# Isaac I.T. Ullah

November 11, 2015

Arizona State University School of Human Evolution and Social Change PO Box 2402 Tempe, AZ 85287-2402

(480) 727-1054 office (650) 201-0479 cell iullah@asu.edu http://isaacullah.github.io

### ACADEMIC EMPLOYMENT

2014–Present	Postdoctoral Research Scholar, School of Human Evolution and Social Change, Arizona State University, Tempe, AZ.
2013–2014	Visiting Scholar, Center for Comparative Archaeology, University of Pittsburgh, Pittsburgh, PA.
2012–2013	Visiting Assistant Professor of Anthropology, Department of Anthropology, University of Notre Dame, Notre Dame, IN.

# **EDUCATION**

2013	Ph.D., Anthropology. Arizona State University.
2003	M.A., Anthropology. University of Toronto.
2001	B.S., Anthropology. University of California, Davis.

### RESEARCH INTERESTS

Long-term human eco-dynamics Landscapes, geoarchaeology, and earth-surface dynamics Plant and animal domestication and intensification

# GRANTS, FELLOWSHIPS, AND AWARDS

#### Research Grants

2014–2016	New Perspectives in Archaeology: The Socio-ecological Agent-based Modeling of the Early Bronze Age I of Arslantepe (Malatya). PI: B. Arikan. Foreign Researchers: I.I.T. Ullah, and S. Bergin (PI's/CI's limited to Turkish nationals only). Research grant from TUBITAK, The Scientific and Technological Research Council of Turkey, Research and Development Funding Program. Amount received: \$30,000.
2013–2017	The Emergence of Coupled Natural and Human Landscapes in the Western Mediterranean. PI: C.M. Barton. CI's: S. Sarjoughian, A. Heimsath, M. Acevedo, J. Riel-Salvatore. Senior Personnel: E. Vivoni, J. Bernabeu, I.I.T. Ullah. Dynamics of Coupled Natural and Human Systems grant from the National Science Foundation. Amount received: \$1,300,000
2013–2015	Archaeological Survey and the Neolithic of the Levant. PI's: E.B. Banning and S.T. Stewart. Collaborator: <b>I.I.T. Ullah</b> . Insight grant from the Social Sciences and Humanities Research Council of Canada. Amount received: \$282,000

#### Research Grants Submitted

Landscape Archaeology and the Neolithic of Jordan and Cyprus. PI's: E.B. Banning and S.T. Stewart. Collaborators: **I.I.T. Ullah**, K. Gibbs, A. Hawkins. Insight grant from the Social Sciences and Humanities Research Council of Canada. Amount requested: \$288,750

### Research Grants In Preparation

*Slow Recovery: Land Use and Human Impacts in Post-Contact Southern Arizona*. PI's: **I.I.T. Ullah** and J.S. Watts. In preparation for submission to the CNH program of the NSF, Fall, 2015.

### **Fellowships**

- 2011–2012 Arizona State University Dean's Fellow. *Amount*: \$30,000/year.
- 2008–2010 Arizona State University Dean's Advanced Scholar.. *Amount*: \$35,000/year.

### Awards

2010 University Consortium for Geographic Information Science Student Paper Award

### **AFFILIATIONS**

## **Affiliations and Professional Memberships**

Society for American Archaeology; CHANS-Net: International Network of Research on Coupled Human and Natural Systems; Anthropocene Working Group of the Community Surface Dynamics Modeling System; Complex Systems Society; ASU Center for Social Dynamics and Complexity

### **PUBLICATIONS**

### Articles in Peer-Reviewed Journals

- 2015 **Ullah, I.I.T.** *Integrating older survey data into modern research paradigms: Identifying and correcting spatial error in "legacy" datasets.* <u>Advances in Archaeological Practice.</u> In Press. Expected print date, 10/2015.
- 2015 **Ullah, I.I.T.**, Kuijt, I., and Freeman, J.F. *Toward a theory of punctuated subsistence change*. Proceedings of the National Academy of Sciences. 112(31), 9579–9584.
- Barton, C.M., **Ullah, I.I.T.,** and Heimsath, A. *How to make a Barranco: Modeling socioecological dynamics of landscape change in the Mediterranean*. <u>Land, special issue: "Agent-Based Modelling and Landscape Change."</u> 4(3), 578-606.
- 2015 **Ullah, I.I.T.,** Duffy, P.R., and Banning, E.B. *Modernizing spatial micro-refuse analysis: New methods for collecting, analyzing, and interpreting the spatial patterning of micro-refuse from house-floor contexts.* <u>Journal of Archaeological Method and Theory.</u> 22(4), 1238-1262.
- Barton, C.M., **Ullah, I.I.T.,** Bergin, S.M., Mitasova, H., and Sarjoughian, H. *Looking for the future in the past: Long-term change in socioecological systems.* Ecological Modeling, special issue: "Modeling Across Millennia." 241(0):42-53.
- 2011 **Ullah, I.I.T.** *A GIS method for assessing the zone of human-environmental impact around archaeological sites: a test case from the Late Neolithic of Wadi Ziqlâb, Jordan.* <u>Journal of Archaeological Science.</u> 38(3):623-632.

- 2010 Barton, C.M., **Ullah, I.I.T.,** and Bergin, S. *Land use, water and Mediterranean landscapes: Modelling long-term dynamics of complex socio-ecological systems.*Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences. 368(1931):5275 -5297.
- Barton, C.M., **Ullah, I.I.T.**, and Mitasova, H. *Computational modeling and Neolithic socioecological dynamics: A case study from Southwest Asia*. <u>American Antiquity.</u> 75(2):364-386.

#### **Books**

**Ullah, I.I.T.** *Neolithic Human Landuse in Northern Jordan: A Simulation Modeling Approach*. Under contract for publication by <u>Arizona State University Anthropological Research Papers.</u> Status: <u>In revision</u>. Initial copy edit and editorial comments received, 8/30/2015. Expected 2016 publication date.

#### Articles in Edited Volumes

- 2015 Sarjoughian, H., Mayer, G., **Ullah, I.I.T.,** and Barton, C.M. *Managing Hybrid Model Composition Complexity: Human–Environment Simulation Models*. In: Levent Yilmaz (Ed.), <u>Concepts and Methodologies for Modeling and Simulation</u>. Springer, 107-134. DOI: 10.1007/978-3-319-15096-3
- 2013 Mitasova, H., Barton, C.M., **Ullah, I.I.T.,** Hofierka, J., and Harmon, R.S., *GIS-based soil erosion modeling*. In: <u>Treatise in Geomorphology</u>, Vol. 3: Remote Sensing and <u>GIScience in Geomorphology</u>, Academic Press, San Diego. pp. 228-258
- 2012 **Ullah, I.I.T.** *Particles from the past: microarchaeological spatial analysis of ancient house floors.* In: Parker, B.J., Foster, C.P. (Eds.), <u>New Perspectives in Household</u> Archaeology. Eisenbrauns, Winowna Lake, pp. 123–138.
- Ullah, I.I.T., and Bergin, S.M. Modeling the consequences of village site location: Least cost path modeling in a coupled GIS and agent-based model of village agropastoralism in eastern Spain, in: White, D.A., Surface-Evans, S.L. (Eds.), Least Cost Analysis of Social Landscapes: Archaeological Case Studies. University of Utah Press, Salt Lake City, pp. 155–173.
- 2009 **Ullah, I.I.T.** *Within-room spatial analysis of activity areas at Late Neolithic Tabaqat Al-Buma, Wadi Ziqlab, Al Koura, Jordan.* In: <u>Studies in the History and Archaeology of Jordan, X.</u> The Department of Antiquities of Jordan, Amman, pp. 87-95.

### Peer-Reviewed Computer Software

Barton, C.M., **Ullah, I.I.T.**, Mayer G., Bergin, S., Sarjoughian, H., and Mitasova, H. *MedLanD Modeling Laboratory v.1* - A hybrid modeling environment that couples an agent-based model of small-holder agropastoral households and a cellular landscape evolution model that simulates changes in erosion/deposition, soils, and vegetation. Retrievable from: <u>CoMSES Computational Model Library</u>, www.openabm.org/model/4609/version/1

### **Publicly Available Computer Software**

- 2015 **Ullah, I.I.T.** *AgModel*, *v.0.3* An agent-based model of the forager-farmer transition. Retrievable from: <u>GitHub</u>, dx.doi.org/10.5281/zenodo.17551
- 2015 Ullah, I.I.T. *r.viewshed.cva* A GRASS GIS module that undertakes a cumulative viewshed analysis using a vector points map as input "viewing" locations. Retrievable

- from: <u>GRASS Addons Repository</u>, svn.osgeo.org/grass/grass-addons/grass7/raster/r.viewshed.cva/
- 2014 **Ullah, I.I.T.**, Barton, C.M., Mitasova, H. *r.landscape.evol* A GRASS GIS module that simulates the cumulative effect of erosion and deposition on a landscape over time. Retrievable from: <u>GRASS Addons Repository</u>, svn.osgeo.org/grass/grass-addons/grass7/raster/r.landscape.evol/
- 2014 **Ullah, I.I.T.** *r.floorsim* A GRASS GIS module that simulates artifact deposition on a house floor, with site formation disturbance, sampling, and re-randomization. Retrievable from: <u>GRASS Addons Repository</u>, svn.osgeo.org/grass/grass-addons/grass6/raster/r.floorsim/
- 2014 **Ullah, I.I.T.** *r.soildepth* A GRASS GIS module that estimates soil depths based on hillslope curvatures. Retrievable from: <u>GRASS Addons Repository</u>, svn.osgeo.org/grass/grass-addons/grass6/raster/LandDyn/r.soildepth.py/
- 2011 **Ullah, I.I.T.** *r.catchment* A GRASS GIS module that creates a raster buffer of specified area around vector points using cost distances. Retrievable from: <u>GRASS Addons Repository</u>, svn.osgeo.org/grass/grass-addons/grass7/raster/r.catchment/

### Reports and Non-reviewed Publications

- 2015 Banning, E.B., Gibbs, K., **Ullah I.I.,** Hitchings, P., Abu Jayyab, K., Edwards, S., and Rhodes, S. *Archaeological Excavations in Wadi Quseiba and Wadi al-Bîr, northern Jordan*. Antiquity Project Gallery. 344. http://antiquity.ac.uk/projgall/508
- Banning, E.B., Abu Jayyab, K., Elendari, R., Gibbs, K., Hitchings, P., Hosseinmardi, G., Jablonkay, D., Al Jarrah, H., Letham, B., Razzaz, S., Rhodes, S., **Ullah, I.I.T.,** and Velgakis, J., and Weston, R. *Archaeological excavations in Wadi Quseiba and Wadi al-Bîr, northern Jordan*, *2014*. Report on file with the Department of Antiquities of Jordan, Amman.
- 2013 Banning, E.B., Hitchings, P., Abu Jayyab, Elendari, R., K. Gibbs, K., Jablonkay, D., Al Jarrah, H., Letham, B., Razzaz, S., **Ullah, I.I.T.,** and Weston, R. *2013 Archaeological survey in Wadi Qusayba and the Mandah Plateau, Irbid Region, Jordan.* Annual of the Department of Antiquities of Jordan. 57:463-475.
- Ullah, I.I.T. Chapter IIb Neixon 2011, Artifact density studies, in: Fábregas Valcarce, R., Bonilla Rodríguez, A. (Eds.), Boiro: 5000 Anos De Cambio Climático E Explotación Do Medio No Marco De Arousa Norte Sondaxes Arqueolóxicas. E Labores De Restauro No Complexo Dos Castros Do Neixón (The Concello De Boiro and Centro Arqueolóxico Do Barbanza), Memoria Técnica. The Concello de Boiro and Centro Arqueolóxico do Barbanza.
- 2008 **Ullah, I.I.T.,** Schuldenrien, J., and Smith, M. *Preliminary report of the 2008 season of the Wadi Hasa Ancient Pastoralism Project*. Report on file with the Department of Antiquities of Jordan, Amman.

### Reviews

- 2014 **Ullah, I.I.T.** Review of: *Mediterranean Archaeological Landscapes: Current Issues.* Geoarchaeology. 29(2), March/April, 2014.
- 2007 **Ullah, I.I.T.** Review of: *Human Ecology in the Wadi Al-Hasa: Land Use and Abandonment through the Holocene*. <u>American Anthropologist.</u> 109(1):216.

Gibbs, K., Kadowaki, S., and **Ullah, I.I.T.** *Domesticating Space: Notes on the Toronto Conference*. Neo-Lithics. 1/02:21-22.

#### Works Submitted

Barton, C.M., **Ullah, I.I.T.**, Bergin, S.M., Sarjoughian, H.S., Mayer, G.R., Bernabeu Auban, J.E., Heimsath, A.M., Acevedo, M.F., Riel-Salvatore, J.G., and Arrowsmith, J.R. *Experimental Socioecology: Integrative Science for Anthropocene Landscape Dynamics*. Anthropocene. Submitted, 09/01/2015.

# Works in Progress

**Ullah, I.I.T.**, Chang C., and Tourtellette, P. *Co-evolution of landscapes, Kurgans, and settlements in southeast Kazakhstan during the first millennium BC*. Intended for <u>Journal of Archaeological Science</u>.

Barton L. and **Ullah, I.I.T.** *A dynamic behavioral ecology model of early domestication processes.* Intended for <u>Journal of Anthropological Archaeology.</u>

**Ullah, I.I.T.** and Arikan, B. *Computer-based simulation of surface-processes, and digital reconstruction of paleoenvironment during the Early Bronze Age-I at Arslantepe—Malatya, Eastern Turkey.* Intended for Geoarchaeology.

Banning, E.B., **Ullah, I.I.T.**, Hitchings, P., Abu Jayyab, K., Rhodes, S., Gibbon, E., and Glasser, A. *A Late Neolithic Site in Wâdî al-Bîr, northern Jordan*. Intended for <u>Antiquity</u>.

#### TEACHING EXPERIENCE

# **University Courses**

- 2013–2014 academic year. <u>University of Pittsburgh</u>, Pittsburgh, PA.
  - "Complex Adaptive Systems & Computational Modeling." Graduate seminar.
- 2012–2014 academic year. <u>University of Notre Dame</u>, Notre Dame, IN.
  - "Sustainability: Past and present." Upper division cross-listed elective course.
  - "Life on the move: Pastoral lifeways in archaeological and ethnographic contexts." Upper-division elective seminar course.
  - "Fundamentals of Archaeology." Lower-division core-curriculum course.
  - "Anthropology: Humans 360." Lower-division introductory course.
- 2011 Summer session. Arizona State University, Tempe, AZ.
  - "Castro de Néixon International Field School." Summer field-school, core-curriculum course.
- 2010 & 2011, Fall semesters. Mesa Community College, Mesa, AZ.
  - "Buried Cities and Lost Tribes Old World." Lower-division introductory course.

### **RESEARCH**

### Major Research Projects

Mediterranean Landscape Dynamics Project

Affiliation: Senior Researcher and Co-director of Field Work and Modeling Research . Host Institution: Arizona State University. Principle Investigator: C.M. Barton. Field work

*locations*: Jordan, Spain, Italy. *Objective*: Interdisciplinary project investigating early coupled human-natural systems in the Mediterranean, combining field survey with computational modeling. *Period of affiliation*: 2005–Present.

# Wadi Ziqlab and Wadi Quseiba Projects

Affiliation: Senior Researcher and Co-director of Field Work. Host Institution: University of Toronto. Principle Investigator: E.B. Banning. Field work location: Wadi Ziqlab and Wadi Quseiba, Jordan. Objectives: Investigation of Neolithic communities and land-use through geoarchaeological survey and excavations at project areas in northern Jordan. Period of affiliation: 2004—Present.

Socio-ecological Agent-based Modeling of the Early Bronze Age I of Arslantepe *Affiliation*: Senior Researcher and Co-director of Modeling Research. *Host Institution*: Istanbul Technical University. *Principle Investigator*: Bülent Arikan. *Field work Location*: Malatya region, Turkey. *Objective*: Interdisciplinary project investigating the influence of climate change on Bronze Age peoples in the upper Euphrates Basin. *Period of affiliation*: 2013–Present.

# Bova Marina Archaeological Project

Affiliation: Co-Director of the San Pasquale Historic Houses Survey. *Host Institution*: University of Notre Dame, Cambridge University. *Principle Investigators*: Meredith Chesson and John Robb. *Field work Location*: Bova Marina, Italy. *Objectives*: Deep-time understanding of human land-use in the project region. *Period of affiliation*: 2015—Present.

### Kazakh-American Talgar Archaeology Project

Affiliation: Researcher. Host Institution: Sweet Briar College. Principle Investigator: Claudia Chang. Field work Location: Talgar, Kazakhstan. Objective: Geoarchaeological investigations of Bronze and Iron Age landuse and human-environment co-evolution. Period of affiliation: 2011–Present.

### Wadi Hasa Ancient Pastoralism Project

Affiliation: Project Director. Host Institution: ASU, SHESC. Field work location: Wadi al-Hasa, Jordan. Objective: Survey for Neolithic pastoral sites in the desert margins. Period of affiliation: 2008–2009.

### **CONFERENCE PRESENTATIONS**

### Symposia Organized

"Socio-natural systems in pastoral and agro-pastoral societies: Archaeological investigations of pastoral landscapes." 77<sup>th</sup> annual meeting of the Society of American Archaeology in Memphis, TN. Co-organizer: Claudia C. Chang.

# **Invited Papers**

- n.d. **Ullah, I.I.T.**, *Traces of complexity: connecting model output with archaeological reality*. In preparation for the symposium: "*Human-Environmental Interactions in the Mediterranean Basin.*" 81<sup>st</sup> Annual Meeting of the Society for American Archaeology, Orlando. FL. April 6–10, 2016.
- 2015 **Ullah, I.I.T.**, and Barton, C.M., *Complexity in space and time: spatio-temporal variability and scale in simulations of social-ecological systems*. Symposium: "Simulating Social Complexity to Understand the Archaeological Past." 80<sup>th</sup> Annual

- Meeting of the Society for American Archaeology, San Francisco. CA. April 15–19, 2015.
- 2014 **Ullah I.I.** Computer-based simulation of surface-processes, and digital reconstruction of paleoenvironment during the Early Bronze Age-I at Arslantepe–Malatya, Eastern Turkey. Symposium: "Environmental Change: Data, Processes, and Integrated Modeling." 20<sup>th</sup> Annual Meeting of the European Archaeological Association, Istanbul, Turkey. September 10–14, 2014.
- Ullah I.I. From a world of compasses, paper, and pencils to the digital era: how to integrate "pre-GPS" survey data into a modern research paradigm. Symposium "Paleolithic Paradigms: Papers in Honor of Geoffrey Clark." 79<sup>th</sup> Annual Meeting of the Society for American Archaeology, Austin, TX. April 23–27, 2014.
- 2014 Banning, E.B., and **Ullah I.I.** *In Small Things Miscounted: Problems, Solutions and Opportunities of Scale in Microrefuse Analysis.* Symposium: "*Multi-scalar Approaches to Archaeological Interpretation.*" 79<sup>th</sup> Annual Meeting of the Society for American Archaeology, Austin, TX. April 23–27, 2014.
- 2013 **Ullah, I.I.T.** and Barton, C.M., *Simulating "collapse": A computational modeling approach to understanding adaptive reorganization in low-level socio-natural systems*. Symposium: "New Directions in Modeling Dynamics in Coupled Social-Natural Systems." 78<sup>th</sup> annual meeting of the Society of American Archaeology, Honolulu, HI.
- 2012 **Ullah, I.I.T.,** Simulating the long-term effects of agropastoral landuse decisions: a computational modeling approach to the Prepottery/Pottery Neolithic transition in northern Jordan. Symposium: "Socio-natural systems in pastoral and agro-pastoral societies: Archaeological investigations of pastoral landscapes." 77<sup>th</sup> annual meeting of the Society of American Archaeology, Memphis, TN.
- 2012 Bergin, S., **Ullah, I.I.T.,** Barton, C.M., and Gravel-Miguel, C., *Human-Environment Interactions in a Changing Environment: A Computational Model of Agropastoral Practices and Landscapes in Neolithic Spain.* Symposium: "Socio-natural systems in pastoral and agro-pastoral societies: Archaeological investigations of pastoral landscapes." 77<sup>th</sup> annual meeting of the Society of American Archaeology, Memphis, TN.
- 2011 Ullah, I.I.T., Barton, C.M., Bergin, S., and A. Miller. Simpler is better: lessons from modeling coupled human and natural systems in the Mediterranean Landscape Dynamics Project. Symposium "Process and Change in Prehistoric Socio-Natural Systems." 76<sup>th</sup> annual meeting of the Society of American Archaeology, Sacramento, CA.
- 2011 Bergin, S., **Ullah, I.I.T.,** Arikan, B., Barton, C.M., Sarjoughian, H., and G. Mayer. Simulating Neolithic Landscape Dynamics: A Coupled ABM-GIS Model of Agro-Pastoral Systems in Eastern Spain. Symposium: "Process and Change in Prehistoric Socio-Natural Systems." 76<sup>th</sup> annual meeting of the Society of American Archaeology, Sacramento, CA.
- 2010 **Ullah, I.I.T.** A GIS method for assessing the zone of human-environmental impact around archaeological sites: a test case from the Late Neolithic of Wadi Ziqlâb,

- *Jordan.* 2010 Summer Assembly of the University Consortium for Geographic Information Science. Hilton Head Island, SC.
- 2009 Ullah I.I. Particles from the Past: A Diachronic Study of the Spatial Patterning of Microrefusefrom Room Floors at Late Neolithic Tabaqat al-Bûma, Northern Jordan. Household Archaeology in the Middle East and Beyond: Theory, Method and Practice Conference. Feb 19-21, Salt Lake City.
- 2009 **Ullah, I.I.T.,** Mayer, G.R., Barton, C.M., Sarjougian, H.S. *Ancient Mediterranean landscape dynamics: Hybrid agent and geospatial models as a new approach to socioecological simulation.* Symposium: "Parallel Worlds: Interdisciplinary Agent-Based Models of Socioecological Processes and Complexity." 73<sup>rd</sup> Annual Meeting of the Society for American Archaeology, Vancouver, BC.

# **Contributed Papers**

- 2015 Gibbs, K., Banning, E.B., Ullah I.I., Hitchings, P., and Abu Jayyab, K. Late Neolithic Excavations in Wadi Qusayba, Northern Jordan. 2015 ASOR Annual Meeting, San Diego, CA.
- 2014 **Ullah I.I.**, and Barton, C.M. *Mediterranean Landscape Dynamics Project II*. Symposium: "*DDIG Lightning Talks*." Digital Data Interest Group business meeting. 79th Annual Meeting of the Society for American Archaeology, Austin, TX. April 23–27, 2014.
- 2010 Barton, C. M., **Ullah, I.I.T.,** Mayer, G., Sarjoughian, H., Bergin, S., Miller, A., and H. Mitasova. *Coupled Models for Coupled Systems: Land-Use and Landscape Dynamics in the Mediterranean*. 2010 Annual Meeting of the Association of American Geographers. Washington, D.C.
- 2010 Bergin, S., **Ullah, I.I.T.,** Barton, C.M., Mayer, G., and H. Sarjoughian. *Coupled ABM-GIS Modeling of Agro-Pastoral Systems in Eastern Spain*. 75<sup>th</sup> annual meeting of the Society of American Archaeology, St. Louis, MO.
- 2010 **Ullah, I.I.T.** *Assessing the accuracy of microrefuse sampling techniques*. 75<sup>th</sup> annual meeting of the Society of American Archaeology, St. Louis, MO.
- 2009 Bergin, S., **Ullah, I.I.T.,** and G. Mayer. *A Coupled ABM-GIS model of small-scale farming.* North American Association for Computational Social and Organizational Sciences Meeting, Tempe, AZ.
- 2009 **Ullah I.I.** *Ancient Pastoralism and Landscape Change in South Central Jordan.* 74<sup>th</sup> Annual Meeting of the Society for American Archaeology, Atlanta, GA.
- 2007 **Ullah, I.I.T.,** *Microarchaeology and the Use of Space at the Late Neolithic Farmstead of Tabaqat al-Bûma*. 10<sup>th</sup> International Conference on the History and Archaeology of Jordan, The George Washington University, Washington, DC.
- 2007 **Ullah I.I.,** and Barton, C.M., *Alternative Futures of the Past: Modeling Neolithic Landuse and Its Consequences in the Ancient Mediterranean.* 72<sup>nd</sup> Annual Meeting of the Society for American Archaeology, Austin, TX.
- 2006 DiMaggio, E.N., Arrowsmith, J.R., Barton, C.M., Sarjoughian, H.S., Fall, P., Falconer, S.E., and **Ullah, I.I.T.,** *Geomorphic Mapping and Paleoterrain Generation for use in Modeling Holocene* (8,000 1,500 yr) *Agropastoral Landuse and*

- *Landscape Interactions in Southeast Spain.* 2006 American Geophysical Union annual meeting, San Francisco, CA.
- 2006 Barton, C.M. and **Ullah, I.I.T.,** *Modeling Impacts of Landuse Practices on Mediterranean Landscapes.* 2006 Archaeological Sciences of the Americas Symposium. University of Arizona, Tucson, AZ.
- 2006 **Ullah, I.I.T.,** *GIS and Pastoralists in Beidha, Southern Jordan: Predictive Modeling of Campsite Location.* 2006 Annual Conference of WECSOR/ASOR Pacific Southwest Region, Claremont Graduate University, Claremont, CA.

#### **SERVICE**

# **Professional Workshops**

Open Source Geospatial Tools for Anthropologists. Invited workshop to be given at University of Notre Dame, Department of Anthropology, December 1–4, 2015. To be cotaught with M. Sisk of UND Library.

Paleolandscape Reconstruction and Ancient Human Landuse: A GIS Workshop. (2 sessions, 8 hours each). University of Toronto Archaeology Center. Fall, 2009.

GRASS GIS for Anthropologists. SHESC Graduate Workshop Series. Fall term, 2006. (2 sessions, 2 hours each). Arizona State University. Fall, 2006.

### Departmental Service

Mentor for incoming graduate students. *School of Human Evolution and Social Change Association of Anthropology Graduate Students*, Arizona State University, Tempe, Arizona. (2008-2012). Member of executive council. *Anthropology Graduate Student Union*, University of Toronto, Toronto, ON. (2002-2003 Academic Year)

#### **Editorial**

Review Editor, Frontiers in Digital Archaeology. 2015-current.

#### Peer Reviewer

Journal of Archaeological Research; Advances in Archaeological Practice; Journal of Archaeological Sciences; Computation; Southeast Archaeological Review

#### **Public Lectures**

Simulating the consequences of early farming strategies: a computational modeling approach to understanding long-term socio-ecological dynamics in low-level agropastoral systems. University of Pittsburgh, Department of Anthropology colloquium series. Fall term, 2013.

The Neolithic period in Jordan: Daily life in early farming villages. Mesa Community College Cultural Science brown bag series. Spring term, 2011.

#### OTHER PROFESSIONAL EXPERIENCE

### **Teaching Positions**

2010–2011 Adjunct faculty, Cultural Sciences Department, Mesa Community College, Mesa, AZ.

### **Professional Archaeological Positions**

2001–2005 Numerous Cultural Resource Management projects in California, Nevada, and Utah. Employers: Far-Western Anthropological Research Group, Inc., and

Pacific Legacy, Inc. Further details available upon request.

# MEDIA COVERAGE

### **Summary News Articles**

2015 "Analyzing the Neolithic Revolution." Archaeology Magazine, Online. July 24, 2015.

2015 "New Research Reveals Clues of Neolithic Revolution." New Historian. July 22, 2015.

"Archaeologists use new methods to explore move from hunting, gathering to farming." Phys.org. July 21, 2015

2010 "Archaeology Could Benefit From Computer Modeling." Science 2.0. May 10, 2010.

### **Editorials**

2010 "Living in the Past and Looking Toward the Future. Archaeologists develop models to explain agricultural history, future." Chris Gorski, <u>Inside Science</u>, July 29, 2010.

### PROFESSIONAL REFERENCES

### C. Michael Barton

Title: Professor of Anthropology; Director, Center for Social Dynamics and Complexity

Relationship: PhD committee chair, Post-doctoral advisor

School of Human Evolution and Social Change

Arizona State University

PO Box 2402

Tempe, AZ 85287-2402

tel: 480-965-6262

e-mail: michael.barton@asu.edu

#### Ian Kuijt

Title: Professor of Anthropology; Director of Graduate Studies

Relationship: Faculty mentor, Co-author

Department of Anthropology University of Notre Dame

617 Flanner Hall

Notre Dame, IN 46556-5611

tel: 574-631-3263 e-mail: kuijt.1@nd.edu

### Edward B. Banning

*Title:* Professor of Anthropology; Department Chair *Relationship:* Master's advisor, PhD committee member Department of Anthropology University of Toronto

19 Russell St.

Toronto, Ontario,

Canada M5S 3G3 tel: 416-978-2315

e-mail: ted.banning@utoronto.ca

Bryan K. Hanks

Title: Associate Professor of Anthropology

Relationship: Faculty mentor Department of Anthropology University of Pittsburgh 3302 WWPH

Pittsburgh, PA 15260 tel: 412-648-7524 e-mail: bkh5@pitt.edu