

# MATTHEW D. HOWLAND

## CURRICULUM VITAE

DECEMBER 28, 2024

Department of Anthropology  
Wichita State University  
1845 Fairmount St.  
Wichita, Kansas 67260  
matthew.howland@wichita.edu

216 N Dellrose Ave  
Wichita, KS 67208  
mdh5169@gmail.com

## POSITIONS

Assistant Professor  
Department of Anthropology  
Wichita State University, Wichita, Kansas  
Fall 2023-Present

Post-Doctoral Research Associate  
Laboratory of Archaeology  
Department of Anthropology  
University of Georgia, Athens, Georgia  
Fall 2022-Fall 2023

Post-Doctoral Fellow  
Department of Archaeology and Ancient Near Eastern Cultures  
Tel Aviv University, Tel Aviv, Israel  
Fall 2021-Fall 2022

## EDUCATION

Ph.D. in Anthropology (Archaeology)  
*Long-Distance Trade and Social Complexity in Iron Age Faynan, Jordan*  
Adviser: Prof. Thomas E. Levy  
University of California, San Diego, La Jolla, CA  
2021

M.A. in Anthropology (Archaeology)  
*Modeling Site Formation Processes with Low-altitude  
Aerial Photography, Structure from Motion, and GIS*  
University of California, San Diego, La Jolla, CA  
2014

B.S. with Honors in Archaeological Science  
Pennsylvania State University, State College, PA  
2012

B.A. with Honors in Classics and Ancient Mediterranean Studies  
Pennsylvania State University, State College, PA  
2012

## PUBLICATIONS

## REFEREED JOURNAL ARTICLES

Thompson, V.D., Sanger, M., Smith, K.Y., Garland, C.J., **Howland, M.D.**, Andrus, C.F.T., Holland-Lulewicz, I., Hadden, C., Alexander, C., Cajigas, R. and Blair, E.

2024 Shellfishing, sea levels, and the earliest Native American villages (5000–3800 yrs. BP) of the South Atlantic Coast of the US. *Scientific Reports* 14(1): p.22322.

Garland, C.J., Thompson, V.D., **Howland, M.D.**, Gragson, T.L., Andrus, C.F.T., Demyan, M. and Parbus, B., 2024 Stable Isotope Analysis and Chronology Building at the Hokfv-Mocvse Cultural Site, the Earliest Evidence for South Atlantic Shell-Ring Villages. *American Antiquity*, pp.1-20.

**Howland, M.D.**, and Thompson, V.D.

2024 Modeling the potential impact of storm surge and sea level rise on coastal archaeological heritage: A case study from Georgia. *PLoS ONE*, 19(2): e0297178.

Di Chiara, A., Tauxe, L., Gries, H., Helwing, B., **Howland, M.D.**, and Ben-Yosef, E.

2024 An archaeomagnetic study of the Ishtar Gate, Babylon. *PLoS ONE* 19(1): e0293014.

**Howland, M.D.**, Tauxe, L., Gordin, S., Altaweel, M., Cych, B., and Ben-Yosef, E.

2023 Exploring geomagnetic variations in ancient Mesopotamia: Archaeomagnetic study of inscribed bricks from the 3rd–1st millennia BCE. *Proceedings of the National Academy of Sciences (PNAS)* 120(52): e2313361120.

**Howland, M.D.**, Tamberino, A., Liritzis, I., and Levy, T.E.

2022 Digital Deforestation: Comparing Automated Approaches to the Production of Digital Terrain Models (DTMs) in Agisoft Metashape. *Quaternary* 5(1): 5.

Burton, M., Quinn, P., Bennallack, K., Farahani, A., **Howland, M.D.**, Najjar, M., and Levy, T.E.

2021 Ceramic Technology at Wadi Fidan 61, an Early Pottery Neolithic Site (ca. 6500 B.C.E.) in the Faynan Region of Southern Jordan. *Journal of Archaeological Science: Reports*.

**Howland, M.D.**, Liss, B., Levy, T.E., and Najjar, M.

2020 Integrating Digital Datasets into Public Engagement through ArcGIS StoryMaps. *Advances in Archaeological Practice* 8(4): 351-360.

Liss, B., **Howland, M.D.**, Lorentzen, B., Smitheram, C., Najjar, M., & Levy, T. E.

2020 Up the Wadi: Development of an Iron Age Industrial Landscape in Faynan, Jordan. *Journal of Field Archaeology*: 1-15.

**Howland, M.D.**, Jones, I.W.N., Najjar, M., and Levy, T.E.

2018 Quantifying the Effects of Erosion on Archaeological Sites with Low-Altitude Aerial Photography, Structure from Motion, and GIS: A Case Study from Southern Jordan. *Journal of Archaeological Science* 90: 62-70.

Liss, B., **Howland, M.D.**, and Levy, T.E.

2017 Testing Google Earth Engine for the Automatic Identification and Vectorization of Archaeological Features: A Case Study from Faynan, Jordan. *Journal of Archaeological Science: Reports* 15: 299-304.

Sideris, A., Liritizis, I., Liss, B., **Howland, M.D.**, and Levy, T.E.

2017 At-Risk Cultural Heritage: New Excavations and Finds from the Mycenaean Site of Kastrouli, Phokis, Greece. *Mediterranean Archaeology and Archaeometry* 17/1: 271-285.

Levy, T.E., Najjar, M., Liss, B., **Howland, M.D.**, Smitheram, S., and Smith, N.

2016 Khirbat al-Jariya. *American Journal of Archaeology: Archaeology in Jordan Newsletter* 120(4): 654-655.

Liritizis, I., Pavlidis, G., Vosinakis, S., Koutsoudis, A., Volonakis, P., Petrochilos, N., **Howland, M.D.**, Liss, B., and Levy, T. E.

2016 Delphi4Delphi: First Results of the Digital Archaeology Initiative for Ancient Delphi, Greece. *Antiquity* 90/354: 1-6.

**Howland, M.D.**, F. Kuester, and T.E. Levy

2014 Structure from Motion: Twenty-First Century Field Recording with 3D Technology. *Near Eastern Archaeology* 77(3): 187-192.

**Howland, M.D.**, F. Kuester, and T.E. Levy

2014 Photogrammetry in the Field: Documenting, Recording, and Presenting Archaeology. *Mediterranean Archaeology and Archaeometry* 14(4): 101-108.

Levy, T.E., Vincent, M.L., **Howland, M.**, Kuester, F., and Smith, N.G.

2014 The Art of Implementing SfM for Reconstruction of Archaeological Sites in Greece: Preliminary Applications of Cyber-Archaeological Recording at Corinth. *Mediterranean Archaeology and Archaeometry* 14(4): 125-133.

Quartermaine, J., Olson, B.R., and **Howland, M.**

2013 Appendix B: Using Photogrammetry and Geographic Information Systems (GIS) to Draft Accurate Plans of Qazion. *Journal of Eastern Mediterranean Archaeology* 1/2: 169-174.

Levy, T., Tuttle, C., Vincent, M., **Howland, M.**, Richter, A., Petrovic, V. and Vanoni, D.

2013 The 2012 Petra Cyber-Archaeology Cultural Conservation Expedition: Temple of the Winged Lions and environs, Jordan. *Antiquity*.

#### BOOK CHAPTERS

**Howland, M.D.**, and Liss, B.

2023 Maps and Models: Applications of GIS and Image-Based Modeling to Field Archaeology in Faynan, Jordan. In *"And in Length of Days Understanding" (Job 12:12): Essays on Archaeology in the*

*Eastern Mediterranean and Beyond in Honor of Thomas E. Levy*, (eds.) E. Ben-Yosef and I.W.N. Jones, pp. 1107-1132.

Stroth, L., Garvin Suero, A., Liss, B., **Howland, M.D.**, and D'Alpoim Guedes, J.  
2023 Archaeological Evidence of Casual Snacking and Resource Provisioning at Khirbat al-Jariya (ca. Eleventh to Tenth Centuries BCE), an Iron-Age Copper Production Site. In *"And in Length of Days Understanding" (Job 12:12): Essays on Archaeology in the Eastern Mediterranean and Beyond in Honor of Thomas E. Levy*, (eds.) E. Ben-Yosef and I.W.N. Jones, pp. 1133-1154.

**Howland, M.D.**, and Levy, T.E.

2022 Cyber-Archaeology in Israel and Edom. In *The Ancient Israelite World*, (eds.) K.H. Keimer and G.A. Pierce.

**Howland, M.D.**

2018 3D Recording in the Field: Style Without Substance? In *Cyber-Archaeology and Grand Narratives: Digital Technology and Deep-Time Perspectives on Culture Change in the Middle East*, (eds.) T.E. Levy and I.W.N. Jones, pp. 19-34.

Levy, T.E., Sideris, T., **Howland, M.**, Liss, B., Tsokas, G., Stambolidis, A., Fikos, E., Vargemezis, G., Tsourlos, P., Georgopoulos, A., Papatheodorou, G., Garaga, M., Christodolou, D., Norris, R., Rivera-Collazo, I., and Liritzis, I.

2018 At-Risk World Heritage, Cyber, and Marine Archaeology: The Kastrouli–Antikyra Bay Land and Sea Project, Phokis, Greece. In *Cyber-Archaeology and Grand Narratives: Digital Technology and Deep-Time Perspectives on Culture Change in the Middle East*, (eds.) T.E. Levy and I.W.N. Jones, pp. 143-234.

Liritzis, I., Pavlidis, G., Vosinakis, S., Koutsoudis, A., Volonakis, P., **Howland, M.D.**, Liss, B., and Levy, T.E.

2017 Delphi4Delphi: Data Acquisition of Spatial Cultural Heritage Data for Ancient Delphi, Greece. In *Heritage and Archaeology in the Digital Age* (eds.) M. Vincent, V. M. L-M. Bendicho, M. Ioannides, and T.E. Levy, pp. 151-165.

#### CONFERENCE PROCEEDINGS

**Howland, M.D.**, Liss, B., Smitheram, C., Najjar, M., and Levy, T.E.

2015 GIS-Based Mapping of Archaeological Sites with Low-Altitude Aerial Photography and Structure from Motion: a Case Study from Southern Jordan. *2015 Digital Heritage International Congress 1*: 91-94.

Smith, N.G., **Howland, M.** and Levy, T.E.

2015 Digital archaeology field recording in the 4th dimension: ArchField C++ a 4D GIS for digital field work. In *2015 Digital Heritage* (Vol. 2, pp. 251-258). IEEE.

#### CULTURAL RESOURCE MANAGEMENT REPORTS

Dozier, Crystal A., McKellop, Robbyn M.S., Zavala, Georgia, **Howland, M.D.**, and Gosch, Max

2024 Phase II Archaeological Survey – Pedestrian Survey and Shovel Testing, Reno County, Kansas. Technical report prepared for the City of Bentley for consideration by Reno County, Kansas, and the Kansas State Historic Preservation Office.

Dozier, Crystal A., Forker, Hannah, and **Howland, M.D.**

2024 Phase II Archaeological Survey – Pedestrian Survey, City of Bentley, Sedgwick County, Kansas. Technical report prepared for the City of Bentley for consideration by the City of Bentley and the Kansas State Historic Preservation Office.

Dozier, Crystal A., Kleiner, E., **Howland, M.D.**, and Kressly, D.J.

2024 Phase II Archaeological Survey – Shovel Testing, City of Belle Plaine, Sumner County, Kansas. Technical report prepared for the City of Belle Plaine for consideration by the Osage Nation Tribal Historic Preservation Office.

#### PUBLIC FACING

**Howland, M.D.**, Kersel, M.M., Osborne, J.F., and Rowan, Y.M.

2024 (Re)visiting the Past in the Present: The Power of Place and the Malleability of Monuments. *The Ancient Near East Today*. <https://anetoday.org/howland-past-in-present-monuments/>

#### WEB-BASED PUBLICATIONS

*The Kingdom of Copper*, StoryMap telling the story of Iron Age copper production in Faynan, Jordan.

English: <https://storymaps.arcgis.com/stories/b441a28ea5844d7bafbd47d3471166c9>

Arabic: <https://storymaps.arcgis.com/stories/fadfbcb0c1ed447bb272eced3140f004>

*Choose Your Own Archaeology:*

*Non-Linear, User-Driven Storytelling in 3D at Faynan, Jordan* Sketchfab page, in English and Arabic:

<https://sketchfab.com/ELRAP/>

#### GRANTS, FELLOWSHIPS, AND AWARDS

ASOR Community Engagement and Public Outreach Award 2024

*Choose Your Own Archaeology:*

*Non-Linear, User-Driven Storytelling in 3D at Faynan, Jordan*

**Matthew D. Howland**, Brady Liss, Ian W.N. Jones, Anthony Tamberino, Mohammad Najjar, and Thomas E. Levy

Wichita State University

University Research/Creative Projects Award 2024

*Quantifying Risk Factors of Coastal Erosion of Archaeological Sites on the Georgia Coast*  
\$4,500

National Science Foundation Kansas Established Program to Stimulate Competitive Research (EPSCoR) First Award 2024

*Improving Cultural Heritage Resilience through Modeling*

*and Quantification of Erosion Risks to Heritage Sites in Kansas*  
\$49,955

National Park Service National Center for Preservation  
Technology and Training Grant 2023  
*Prose to Parameters: ChatGPT and AI-Based  
Language Models for Producing Analytical Code for  
GIS Analysis in Archeology*  
\$12,631

University of Georgia Postdoctoral Scholar Travel Program 2023  
\$1,000

AIA-NEH Grant For Post-Fieldwork Research And Publication 2023  
*Choose Your Own Archaeology: Non-Linear, User-Driven  
Storytelling in 3D at Faynan, Jordan*  
\$10,518

ASOR Joy Ungerleider Poster Award 2022  
*Digitally Cleaning the Section: Using Archived Photographs  
to Reconstruct Stratigraphic Sections in Faynan, Jordan*  
Brady Liss, **Matthew D. Howland**, Anthony Tamberino,  
Mohammad Najjar, and Thomas E. Levy

F.G. Bailey Fellowship Program 2018  
*Long Distance Trade and Social  
Complexity in Iron Age Jordan*  
\$4,000

UC San Diego Winter GSA Travel Grant 2019  
\$500

UC San Diego Winter GSA Travel Grant 2018  
\$500

American Institute of Archaeology Orange County Chapter  
Annual Grant:  
*Comprehensive Analysis of Archaeological  
Ceramics from Southern Jordan*  
\$2,000 2018

National Science Foundation  
Integrative Graduate Education and Research Traineeship  
Minigrant 2015 – 2016  
*Training and Study of Archaeological Ceramics*

*from southern Jordan through Petrological and Petrographic Analysis*  
\$3,450.

National Science Foundation  
Integrative Graduate Education and Research Traineeship 2014 – 2016

Schreyer Honors College Academic Excellence Scholarship  
Pennsylvania State University 2008 – 2012

## MEDIA AND OUTREACH

### EARNED MEDIA

Edom Lowlands archaeology project highlights Faynan's copper production, cultural heritage, *Jordan Times*, December 28, 2024

<https://www.jordantimes.com/news/local/edom-lowlands-archaeology-project-highlights-faynans-copper-production-cultural-heritage>

**Howland** et al. 2024 covered by over 15 media outlets, including:

- Georgia Historical Sites Face 'Imminent Risk' of Destruction, *Newsweek*, February 28, 2024  
<https://www.newsweek.com/georgia-historical-sites-risk-destruction-1872901>
- Thousands of cultural heritage sites along the Georgia coast are threatened by storm surge, *Columbus Ledger-Enquirer*, March 21, 2024:  
<https://www.ledger-enquirer.com/news/state/georgia/article286865735.html>
- Climate change threatens archaeological heritage of coastal Georgia, *WUGA (Georgia NPR affiliate)*, March 4, 2024  
<https://www.wuga.org/local-news/2024-03-04/climate-change-threatens-archaeological-heritage-of-coastal-georgia>

**Howland** et al. 2023 covered by over 140 media outlets, including:

- Ancient Inscribed Bricks Contain Evidence of Mysterious Magnetic 'Anomaly,' Scientists Find, *Vice*, December 18, 2023  
<https://www.vice.com/en/article/4a3pam/ancient-inscribed-bricks-contain-evidence-of-mysterious-magnetic-anomaly-scientists-find>
- Ancient bricks baked when Nebuchadnezzar II was king absorbed a power surge in Earth's magnetic field, *CNN*, December 28, 2023  
<https://www.cnn.com/2023/12/27/world/ancient-bricks-magnetic-field-anomaly-scnn/index.html>
- New Dating Technique Employs Ancient Mediterranean Bricks, *Archaeology Magazine*, December 20, 2023  
<https://www.archaeology.org/news/12013-231221-mesopotamia-dating-bricks>

Di Chiara, **Howland**, et al. 2024 covered by over 25 media outlets, including:

- Babylon's Ishtar Gate may have a totally different purpose than we thought, magnetic field measurements suggest, *Yahoo*, January 17, 2024  
<https://www.yahoo.com/lifestyle/babylons-ishtar-gate-may-totally-222255420.html>
- Archaeologists Redate Babylon's Ishtar Gate Using Earth's Magnetic Field, *Haaretz*, January 23, 2024  
<https://www.haaretz.com/archaeology/2024-01-23/ty-article/archaeologists-redate-babylons-ishtar-gate-using-earths-magnetic-field/0000018d-362c-d81e-abdf-3e2c1cc20000>

Wadi Faynan: Ancient copper metallurgical centre reveals extensive Mediterranean trade routes, *Jordan Times*, December 12, 2023

<https://jordantimes.com/news/local/wadi-faynan-ancient-copper-metallurgical-centre-reveals-extensive-mediterranean-trade>

2023 AIA Fellowships Spotlight: AIA-NEH Grant for Post-fieldwork Research and Publication

<https://www.archaeological.org/2023-aia-fellowships-spotlight-aia-neh-grant-for-post-fieldwork-research-and-publication-2/>

Digging into archaeological research through digital storytelling, *Esri ArcGIS Blog*, October 21, 2019,  
<https://www.esri.com/arcgis-blog/products/arcgis-storymaps/sharing-collaboration/digging-into-archaeological-research-through-digital-storytelling/>

#### UNIVERSITY PRESS RELEASES

- Wichita State research will identify erosion risks for historic sites in Kansas, October 7, 2024  
<https://news.wichita.edu/2024/10/07/wichita-state-research-will-identify-erosion-risks-for-historic-sites-in-kansas/>
- Archaeologist uses GIS to model past and future changes in landscape, March 5, 2024  
[https://www.wichita.edu/about/wsunews/fairmount\\_news/Howland\\_GIS.php](https://www.wichita.edu/about/wsunews/fairmount_news/Howland_GIS.php)
- Matthew Howland's research featured in Newsweek, March 1, 2024  
<https://news.wichita.edu/2024/03/01/matthew-howlands-research-featured-in-newsweek/>

#### INVITED LECTURES, PAPERS, AND WORKSHOPS

*Digital Archaeology and the Biblical World*

**Matthew D. Howland**

Museum of World Treasures, Coffee with the Curator

2024

*Uncovering Earth's Magnetic Field with Ancient Mesopotamian Mudbricks*

**Matthew D. Howland**

Wichita State University Physics Seminar

2024

*Cyber-Archaeology and Public-Oriented Dissemination: Non-Linear Archaeological Storytelling in 3D in Iron Age Faynan, Jordan*

**Matthew D. Howland** and Brady Liss



Annual Meeting of ASOR 2023

*For Whom the Model Loads: Digital Public Archaeology and the Digital Divide*

**Matthew D. Howland**

Digital Ethics in Ancient Near Eastern Research – Workshop  
Annual Meeting of ASOR 2023

*Waterworld: Modeling the Impacts of Sea Level Rise and Storm Surge on Coastal Archaeological Sites*

**Matthew D. Howland**

Invited by the Archaeological Association of South Central Kansas 2023

*What is Archaeology?*

**Matthew D. Howland**

Invited by the Wichita State Department of Anthropology 2023

*3D in Archaeology*

**Matthew D. Howland**

Invited by the University of Georgia Laboratory of Archaeology 2023

*Multiscalar Approaches to the Spatial Analysis of Heritage Risk*

**Matthew D. Howland**

Invited by the Wichita State Department of Anthropology 2023

*Archaeological Storytelling as Non-Linear Narrative using 3D Excavation Data*

**Matthew D. Howland**, Brady Liss, Mohammad Najjar, Thomas E. Levy

Digging Up Data: A Showcase of Ongoing Digital Scholarship Projects - Workshop

Annual Meeting of ASOR (Boston, MA/Virtual) 2022

*Digital Deforestation: DTM Generation with Agisoft Photoscan*

Towards A Standardization Of Photogrammetric Methods In Archaeology: A Conversation About 'Best Practices' In An Emerging Methodology - Symposium

**Matthew D. Howland**

Annual Meeting of the Society for American Archaeology 2019

*Kings, Copper, and Clay: Reconstructing the Copper Trade of the Biblical Kingdoms through Ceramic Analysis*

**Matthew D. Howland**

Orange County Chapter of the American Institute of Archaeology 2019

*Investigating the Social Dynamics of Iron Age Copper Production:  
Preliminary Results from New Excavations at Khirbat al-Jariya, Jordan*

**Matthew D. Howland**, Brady Liss, Craig Smitheram,  
Mohammad Najjar, and Thomas E. Levy  
Annual Meeting of the Society for American Archaeology

2015

*Low-altitude Photography and Structure from Motion*

**Matthew D. Howland**  
Inaugural conference on Virtual Archaeology:  
Museums and Cultural Tourism

2014

### CONFERENCE AND WORKSHOP PAPER PRESENTATIONS

*Exploring Geomagnetic Variations in Ancient Mesopotamia:  
Archaeomagnetic Study of Inscribed Bricks from  
the 3rd–1st millennia BCE*

**Matthew D. Howland**, Erez Ben-Yosef, Lisa Tauxe, Shai Gordin,  
Mark Altaweel, and Brendan Cych  
Annual Meeting of ASOR

2024

*“The Miracle City”: GIS-based Analysis of Shovel Test Pits at Planeview,  
Wichita, Kansas*

**Matthew D. Howland** and Crystal A. Dozier  
Annual Meeting of the Plains Anthropological Society

2023

*Modeling the Impact of Anthropogenic Sea-Level Rise and Storm Surge  
on Coastal Archaeological Sites*

**Matthew D. Howland** and Victor D. Thompson  
Annual Meeting of the Society for American Archaeology

2023

*Shifting Seas: GIS-Based Approaches to Understanding Sea-Level  
Change in Georgia*

**Matthew D. Howland** and Victor D. Thompson  
Annual Meeting of the Society for Georgia Archaeology

2023

*Loess is More: Social Complexity Through the Lens of the Petrographic  
Microscope at Khirbat al-Jariya, Jordan*

**Matthew D. Howland**, Mohammad Najjar, and Thomas E. Levy  
Annual Meeting of ASOR

2021

*Using Spatial Storytelling Platforms for Public Archaeology, Open Data,  
and Scholarly Publishing*

**Matthew D. Howland**, Brady Liss, Mohammad Najjar, and Thomas E. Levy  
Annual Meeting of the International Conference on Computer  
Applications and Quantitative Methods in Archaeology (CAA)

2021

*Integrating Digital Datasets into Public Engagement  
through ArcGIS StoryMaps*

**Matthew D. Howland**, Brady Liss, Mohammad Najjar, and Thomas E. Levy  
Annual Meeting of the Society for American Archaeology 2021

*A Preliminary Report on Iron Age Ceramic and Chronological Evidence  
from Khirbat al-Jariya, Jordan*

**Matthew D. Howland**, Brady Liss, Mohammad Najjar, and Thomas E. Levy  
Annual Meeting of ASOR 2020

*The Garden of Edom: Woodland Use, Landscape Management, and the  
Iron Age Copper Industry at Faynan, Jordan*

Brita Lorentzen, Brady Liss, **Matthew D. Howland**,  
Mohammad Najjar, and Thomas E. Levy  
Annual Meeting of ASOR 2019

*Testing Google Earth Engine for Remote Sensing in Archaeology:  
Case Studies from Jordan*

Brady Liss, **Matthew D. Howland**, and Thomas E. Levy  
Annual Meeting of the Society for American Archaeology 2018

*Running on Autopilot: Testing Google Earth Engine for the Automatic  
Identification of Archaeological Features in Satellite Imagery*

Brady Liss, **Matthew D. Howland**, and Thomas E. Levy  
Annual Meeting of the International Conference on Computer  
Applications and Quantitative Methods in Archaeology (CAA) 2017

*Helicopters and Balloons: The Importance of Data-Capture Strategies  
in Mapping with LAAP and SfM*

**Matthew D. Howland**, Mohammad Najjar, and Thomas E. Levy  
Eighth World Archaeology Congress 2016

*O.M.G(EE): Exploring the Application of Google Earth Engine (GEE)  
for Archaeology*

Brady Liss, **Matthew D. Howland**, and Thomas E. Levy  
Eighth World Archaeology Congress 2016

*After the Late Bronze Age Collapse – Economic Opportunism  
in the Faynan, Jordan*

Thomas E. Levy, Mohammad Najjar, **Matthew D. Howland**,  
Brady Liss, and Craig Smitheram  
13th International Conference on the History and Archaeology of Jordan 2016

*Renewed Excavations at Khirbat al-Jariya: Investigating the  
Metallurgical Narrative of an Iron Age Smelting Site in Faynan, Jordan*

Brady Liss, **Matthew D. Howland**, Craig Smitheram,  
 Mohammad Najjar, and Thomas E. Levy  
 Annual Meeting of ASOR 2015

*Mapping with Low-Altitude Photography and Structure from Motion: A  
 Comparative Case Study from Faynan, Jordan*  
**Matthew D. Howland**, Mohammad Najjar, and Thomas E. Levy  
 Annual Meeting of ASOR 2015

*Modeling Site Formation Processes with Low-altitude  
 Aerial Photography, Structure from Motion,  
 and GIS: A Case Study from Southern Jordan*  
**Matthew D. Howland**  
 Paper presented at Annual Meeting of ASOR 2014

*Archaeological Survey and GIS-based Investigation  
 into Site Formation Processes through Balloon  
 Photography and Structure from Motion*  
**Matthew D. Howland**, Thomas E. Levy, and Falko Kuester  
 Annual Meeting of the Society for American Archaeology 2014

*Ballooning at Petra: Utilizing Low-Altitude Aerial  
 Photography and Structure-From-Motion  
 for Archaeological Conservation*  
**Matthew D. Howland**  
 Paper presented at the Seventh World Archaeology Congress 2013

#### CONFERENCE AND WORKSHOP POSTER PRESENTATIONS

*AI Archaeology: Using AI to Write Python for GIS*  
 Max Gosch\* and **Matthew D. Howland**  
 \*: Undergraduate Student Author  
 Flint Hills Archaeological Conference 2024

*Digitally Cleaning the Section: Using Archived Photographs to  
 Reconstruct Stratigraphic Sections in Faynan, Jordan*  
 (Joy Ungerleider Poster Award)  
 Brady Liss, **Matthew D. Howland**, Anthony Tamberino,  
 Mohammad Najjar, and Thomas E. Levy  
 Annual Meeting of ASOR 2022

*Archival Photogrammetry: Repurposing Excavation Photographs  
 to 3D Model Previous Excavations in Faynan, Jordan*  
 Brady Liss, **Matthew D. Howland**, Anthony Tamberino,  
 Scott McAvoy, and Thomas E. Levy  
 Annual Meeting of the Society for American Archaeology 2021

*Accessible Assemblages: Publishing Levantine Ceramics in 3D and in Context*

**Matthew D. Howland**, Mohammad Najjar, and Thomas E. Levy

Annual Meeting of ASOR

2020

*"Send for water to 'Ain el-Gheweibeh": Copper Production and Provisioning the Regional Network of Iron Age Faynan, Jordan*

Brady Liss, **Matthew D. Howland**, Brita Lorentzen,

Mohammad Najjar, and Thomas E. Levy

Annual Meeting of ASOR

2020

*Archaeological Storytelling and Community Engagement via Story Maps*

**Matthew D. Howland**, Brady Liss, and Mohammad Najjar

Annual Meeting of ASOR

2019

*At-Risk World Heritage and the Digital Humanities – Recent Destruction at Khirbat en-Nahas*

Thomas E. Levy, **Matthew D. Howland**,

Brady Liss, and, Mohammad Najjar

Annual Meeting of ASOR

2019

*Everything Old is New Again: Using Archived Photography to 3-D Model Previous Excavations in Faynan, Jordan*

Brady Liss, **Matthew D. Howland**, Anthony Tamberino, Scott McAvoy,

Mohammad Najjar, and Thomas E. Levy

Annual Meeting of ASOR

2019

*Analysis of the Paleobotanical Collection from Khirbat al-Jariya, an Early Copper Production Site in the Faynan, Jordan*

Jade d'Alpoim Guedes, Katrina Cantu, Clara Dawson,

Shelby Jones Cervantes, Arianna Garvin, Brandon Gay, Isabel Hermsmeyer,

**Matthew D. Howland**, Xiyuan Huang, Bridget Lawrence, Brady Liss,

Sunyoung Park, Eric Rodriguez, Julianna Santillan-Goode, Sarah Sheridan,

Luke Stroth, Isabell Villasana, Emma Villegas, Zhen Yu, and Thomas E. Levy

Annual Meeting of ASOR

2019

*The archaeobotany of an early copper production site in the Faynan, Jordan*

Jade d'Alpoim Guedes, Katrina Cantu, Clara Dawson,

Shelby Jones Cervantes, Arianna Garvin, Brandon Gay, Isabel Hermsmeyer,

**Matthew D. Howland**, Xiyuan Huang, Bridget Lawrence, Brady Liss,

Sunyoung Park, Eric Rodriguez, Julianna Santillan-Goode, Sarah Sheridan,

Luke Stroth, Isabell Villasana, Emma Villegas, Zhen Yu, and Thomas E. Levy

Annual Meeting of the Society for Ethnobotany 2019

*Digital Deforestation: DTM Generation with Agisoft Photoscan*

**Matthew D. Howland** and Thomas E. Levy

Annual Meeting of the Society for American Archaeology 2018

*Developing a Standardized Workflow for Digital Preservation and Analysis of Archaeological Ceramics*

**Matthew D. Howland**, Mohammad Najjar, and Thomas E. Levy

Annual Meeting of ASOR 2017

*Erosion and Longue Durée 3D Modeling of Wadi Fidan 61, A Late Neolithic Site in Southern Jordan*

Kathleen Bennallack, **Matthew D. Howland**, Isabel Rivera-Collazo, Mohammad Najjar, and Thomas E. Levy

Annual Meeting of ASOR 2017

*Go Big, and Stay Home: Testing Google Earth Engine for Satellite Imagery Analysis on a Regional Scale in the Southern Levant*

Brady Liss, **Matthew D. Howland**, and Thomas E. Levy

Annual Meeting of ASOR 2017

*Land and Sea Connections through Marine Geoarchaeology and Geo-spatial Databases: Landscapes, Human Activity, and Sediment Profiles in Antikyra Bay, Greece*

Isabel C. Rivera-Collazo, Richard Norris, George Papatheodorou, Ioannis Liritzis, Maria Garaga, **Matthew D. Howland**, Brady Liss, and Thomas E. Levy

Poster presented at Annual Meeting of ASOR 2017

*3D Printing for Cultural Heritage Preservation and Education*

Anthony Tamberino, Scott McAvoy, **Matthew D. Howland**, Brady Liss, Kathleen C. Bennallack, and Thomas E. Levy

Annual Meeting of ASOR 2017

*Developing a Standardized Workflow for Digital Preservation and Analysis of Archaeological Ceramics*

**Matthew D. Howland**

45th Computer Applications and Quantitative Methods in Archaeology (CAA) International Conference

2017

*Archaeological formation processes in 3D: Quantifying the effects of erosion on archaeological sites with low-altitude aerial photography, structure from motion, and GIS in Southern Jordan*

**Matthew D. Howland**

Modeling Culture: 3D Archaeology and the Future of the Past Conference 2016

*GIS Modelling of Ancient Pollution from the  
Faynan Valley, Southern Jordan*

Kyle Knabb and **Matthew D. Howland**

Annual Meeting of ASOR 2014

*Preliminary Results from 2014 Excavations at Khirbat al-Jariya, Jordan*

Brady Liss, **Matthew D. Howland**, Craig Smitheram, Mohammad

Najjar, and Thomas E. Levy

Annual Meeting of ASOR 2014

*DEM and Orthophoto Production Through Balloon Photography and  
Structure from Motion*

**Matthew D. Howland**, Mohammad Najjar, and Thomas E. Levy

Annual Meeting of ASOR 2013

#### COMMITTEE MEMBERSHIPS AND CONFERENCE SESSIONS CHAIRED

*Committee on Archaeological Research and Policy*

American Society for Overseas Research (ASOR) 2024-Present

*Digital Archaeology and History (Three Sessions)*

**Matthew D. Howland**, Tiffany Earley-Spadoni, and Leigh Ann Lieberman

Annual Meeting of ASOR, Boston, MA 2024

*(Re)Visiting the Past in the Present: Monuments in Place – Workshop*

Morag M. Kersel and **Matthew D. Howland**

Annual Meeting of ASOR, Chicago, IL 2023

*Digital Archaeology and History (Three Sessions)*

Tiffany Earley-Spadoni and **Matthew D. Howland**

Annual Meeting of ASOR, Chicago, IL 2023

*Digital Archaeology and History (Three Sessions)*

Tiffany Earley-Spadoni and **Matthew D. Howland**

Annual Meeting of ASOR, Boston, MA 2022

*Digital Archaeology and History (Two Sessions)*

Tiffany Earley-Spadoni and **Matthew D. Howland**

Annual Meeting of ASOR, Virtual 2022

#### TEACHING EXPERIENCE

Instructor of Record

Fall 2024

WSU Anthropology 766: Research Design and Proposal Writing

*Graduate Level*

|  |             |
|--|-------------|
| Instructor of Record<br>WSU Anthropology 562: Introduction to GIS<br>Undergraduate and <i>Graduate Level</i>   | Fall 2024   |
| Instructor of Record<br>WSU Anthropology 305: World Archaeology  | Fall 2024   |
| Instructor of Record<br>WSU Anthropology 664: Spatial Project in Anthropology<br><i>Graduate Level</i>   | Spring 2024 |
| Instructor of Record<br>WSU Anthropology 562: Introduction to GIS<br>Undergraduate and <i>Graduate Level</i>   | Spring 2024 |
| Instructor of Record<br>WSU Anthropology 103: Intro to Archaeology   | Spring 2024 |
| Instructor of Record<br>WSU Anthropology 664: Spatial Project in Anthropology<br><i>Graduate Level</i>   | Fall 2023   |
| Instructor of Record<br>WSU Anthropology 305: World Archaeology  | Fall 2023   |
| Instructor of Record<br>WSU Anthropology 103: Intro to Archaeology   | Fall 2023   |
| Instructor of Record<br>WSU Anthropology 102: Cultural Anthropology  | Fall 2023   |
| Instructor of Record<br>WSU Anthropology 305: World Archaeology  | Fall 2023   |
| Associate-In/Instructor of Record<br>UCSD Anthropological Archaeology 104: Intro to GIS for<br>Archaeologists and Anthropologists<br>Undergraduate and <i>Graduate Level</i> | Spring 2021 |
| Teaching Assistant<br>UCSD Muir College Writing Program 50: Pre-Existing Conditions:<br>Anti-Blackness in the Medical Industrial Complex                                     | Winter 2021 |
| Teaching Assistant   | Fall 2020   |



UCSD Muir College Writing Program 40: Critical Writing

Teaching Assistant Summer 2020  
UCSD Sociocultural Anthropology 166: Film and Culture in Asia

Teaching Assistant Spring 2020  
UCSD Anthropology 23: Debating Multiculturalism

Associate-In/Instructor of Record Winter 2020

UCSD Anthropological Archaeology 104: Intro to GIS for  
Archaeologists and Anthropologists  
Undergraduate and *Graduate Level*

Teaching Assistant Fall 2019  
UCSD Anthropology 23: Debating Multiculturalism

Associate-In/Instructor of Record Spring 2019

UCSD Anthropological Archaeology 104: Intro to GIS for  
Archaeologists and Anthropologists  
Undergraduate and *Graduate Level*

Teaching Assistant Fall 2018-Winter 2019  
UCSD Anthropology 23: Debating Multiculturalism

Teaching Assistant Fall 2017-Spring 2018  
UCSD Muir College Writing Program 40: Critical Writing

GIS Instructor Summer 2016  
DigArch16 Summer School

Teaching Assistant Winter 2017  
UCSD Anthropology 21: Race and Racisms

Teaching Assistant Fall 2016  
UCSD Anthropology 101: Foundations of Social Complexity

Teaching Assistant Spring 2016  
UCSD Anthropology 23: Debating Multiculturalism

Teaching Assistant Winter 2016  
UCSD Anthropology 21: Race and Racisms

Teaching Assistant Fall 2015  
UCSD Anthropology 101: Foundations of Social Complexity

**FIELD AND LAB EXPERIENCE**

|  |                     |
|--|---------------------|
| Enfulletv-Mocvse ("New Ways" in Muskogean) in Archaeology Field School<br>Director Victor D. Thompson and Carey Garland<br>Staff | 2023 - Present      |
| Supervised, low-altitude aerial photography,<br>and recording systems  |                     |
| ASOR/Open Context Digging Up Data:<br>Turning an Idea into Digital Scholarship<br>Program Participant                            | 2021                |
| Archaeomagnetic Dating of Mesopotamian Mudbricks Project<br>Director   | Summer 2021         |
| Collected samples of Mudbricks from Sulaimaniyah Museum and<br>Yale Babylonian Collection  |                     |
| Kastrouli Archaeological Project<br>Directors Ioannis Liritzis and Thomas E. Levy<br>Staff                                       | Summer 2016         |
| Supervised excavation area, site mapping,<br>low-altitude aerial photography, and recording systems                              |                     |
| British School at Athens Ceramic Petrology Course<br>Student   | Summer 2016         |
| Studied geology, ceramic manufacture and technology, and<br>petrological analysis of rock and ceramics                           |                     |
| Edom Lowlands Regional Archaeology Project<br>Directors Thomas E. Levy and Mohammad Najjar<br>Staff                              | Fall 2012 – Present |
| Supervised excavation area, site mapping, low-altitude aerial<br>photography, and 3D recording systems                           |                     |
| Tel Akko Total Archaeology Project<br>Directors Ann E. Killebrew and Michal Artzy<br>Staff                                       | 2010- 2012          |
| Supervised site mapping and 3D recording systems. Directed site<br>survey. GIS Specialist.                                       |                     |
| Tel Akko Total Archaeology Project<br>Directors Ann E. Killebrew and Michal Artzy<br>Student                                     | 2009                |
| Excavation experience  |                     |
| Penn State Archaeological Field School   |                     |

Director Claire Milner

Student

2009

Excavation experience, training in square supervision, survey techniques

**ARTICLE REVIEWS**

PLoS One

Journal of Field Archaeology

Digital

Digital Applications in Archaeology and Cultural Heritage

Remote Sensing

Journal of Archaeological Science: Reports

**LANGUAGES**

English – Native language

French – Speak and read at intermediate level

Arabic – Speak and read at intermediate level

Hebrew – Speak and read at basic level

**MEMBERSHIPS**

Society of American Archaeology

Plains Anthropological Society

ASOR

**CERTIFICATIONS**

Federal Aviation Administration Part 107 Small Unmanned Aircraft System Operator