli. Phase II Archaeological Research, MRP Project, Nesquehoning, PA , Report submitted to the Pennsylvania Museum and Historic Commission - Bureau for Historic Preservation (Harrisburg, PA).
27. **2001:** Murtha, T. Cohune Ridge Archaeological Settlement Survey Report, in A. Chase and D. Chase, Epicentral Ring Settlement: Report of the Spring 2000 Field Season at Caracol, Belize, Report submitted to the Belize Department of Archaeology (Belmopan, Belize).
28. **2000:** Murtha, T. Tudek Site Field Summary Report, Report submitted to the Pennsylvania Museum and Historic Commission - Bureau for Historic Preservation (Harrisburg, PA)
29. **2000:** Murtha, T. and N. Murray. 322 Facility Survey: Final Report, Report submitted to the Pennsylvania Museum and Historic Commission - Bureau for Historic Preservation (Harrisburg, PA) with Neil Murray.
30. **2000:** Murtha, T. and B. Andrews. The Archaeology of the Tudek Site: Final Report, Report submitted to the Pennsylvania Museum and Historic Commission - Bureau for Historic Preservation (Harrisburg, PA).

PUBLISHED WORK IN PROGRESS

1. Murtha, Timothy. (in prep). *The Ancient Maya Landscape*. Book investigating what we know about the historical ecology of the Maya lowlands and investigating the way in which landscape and environment have been presented and portrayed by archaeologists, historians and artists. 250 pages.
2. Murtha, Timothy. (in prep). Resilient Landscapes. Terraces and Settlement Ecology of the Lowland Maya. Research article. 24 pp.
3. Murtha, Timothy. (in press: 2020?). Tikal's Agrarian Landscape: the view from above. In *Archaeological Methods and Applications in Multispectral Image Processing*. ed by L. Santini, W. VanEssendelft and B. Davenport. Oxbow Press. 26 pages.
4. Murtha, Timothy and Barry Sheetz. (Under Revision: expected 2019?). Sourcing the Source: Bald Eagle Jasper Quarries and the Houserville Habitation Complex. In *Pennsylvania Quarries: Recent Research in Pennsylvania Archaeology Series*. ed by K. Carr and P. Raber. Penn State University Press, University Park, PA. 24 pages.

VII. PROFESSIONAL PRESENTATIONS (* indicates published abstract)

2019:

1. Murtha, Timothy and Whittaker Schroder. 2020. *Settlement, Ecology, and Land Systems Architecture across the Maya lowlands*. Landscape Archaeology Conference. Madrid, Spain. Accepted, **Postponed June 2020, now June 2021**).
2. Murtha, Timothy. The Ancient Maya Landscape: a view from above. Archaeological Institute of America – Gainesville Chapter. February 2020. Gainesville, FL.
3. Schroder, Whittaker and Timothy Murtha. 2020. *Computer Applications and Quantitative Analysis in Archaeology*, Oxford, UK. (Accepted, **Canceled, April 2020**).
4. Schroder, Whittaker and Timothy Murtha. 2020. Society for American Archaeology, Austin, Texas. (Accepted, **Canceled, April 2020**).
5. Wang, Luwei, Timothy Murtha, and Madeline Brown. 2020. *Digital Landscape Architecture*. Cambridge, MA. (Accepted, **Canceled, June 2020**).
6. Brown, Madeline, Luwei Wang, and Timothy Murtha. 2020. *Digital Landscape Architecture*. Cambridge, MA. (Accepted, **Canceled, June 2020**).

2019:

1. Murtha, Timothy. 2019. Remote Sensing the Ancient Maya Landscape. Earth Science Lecture Series, University of Alabama Huntsville. September 2019. Huntsville, AL.
2. Murtha, Timothy. 2019. From the AppLCC to the NCR: Landscape Scale Conservation Design and Planning for Community and Cultural Resources. Landscape scale conservation design and planning between the parks: cultural resources and the national capital region, A summit. National Conservation and Training Center, West Virginia. July.
3. Murtha, Timothy. 2019. Geospatial Data, Cultural Resources, and Overlay Analysis. Landscape scale conservation design and planning between the parks: cultural resources and the national capital region, A summit. National Conservation and Training Center, West Virginia. July.
4. Murtha, Timothy. 2019. Modeling the ethnographic landscape for landscape scale conservation design. Landscape scale conservation design and planning between the parks: cultural resources and the national capital region, A summit. National Conservation and Training Center, West Virginia. July.
5. Alcover Firpi, Omar, Timothy Murtha, Charles Golden, Andrew Scherer y Eben Broadbent. 2019. Encima y Debajo del Dosel: El Uso de Múltiples Sistemas de Teledetección en la Documentación del Mundo Antiguo. Chetumal, Quintana Roo, Mexico. July.

2018:

6. Murtha, Timothy. 2018. Livelihoods and Opportunities: Household, Land Use and Landscape Change at Tikal. Invited Presentation for the Society of American Archaeology Annual Meeting. April.
7. Murtha, Timothy, Ann Cyphers, Charles Golden, and Alex Klippel. (2018). Beyond Inventory and Mapping: LIDAR, Landscape, and Digital Landscape Architecture. 2018 Digital Landscape Architecture. Munich, Germany (June).
8. Brian Orland, Micah Taylor, Tara Mazurczyk, Meredith Welch-Devine, Lacey Goldberg, Mary Candler Scales, Timothy Murtha, and Jon Calabria. (2018). Augmented reality and the scenic drive. 2018 Digital Landscape Architecture. Munich, Germany (June).

2017:

9. Goldberg, Lacey, Timothy Murtha, and Brian Orland. The Use of Crowdsourced and Georeferenced Photography to Aid in Visual Resource Planning and Conservation. Visual Resource Stewardship Conference Landscape and Seascape Management in a Time of Change. Argonne National Laboratory. November.
<http://vrconference.evs.anl.gov/doc/papers/Goldberg%20et%20al%20Use%20of%20crowdsourced%20geocoded%20photography%20in%20VR%20planning%20FINAL.pdf>
10. Mazurczyk, Tara, L. Goldberg and T. Murtha. Integrating Visual and Cultural Resource Evaluation and Impact Assessment for Landscape Conservation Design and Planning. Visual Resource Stewardship Conference Landscape and Seascape Management in a Time of Change. Argonne National Laboratory. November.
<http://vrconference.evs.anl.gov/doc/papers/Mazurczyk%20et%20al%20Integrating%20Visual%20and%20Cultural%20Assessments%20FINAL.pdf>
11. Orland, Brian, J. Calabria, Lacey Goldberg, Tara Mazurczyk, Timothy Murtha, M. Thomas, M. Welch-Devine, and A. Wolfe. Identifying the Valued Ordinary, as a Step toward Scenic Landscape Conservation. Visual Resource Stewardship Conference Landscape and Seascape Management in a Time of Change. Argonne National Laboratory. November.

<http://vrconference.evs.anl.gov/doc/papers/Orland%20et%20al%20Identifying%20the%20valued%20or%20dinary%20FINAL.pdf>

12. Murtha, T. *Landscape and City in the Ancient Maya Lowlands: Regionalism, Settlement and Ecology*. Landscapes of Pre-Industrial Cities. Garden and Landscape Studies Symposium. Dumbarton Oaks. Georgetown, DC <http://doaks.org/research/garden-landscape/scholarly-activities/landscapes-of-pre-industrial-cities>
13. Alcover Firpi, Omar A., C. Golden, A. Scherer, T. Murtha, B. Cook, and W. Schroeder. *Reconsidering "sites," "features," and "landscapes" in the Maya Lowlands with remote sensing and ground-based survey*. Society for American Archaeology Meetings. Vancouver, CA (April 2017)
14. Murtha, T. *Landscape Conservation Design and Planning with Communities and Cultural Resources*. Workshop at the National Park Service's Center for Urban Ecology. Washington, DC (March 27, 2017).
15. Hermitt, E., E. Maxon, K. French, D. Marken and D. Shaffer. *Hydrologic design in three Maya cities: Using regional topographic data, hydrologic analysis in GIS and archaeology for a comparative analysis of Palenque, Tikal, and El Peru*. Computer Applications and Quantitative Analysis in Archaeology. Atlanta, GA (April 2017).
16. Shaffer, D., T. Murtha, C. Golden, B. Cook and E. Hermitt. *Sites, Landscapes, and LiDAR in the Maya Lowlands: Leveraging high resolution regional LiDAR for improved predictive models*. Computer Applications and Quantitative Analysis in Archaeology. Atlanta, GA (April 2017).
17. Murtha, T. *Cultural Resources and Landscape Conservation Design*. Webinar delivered to the Appalachian Landscape Conservation Cooperative Board (February 2017).

2016:

18. Murtha, T. *Rethinking urban density: archaeology, low density urbanism and sustainability*. Architecture, Archaeology and Contemporary City Planning: Issues of Scale. Hosted by the Museum of London Archaeology. London, UK (September).
19. Marken, D. and T. Murtha. *Maya Cities, People and Place: Comparative Perspectives from El Peru and Tikal*. Belize Archaeology and Anthropology Symposium. San Ignacio, Belize (July).*
20. Murtha, T. *Landscape Regionalism, Households and the Settlement Ecology of the Maya*. Architecture, Archaeology and City Planning 3rd Workshop. Asentamiento y Urbanismo, Arquitectura y Arqueologica en America y Europa. Cancun, Mexico (May).*
21. Murtha, T., A. Cyphers and G. Jimenez. *The San Lorenzo Geospatial Project: Mapping the Olmec City and Landscape*. Society of American Archaeology. Orlando, FL (April).*

2015:

22. Murtha, T., O. Schroth, L. Goldberg, B. Orland. 2015. *A Tale of Two Regions: Landscape Ecological Planning for Shale Gas Energy Futures*. AGU Annual Meeting. San Francisco, CA (December).*
23. Goldberg, L. and T. Murtha. 2015. *Experiential and Visual Impacts of Energy on the Pennsylvania Landscape*. European Conference of the Landscape Research Group. Energy Landscapes: Perception, Planning, Participation and Power. Dresden, Germany (September).*
24. Murtha, T., O. Schroth, L. Goldberg, B. Orland. 2015. *Fracking Futures: Emerging comparative perspectives on new energy landscapes*. RGS-IBG Annual International Conference 2015. Exeter, UK (September).*

25. Murtha, T., R. Hammond, B. Orland and L. Goldberg. 2015. Probabilistic Modelling and Complex Energy Landscape Design and Planning: an experimental approach. Digital Landscape Architecture Conference 2015 at Bernburg, Germany (June).*
26. Murtha, T., D. Webster, K. French, C. Duffy, R. Terry, A. Parker and C. Balzotti. 2015. Tikal's Landscape: Four Decades of Soil, Settlement and the Earthworks. Belize Archaeology and Anthropology Symposium. San Ignacio, Belize (July).*
27. Murtha, T. and B. Orland. 2015. Communities and Gas: Landscape Design and Planning in an Energy Landscape. Invited presentation at the North Carolina American Society of Landscape Architects annual meeting, North Carolina(May).*

2014:

28. Murtha, T., B. Orland, R. Hammond and L. Goldberg, 2014. Unconventional Tools for an Unconventional Resource: Community and Landscape Planning for Shale in the Marcellus Region. AGU Annual Meeting. San Francisco, CA (December).*
29. Shu, L. C. Duffy, K. French, T. Murtha and S.E. Garcia-Gonzalez. 2014. Reconstructing the role of landuse change on water yield at the Maya urban center Tikal, Guatemala [700-800 AD]. AGU Annual Meeting. San Francisco, CA (December).*
30. Murtha, T. and B. Orland, 2014. Local lessons for a global landscape challenge: Design and planning responses to unconventional shale gas development. Digital Landscape Architecture Conference. Zurich, CH (May).*
31. Murtha, T., C. Balzotti, K. French, D. Webster and R. Terry, 2014. The Agrarian Landscape of Tikal: A View from Above. Society for American Archaeology Meetings. Austin, TX (April).*
32. French, K., T. Murtha, D. Webster, C. Duffy and C. Ebert, 2014. Water and Tikal, Guatemala. Society for American Archaeology Meetings. Austin, TX (April).
33. Orland, B. and T. Murtha, 2014. Show me: Engaging citizens in planning for shale gas development. National Association of Environmental Professionals, St. Petersburg, FL (April).*
34. Murtha, T. and B. Orland, 2014. Communities and Gas, an Ethnographic Imperative. Ethnographic Film Festival. Penn State University, University Park, PA. (April).
35. Orland, B. and T. Murtha, 2014. Engaged Geodesign in the Forgotten Quarter of Pennsylvania. Geodesign Summit. Redlands, CA (January).*

2013:

36. Murtha, T., K. French, D. Webster and C. Duffy, 2013. Land, Water, and Society in the Maya Lowlands: Niche Construction and Land Use at Tikal, Guatemala. AGU Annual Meeting. San Francisco, CA (December).*
37. Murtha, T., 2013. Anthropology and Geodesign: The Historic Landscape of Orkney, Scotland. Geodesign European Summit. Herwijnen, NL (September).*
38. Murtha, T., 2013. Land, Water, and Territory: Niche Construction and Land Use at Tikal, Guatemala. Royal Geographic Society, Invited Paper, Biogeography Sponsored Session. London, UK (August).*
39. Murtha, T. and K. French, 2013. Climate, Water and Society. Organized session at the AGU Americas Meetings. Cancun, QR, Mexico (May).*

40. Orland, B. and T. Murtha, 2013. Here Comes the Boom: Shale gas, landscapes and an ecological planning imperative. Fabos Conference on Landscape and Greenway Planning: Pathways to Sustainability. Amherst, MA (April).*
41. French, K., T. Murtha, D. Webster and C. Duffy. 2013. Modeling the interplay of Land and Water at Tikal, Guatemala. 78th Society for American Archaeology Meetings. Honolulu, HI (April).*
42. Murtha, T. and K. French, 2013. Land, Water and Territory: A 3,000-year Study of Niche Construction and Culture Change at Tikal, Guatemala. Council of Educators of Landscape Architecture. Austin, TX (March).*
43. Orland, B., T. Murtha and C. A. Cole, 2013. A Geodesign Approach for Energy Development-enabled Sustainability. Council of Educators of Landscape Architecture. Austin, TX (March).*

2012:

44. Murtha, T., 2012. What's in a number? Population estimates and the archaeology of the Classic Maya. Society for American Archaeology Meetings, Memphis (April).*
45. Murtha, T., 2012. Changing patterns of production and tilled fields in Orkney from 1750 to present day. European Social Science and History Conference, Glasgow (April).*
46. Murtha, T., 2012. The Evolution of house, farm and field in Orkney, after 1800. Island Dynamics Conference, Malta (May).*

2011:

47. Murtha, T., 2011. The Cultural Landscape of Marcellus Shale: Rural Pennsylvania + Natural Gas. Council of Educators in Landscape Architecture, Los Angeles, CA (April).*

2010:

48. Murtha, T., 2010. The Ethnographic Landscape. Council of Educators in Landscape Architecture, Maastricht, NL (May).*
49. Murtha, T., J. Wood, P. Johnson, and S. Matthews, 2010. Spatial Dynamics of Population History, Settlement, Social Networks and Landscape in Orkney from 1750 to 2000. European Social Science and History Conference. Ghent, Belgium (April).*

2009:

50. Murtha, T., J. Wood, P. Johnson, and S. Matthews, 2009. The Spatial Dimensions of Population Growth and Decline: Using GIS and Remote Sensing to understand Landscape and Demographic History in Orkney, Scotland. International Union of Social Scientists Studying Population (IUSSP), Marrakech, Morocco (September).*
51. Murtha, T., 2009. Negotiated Landscapes: Comparative Regional Spatial Organization Of Tikal And Caracol – Invited Presentation at Dumbarton Oaks Library, Washington, DC (October).
52. Murtha, T., 2009. Beneath the Canopy: Deciphering the Narrative of the Ancient Maya Landscape. Council of Educators in Landscape Architecture. Tuscon, Arizona (January).*

2008:

53. Murtha, T., J. Wood, P. Johnson, S. Matthews, J. Jennings, 2008. Historical Demography, Oral History, Settlement Archaeology, and Landscape Ecology: The North Orkney Population History Project. European Population Conference. Barcelona, Spain (July).*

2007:

54. Cyphers, A. and T. Murtha, 2007. San Lorenzo Digital Subsurface Survey, Mesa Redunda, Mexico City, Mx (August).*
55. Murtha, T. 2007. GIS and Archaeology, Sponsored Roundtable at the Society for American Archaeology meetings, Austin, Tx (April).

2006:

56. Murtha, T., 2006. The Tikal Forest: Landscape Archaeology and Remote Sensing, American Anthropological Association, San Jose, CA (November).*
57. Murtha, T. 2006. The Settlement Ecology of Tikal, Guatemala, International Congress of Americanists, Sevilla, Spain (July).*
58. Murtha, T. and D. Webster, 2006. The Application of AIRSAR Data for Maya Archaeology: Settlement and Landscape of Tikal, Guatemala, Computer Applications and Quantitative Methods in Archaeology, Fargo, ND (April).*
59. Murtha, T., J. Wood, P. Johnson, C. Sparks and S. Matthews, 2006. Visualizing Orkney: Landscape Archaeology and Demography of the Northern Islands, Computer Applications and Quantitative Methods in Archaeology, Fargo, ND (April).*
60. Murtha, T. 2006. Vernacular Architecture and Everyday Spaces of the Lowland Maya, 71st annual meetings of the Society for American Archaeology, San Juan, Puerto Rico (April).*
61. Webster, D., T. Murtha, and K. Straight, 2006. The Tikal Defensive Earthworks and Settlement, 71st annual meetings of the Society for American Archaeology, San Juan, Puerto Rico (April).*
62. Martinez, H., I. Montepeque, J. Silverstein, T. Murtha, and David Webster, 2006. The Peripheral Organization of Settlement at Tikal, 71st annual meetings of the Society for American Archaeology, San Juan, Puerto Rico (April).*

2005:

63. Murtha, T. and D. Webster, 2005. Application of AIRSAR Data for Archaeology in the Central Lowlands, invited presentation at the National Geographic Society, Washington, DC (December).
64. Murtha, T. 2005. Visualizing Orkney: Landscape and Demographic History of the Northern Isles presentation at the Council for Educators in Landscape Architecture Meetings, Athens, GA (September).*
65. Martinez, H., T. Murtha, D. Webster and K. Straight, 2005. Informe del Estudios de los Fortificaciones Fase 2 en Tikal, Guatemala, International Symposium of Archaeology, Guatemala City, Guatemala (July).*
66. Murtha, T. 2005. Smallholder Landscapes: Settlement Ecology of the Classic Maya, invited presentation at the Society for Economic Anthropology Meetings, Dartmouth, NH (April). *
67. Murtha, T. 2005. Settlement Ecology and Ekistics: The View from Tikal, invited presentation at the Society for American Archaeology Meetings, Salt Lake City, UT (April). *
68. Murtha, T. 2005. Advancements in Computer Technology and Settlement Pattern Archaeology, organizer and chair of a session at the Society for American Archaeology Annual Meetings, Salt Lake City, UT (April).

2004:

69. Murtha, T. 2004. Landscape Archaeology and Settlement Ekistics, invited presentation McMaster University, Hamilton, ONT, CA (October).
70. Murtha, T. 2004. Settlement Pattern Archaeology and GIS of the Maya, invited presentation at the Society for American Archaeology Annual Meetings, Montreal, CA (April). *

2003:

71. Silverstein, J., T. Murtha, H. Martinez, D. Webster and K. Straight, 2003. Recent Research in Maya Warfare, the Tikal Defensive Earthworks, World Archaeology Conference V, Washington DC (July). *
72. Martinez, H., T. Murtha, D. Webster and K. Straight, 2003. Informe del Estudios de los Fortificaciones en Tikal, Guatemala, International Symposium of Archaeology, Guatemala City, Guatemala (July). *
73. Murtha, T. 2003. Analyzing the Space of Demography in Westchester County, Westchester GIS Symposium, Purchase, NY (June).

2002:

74. Murtha, T. 2002. Classic Maya Agriculture, The View from the Fields, 17th Annual Graduate Exhibition, University Park (April).
75. Murtha, T. 2002. Classic Maya Intensive Agriculture, Reclaiming the Mystery, 67th Annual Meeting of the Society for American Archaeology, Denver (March). *

1999:

76. Murtha, T. 1999. Archaeology and GIS: New Visions of the Ancient Maya of Caracol, Belize, 19th Annual ESRI International Conference, San Diego (June). *

VIII. COMMUNITY ENGAGEMENT & WORKSHOPS

SHALE GAS AND COMMUNITY

Digital Workshop Marcellus By Design: Williamsport, Lancaster, Indiana and Dubois, PA. July 2016.
Landscape Ecological Planning and Gas: Citizen Science Volunteers. Williamsport, PA. September, 2015.
Regional Planning and Marcellus By Design. PA Wilds Design Roundtable. Dubois, PA. April, 2015.
Communities, Planning and Shale Gas: Citizen Science Volunteers. Lancaster, PA. February, 2015.
MBD Studio: Landscape Ecological Planning, Design and Energy. Wellsboro, PA. December, 2014.
MBD Studio: Landscape Ecological Planning, Design and Energy. Sullivan County, PA. December, 2013.
MBD Studio: Landscape Ecological Planning, Design and Energy. Sullivan County, PA. December, 2013.
Community Heritage and Planning. Bradford County, PA. December, 2010.
Cultural Landscape of Energy. Harrisburg, PA. June, 2010.
Endless Mountains Heritage Planning. Towanda, PA. February 2010.

HERITAGE PLANNING

Westray Heritage Center Landscape Design, Westray, Orkney. July, 2009.
Westray Heritage Center Landscape Design, Westray, Orkney. July, 2008.

IX. OTHER MEDIA

TELEVISION:

2019: Flights Into the Past - Archaeological Prospection Using Lidar. LIDAR Magazine Webinar. October 23, 2019.
<https://register.gotowebinar.com/register/8365527968771871491>

2011: History Channel Australia and New Zealand Reproduction of Gods, Graves and Scholars, titled: Maya: Rivals in the Jungle - produced by SpiegelTV, Berlin, Germany

2010: History Channel UK Reproduction of Gods, Graves and Scholars, titled: Maya: Rivals in the Jungle - produced by SpiegelTV, Berlin, Germany

2007: God's, Graves, and Scholars, produced by SpiegelTV, Berlin, Germany – HDTV documentary, Directed by Andreas Sawall.

WEB:

hamercenter.psu.edu

www.psutikal.org

marcellusbydesign.psu.edu (with B. Orland)

<http://www.engr.psu.edu/ae/cic/gisbim/index.html>

APPS & STORYMAPS:

hamercenter.psu.edu

www.psutikal.org

X. ADVISING

POST-DOCTORAL

Whittaker Schroder, PhD (2019 to present); Madeline T. Brown, PhD (2017 to present); Wu Hong, PhD (2015 – 2016)

GRADUATE (ADVISER):

PHD @ UFL: LuWei Wang – PhD, College of Design Construction and Planning

PHD @ PSU: Nastaran Tebyanian – PhD, Stuckeman School (current); Lacey Goldberg - PhD, Stuckeman School (ABD).

MASTERS @ UFL: Michelle Laramie, MURP, School of Landscape Architecture and Planning (2020); Nathania Martinez, MALAS, Center for Latin American Studies (2020); William Boose, MALAS, Center for Latin American Studies (2020); Andrew Gallup, MALAS, Center for Latin American Studies (2020); Breanna Ross, MLA, Department of Landscape Architecture (2019).

MASTERS @ PSU: Claudia Rodriguez – MLA, Department of Landscape Architecture (2017); Nicholas Decker – MSinLA, Department of Landscape Architecture (201u8); Abhinandan Bera – MLA, Department of Landscape Architecture (2016); Tobi Baugh – MGIS, College of Earth and Environmental Science (2015); Erik Johanssen – MGIS, College of Earth and Environmental Science (2015); Jason Torres – MGIS, College of Earth and Environmental Science (2013); Stephen Mainzer – MSinLA, Department of Landscape Architecture (2011); Travis Flohr – MSinLA, Department of Landscape Architecture (2011); Steven Preston – MLA, Department of Landscape Architecture (2009); Michelle Lazar – MGIS, College of Earth and Environmental Sciences (2009); Bill Dickinson – MGIS, College of Earth and Environmental Sciences (2008)

GRADUATE (COMMITTEE):

PHD @ UFL: Widyastri Rahmy – PhD Dissertation, College of Design, Construction, and Planning (current); Leilei Duan – PhD Dissertation, College of Design, Construction, and Planning (2018).

PHD @ PSU: Mina Rahimian – PhD Dissertation, Stuckeman School (current); Michael Mohny – PhD Dissertation, College of Education (current); Martin Welker – PhD Dissertation, Department of Anthropology (current); Bianca Gentil – PhD Dissertation, Department of Anthropology (current); Nadia Johnson – PhD Dissertation, Department of Anthropology (current); Claire Ebert - PhD Dissertation, Department of Anthropology (2017); Kirk Straight – PhD Dissertation, Department of Anthropology (2012); Robert Griffin – PhD

Dissertation, Department of Anthropology (2012); J. Heath Anderson - PhD Dissertation, Department of Anthropology (2009); Jason Patrick De Leon - PhD Dissertation, Department of Anthropology (2008); Eric Jones - PhD Dissertation, Department of Anthropology (2008).

MASTERS @ UFL: Jason Seickel – MLA, Department of Landscape Architecture (2018).

MASTERS @ PSU: James Brosius – MSinLA, Department of Landscape Architecture (2015); Tatiana Calmon – MSinLA, Department of Landscape Architecture (2010); Timothy Joice – MSinLA, Department of Landscape Architecture (2010); Jeffrey Fitzpatrick – MLA, Department of Landscape Architecture (2008); Madhur Gurjar - MLA, Department of Landscape Architecture (2006).

XI. TEACHING

NEW COURSE DEVELOPMENT

FLORIDA: LAS 6938 – City as Landscape in Latin America; IDS 2931 – Before Columbus. LAS 3XXX – LATIN AMERICA: URBAN BY DESIGN. LAA 6905 – Latin America City and Landscape.

PENN STATE: Geodesign (LARCH 450); Landscape and City in the Ancient New World (LARCH XXX); Intellectual History of Landscape Architecture (LARCH 502); Depth Studios (multiple topics LARCH 414).

SUNY WESTCHESTER: Cultural Anthropology (ANTH 101); Cultural Anthropology Online (ANTH101OL); Introduction to Sociology Online (SOC101OL).

COURSES TAUGHT

UNIVERSITY OF FLORIDA LANDSCAPE ARCHITECTURE (August 16, 2017 to present): LAA 4356 – Environmental Planning and Design Studio. LAS 6656 – Advanced Ecological Planning and Design. LAA 6905 – Latin America City and Landscape. IDS 2935 – Before Columbus.

PENN STATE LANDSCAPE ARCHITECTURE (2004 to 2017): Graduate Research Design; Intellectual History of Landscape Architecture (graduate seminar); Geodesign; Depth Studios (multiple topics); Seminar (multiple topics); Regional Studio; Regional Seminar; Design Implementation II – Grading and Stormwater; Design Implementation I – Site Analysis and Grading.

PENN STATE ARCHITECTURE (2016): Graduate Research Design.

SUNY WESTCHESTER (2002 to 2004): Cultural Anthropology (ANTH 101); Cultural Anthropology Online (ANTH101OL); Introduction to Sociology Online (SOC101OL); Urban Sociology and Anthropology.

PENN STATE ANTHROPOLOGY (1997 to 2002): Archaeology Field Methods; Archaeology Lab Methods; Cultural Anthropology; Archaeology.

UNIVERSITY OF CENTRAL FLORIDA (1999): Peoples of the World.

XII. SERVICE

RECENT UNIVERSITY, SCHOOL & DEPARTMENTAL SERVICE

@UFL

University of Florida Senate – Senator (2019 to 2022)

University of Florida – UFF Grievance Officer (2019 to present)

Center for Latin American Studies – Faculty Advisory Council (2018 to present)

Florida Institute of Built Environment Resilience Search Committee (2017 to 2018)

Department of Landscape Architecture Search Committee (2017 to 2019)

Department of Landscape Architecture Promotion and Tenure Policy Committee (2017 to present)

@PSU

Institute of Arts and Humanities, Advisory Board (2014 to 2016)

Faculty Search Committee (2015/16)

Geodesign Program, Advisory Board (2012 to 2017)
University Graduate Fellowship Council, College Representative (2013 to 2014)
College of Arts and Architecture Research (2015 to 2017)
PSU Graduate Research Exhibition (2005 to 2017)
Graduate Program Revision and Design: PhD in Architecture and Landscape Architecture (2013 to 2017)

RECENT SERVICE TO THE PROFESSION & DISCIPLINE

National Science Foundation (2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2020)
National Geographic Society (2017)
American Council of Education – College Credit Review (various appointments 2006 to present)
Commonwealth of Pennsylvania: Board of Historic Preservation (appointed 2 terms: 2009 - 2015)
Spring Creek Canyon Technical Advisory Committee (2009 to 2011; 2016)
Computer Applications and Quantitative Analysis 2017 Annual Meeting Committee (2016 - 2017)
Reviewer: *Journal of Environmental Anthropology*; *Landscape and Urban Planning*; *Archaeological Practice*;
Council of Educators in Landscape Architecture; *Journal of Archaeological Science*; *American Anthropologist*;
Latin American Antiquity; *Computer Applications and Quantitative Analysis*; *Geoforum*.

ADDITIONAL UNIVERSITY SERVICE (Department, School, College, University)

PENN STATE:

Stuckeman Faculty Council, College of Arts and Architecture (chair 2013) (S); Stuckeman School Director Search Committee (D); Departmental Promotion and Tenure Committee (D); Stuckeman School – Vision Task Force (S); Faculty Governance Committee (S); Diversity Committee (C); LARCH Department Head Search (S); Graduate; Program Committee (D); Graduate Curriculum Committee (D); MSLA Curriculum Sub-Committee – Chair (D); Computer Task Force (S); Immersive Environments Laboratory (S); Matson Museum of Anthropology (U); GIS Council (U); Historic Places Initiative (S); D Waiver Committee (D); Search Committee Senior GIS Position, Chair (D); Curriculum Committee (D)

SUNY WESTCHESTER:

Information Literacy Committee (D); Social Science Assessment Coordinator (D); Curriculum Committee (D); Philosophy Search and Screen Committee (D); Faculty Personnel Policy Committee (C); Irish Society, Faculty Advisor (C); Institutional Research Consultant, GIS Specialist (C); Grants Coordinator Consultant, GIS Specialist (C)

PROFESSIONAL AFFILIATIONS & MEMBERSHIPS

Royal Geographical Society, Fellow
Council of Educators in Landscape Architecture
Society for American Archaeology
American Anthropological Association
Computer Applications and Quantitative Analysis in Archaeology
American Geophysical Union