

## **Aylar Abdolahzadeh, PhD**

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## **EDUCATION**

2022 PhD University of Pennsylvania, Department of Anthropology

2010 M.A. University of Tarbiat Modares, Tehran, Iran Department of Archaeology

2007 B.A. University of Tehran, Department of Archaeology

## **ACADEMIC POSITIONS HELD**

### **Arizona State University**

2024-present Teaching Postdoctoral Fellow, School of Human Evolution and Social Change

2022-present Postdoctoral Research Scholar, Institute of Human Origins

## **RESEARCH AND TEACHING INTERESTS**

Introduction to Archaeology

Human Evolution

Experimental Archaeology and Research Design

Archaeological Field Methods

Data Collections, Analysis, and Management

## **RESEARCH FUNDING, FELLOWSHIPS, AND AWARDS**

2020 National Science Foundation, DDRIG in Archaeology, BCS-2029098.

2018 Greenewalt Fund, University of Pennsylvania Museum of Archaeology and Anthropology.

2018 Junior Fellow of the Louis J. Kolb Society, University of Pennsylvania Museum of Archaeology and Anthropology.

2017 Department of Anthropology Summer Field, University of Pennsylvania Museum of Archaeology and Anthropology.

2016 Penn Museum Award, University of Pennsylvania Museum of Archaeology and Anthropology.

2015 Benjamin Franklin Fellowship, University of Pennsylvania. Granted for 5-year Ph.D. program (2015-2020).

## **PEER REVIEWED PUBLICATIONS**

In Prep **Abdolahzadeh, A.** Thermal alteration effects on artifact size and raw material variation. *Journal of Archaeological Science*.

In Prep **Abdolahzadeh, A.** Understanding the use of space for making and maintaining fires in the contexts of Neandertals: Computational modeling approaches. *Journal of Archaeological Science*.

In Prep Sandgathe, D, V Aldeias, P Goldberg, S P McPherron, D Olszewski, **A Abdolahzadeh**, A Carranco Alonso, D Cabanes, G Gallo, G Guerin, Li Li, C Mallol, J del Rio, M Stahlschmidt, T Steele. Microstratigraphic excavation in laboratory conditions: A methodology for high coverage sampling and integration of data from multiple analytical methods. (In preparation).

In Review **Abdolahzadeh, A.**, Olszewski, D., Ranhorn, K. How do we recognize convergence in lithic technology. *Journal of Paleolithic Archaeology*.

In Review Olszewski, D., al-Nahr, M., **Abdolahzadeh, A.** Fire use in the Levantine Early Epipaleolithic: The Dibble and Colleague Lithics Count Method Questions and Answers. *Journal of Paleolithic Archaeology*. *Journal of Paleolithic Archaeology*.

**2023** **Abdolahzadeh, A.**, Leader, G. M., Li, L. Olszewski, D. I., Schurr, T. G. Heat exposed lithics: An experimental approach to quantifying Potlids by temperature. *Journal of Archaeological Sciences: Reports*. 48, 103894.  
<https://doi.org/10.1016/j.jasrep.2023.103894>

**2022** Li Li, Sam C. Lin, Shannon P. McPherron, **Aylar Abdolahzadeh**, Annie Chan, Tamara Dogandžić, Radu Iovita, George M. Leader, Matthew Magnani, Zeljko Rezek, Harold L. Dibble. A synthesis of the Dibble et al. controlled experiments into the mechanics of lithic. *Journal of Archaeological Method and Theory*.  
<https://doi.org/10.1007/s10816-022-09586-2>

**2022** **Abdolahzadeh, A.**, McPherron, S. P., Sandgathe, D. M., Schurr, T. G., Olszewski, D. I., & Dibble, H. L. (2022). Investigating variability in the frequency of fire use in the archaeological record of Late Pleistocene Europe. *Archaeological and Anthropological Sciences*, 14(4), 62.  
<http://dx.doi.org/10.1007/s12520-022-01526-1>

**2021** Lin, S., Zeljko Rezek, **Aylar Abdolahzadeh**, David R. Braun, Tamara Dogandžić, George M. Leader, Li Li, Shannon P. McPherron. The mediating effect of platform width on the size and shape of stone flakes. *PLoS ONE*. 17 (1). e0262920-e0262920. <https://journals.plos.org/plosone/>

**2020** McPherron, S. P., **Abdolahzadeh, A.**, Archer, W., Chan, A., Djakovic, I., Dogandzic, T., Leader, G. M., Li, L., Lin, S., Magnani, M., Reeves, Z., Weiss, M., 2020. Introducing platform surface interior angle (PSIA) and its role in flake formation, size and shape. *PLoS ONE* 15 (11).  
<https://doi.org/10.1371/journal.pone.0241714>

**2020** Dogandzic, T., **Abdolahzadeh, A.**, Leader, G., Li, L., Claudio, T., Dibble, H. L. Are the Results of Lithic Experiments Performed on Glass Cores Applicable to other Raw Materials? *Archaeological and Anthropological Sciences* 1-14.  
<https://doi.org/10.1007/s12520-019-00963-9>

**2017** Dibble, H., **Abdolahzadeh, A.**, Aldeias, A., Goldberg, P., McPherron, P. S., Sandgathe, D., 2017. How did Hominins Adapt to Ice Age Europe without Fire? *Current Anthropology* 58 (16), S278-S287. <https://doi.org/10.1086/692628>

**2017** Leader, G., **Abdolahzadeh, A.**, Lin, S. C., and Dibble, H. L., 2017. The Effects of Platform Beveling on Flake Variation. *Journal of Archaeological Science Reports* 16, 213-223. <https://doi.org/10.1016/j.jasrep.2017.09.026>

## PROFESSIONAL PRESENTATIONS

**2025** Lithic Technology and Fire: Cultural Heritage of our Past Human Ancestors and Present Implications. *PaleoAnthropology Society*. Denver, USA. April 22<sup>nd</sup> and 23<sup>rd</sup>.

**2023** How do We Recognize Convergence in Lithics? *Society for American Archaeology Meetings*. Portland, USA. March 29<sup>th</sup>-April 2<sup>nd</sup>.

**2022** A Controlled Pilot Experiment to Test the Impact of Freezing on Flint Artifacts. *Society for American Archaeology Meetings*. Chicago, USA. March 30<sup>th</sup>- April 3<sup>rd</sup>

**2021** Taphonomy of Fire: An Experimental Approach to Quantifying Potlids by Temperatures. *13<sup>th</sup> International Symposium for Knapped Materials*. Tarragona, Spain. October 4-7<sup>th</sup>.

**2021** Heat-Fracturing: An Experimental Approach to Quantifying Potlids by Temperatures. *Union International Science Prehistory and Protohistory*. Meknès, Morocco. September 1-6<sup>th</sup>.

**2021** Fracture Mechanics, Virtual Knapper, and Controlled Experiments: Towards a Better Model of Flake Formation. *Society for American Archaeology Meetings*. San Francisco, USA. April 10-12<sup>th</sup>.

**2020** Does the Southwest France Pattern of Neandertal Fire Use Exist Across Europe? *Society for American Archaeology Meetings*, Austin, Texas, USA. \*Affected by COVID 19. Planned for next conference.

**2019** Controlled Experiments in Flake Formation using Glass and Raw Materials. Poster presentation at European *Society for the study of Human Evolution* (ESHE). Liege, Belgium. September 1-6<sup>th</sup>.

**2019** Force and Flake Size: Implications for Hominin Strength. *Palaeoanthropology Society Meetings*, Albuquerque, USA. April 10-14<sup>th</sup>.

**2018** The Effect of Raw Materials on Flake Variation. *Society for American Archaeology meetings*. Washington DC, USA. April 10-14<sup>th</sup>.

**2017** The Effects of Platform Beveling on Flake Variation. *Society for American Archaeology Meetings*, Vancouver, Canada. April 10-14<sup>th</sup>.

**2014** Cultural Characteristics of North-western Iran in the Parthian Period (Based on the Results of the 2nd Season of Excavations at Kōhne Pāsgāh Tepesi. *ICAANE*, Basel, Switzerland. July 10-15<sup>th</sup>.

**2012** Report of the Second Season of Excavation at Kōhne Pāsgāh Tepesi (Khoda Afarin, Azerbaijan). *The 11<sup>th</sup> Annual Symposium of Iranian Archaeology*. National Museum, Tehran, Iran.

## INVITED TALKS & GUEST LECTURE

**2024** Deer Valley Petroglyph Preserve, Arizona, “Lithic Technology and Fire: Rethinking Prehistoric and Historical Significance of Ancient Technologies as Tangible and Intangible Forms of Cultural Heritage and Preservations.”

**2023** Center for Archaeology and Society, School of Human Evolution and Social Changes at Arizona State University, “Understanding human-environment interaction through the lens of fire use in the archaeological records of the Late Pleistocene Europe.”

**2023** Unified Anthropology Association at Arizona State University, “Paleolithic Archaeology”

**2021** Department of Anthropology Colloquium, University of Minnesota, “Investigating Variability in the Frequency of Fire Use in the Archaeological Record of Late Pleistocene Europe.”

**2020** Kolb Society Colloquium, “Investigating Variability in the Frequency of Fire Use in the Archaeological Record of Late Pleistocene Europe.”

**2019** Penn Museum Living Room Lecturers. University of Pennsylvania. Invited by Dr. George M. Leader to provide a demonstration of experimental archaeology knapping machines.

## TEACHING AND MENTORING EXPERIENCE

### Courses Taught

*Arizona State University (Instructor of Record)*

2025 Introduction to Archaeology (ASB 222): Buried Cities and Lost Tribes. Spring Term. Arizona State University.

2025 Introduction to Archaeology (ASB 333): Frauds, Myths, Mysteries: Science vs. Pseudoscience in Archaeology. Spring Term. Arizona State University.

2024 Introduction to Archaeology (ASB 222): Buried Cities and Lost Tribes. Fall Term. Arizona State University.

2024 Introduction to Archaeology (ASB 333): Frauds, Myths, Mysteries: Science vs. Pseudoscience in Archaeology. Fall Term. Arizona State University.

*University of Pennsylvania (Teaching Assistant)*

2018 Forensic Anthropology (ANTH 230). Teaching Assistant. Spring Term. University of Pennsylvania.

2017 Becoming Human (ANTH 122). Preparing lab workshops, lecturing, and grading. Teaching Assistant. Spring Term. University of Pennsylvania.

2017 Introduction to Human Evolution (ANTH 003). Lecturing two weekly recitations and grading. Teaching Assistant. Fall Term. University of Pennsylvania.

2016 Introduction to Human Evolution (ANTH 003). Lecturing two weekly recitations and grading. Teaching Assistant. Fall Term. University of Pennsylvania.

**Mentorship**

*Arizona State University*

2022-present Mentor, Ancient Technology Research Group  
Mentoring undergraduate students at ASU's Experimental Archaeology Club  
Demonstrating flintknapping and monitoring flintknapping workshops in the Ancient Technology Lab  
Contributing to mentorship in weekly research roundtable with PhD and undergraduate students

*University of Pennsylvania*

2010-2022 Graduate mentor in UPenn Ancient Technology Lab  
Mentored undergraduate students in lab  
Mentored and demonstrated flintknapping for Anthropology course: Food and Fire (ANTH 148).  
Mentored and demonstrated flintknapping for Anthropology course: Introduction to Archaeology (ANTH 001).

**SCIENCE COMMUNICATIONS**

**In Prep** Demonstrating the relevance of Paleolithic Archaeology in addressing global issues like climate change and its implications for cultural preservation. *SAPIENS*.

**SERVICE**

**2024** **Reviewer:** Evaluating peer-reviewed articles for *Journal of Paleolithic Archaeology* and *Journal of Archaeological Science: Reports*.

**2024**

**Reviewer:** Evaluating content and functionality of a new website--a permanent self-guided training for anthropologists--to write for public-oriented newspapers and magazines. *SAPIENS*.

## INTERNATIONAL FIELD AND LAB RESEARCH

**2020-2021**

*Museum Assistant*, Digital cataloging lithic typology of Penn Museum's Bisitun collection. <https://www.penn.museum/blog/museum/the-scrappers-of-Bisitun-cave/>  
Digital cataloging lithic typology of Penn Museum's Ksar Akil lithic collection. Mrs. Katherine Blanchard, Penn Museum, University of Pennsylvania, Philadelphia, PA.

**2015-2018**

*Lab Manager Assistant*, Organizing and conducting experimental works as well as contributing to social media and data sharing (The Laboratory for the Study of Ancient Technology) at the Penn Museum to update our experimental activities for public outreach. Dr. Harold L. Dibble, University of Pennsylvania, Philadelphia, PA.  
*Co-lab assistant* for archaeological field Project at Pech IV Project (Dordogne, France). Drs. V Aldeias, Sandgathe, D, P Goldberg, S P McPherron, D Olszewski, A Abdolahzadeh, A Carrancho Alonso, D Cabanes, G Gallo, G Guerin, Li Li, C Mallol, J del Rio, M Stahlschmidt, T Steele.

## Data Collections Analysis and Management

**2020-2021**

*Ein Difla lithic collections* (at Arizona State University, Tempe, Arizona, USA). *Nahr Ibrahim lithic collections* (at Penn Museum, University of Pennsylvania).

**2015-2019**

*Kulna lithic collections* (at Historical Section of Moravian Museum; Brno, Czech Republic).

*Abri du Maras lithic assemblages* (at Institute de Paleontologie Humanie; Paris)

*Abri-Pataud lithic collections* (at Les Eyzies: Musée de l'abri Pataud; Périgord region, France).

*Combe Grenal lithic collections* (at Les Eyzies: Musée National de préhistoire; Périgord region, France).

*La Ferrassie lithic assemblages* (Dordogne, France).

*Bockstein lithic collection* (at Institute Für Ur-und Frühgeschichte und Archäologie des Mittelalters; Tübingen, Germany).

*Sesselfelsgrotte lithic collections* (at Institute Für Ur-und Frühgeschichte; Erlangen, Germany).

*Abric Romani lithic collections* (at Institute Català de Paleoecología Human Evolució Social (IPHES); Tarragona, Spain).

## Excavation and Lab Work

**2014-2019**

*Pech de l'Azé IV Project* (Dordogne, France). Directors: Vera Aldeias, Dennis Sandgathe, Shannon McPherron, Paul Goldberg, and Deborah Olszewski.

*Arch Street Project*, Historic American Burial Ground (Philadelphia, United States). Directors: George M. Leader, and Kimberlee Moran.

*Ferrassie Project* (Dordogne, France). Directors: Harold Dibble, Shannon McPherron, Alain Turq, Dennis Sandgathe, Paul Goldberg, 2014-2015.

**2012-2016** *Ranis Project* (Germany). Directors: Jean-Jaques Hublin, Shannon McPherron, Marcel Weiss, and Tim Schuler, 2016.  
*Hohle Fels project* (Blaubeuren, Germany). Directors: Nicolas Conard and Maria Malina, 2015.  
*Fetzer Halden Hohle Project* (Niederstotzingen, Germany). Directors: Nicolas Conard, Maria Malina, Mohsen Zeidi, 2014.  
*Hohle Fels Project* (Blaubeuren, Germany). Directors: Nicolas Conard and Maria Malina, 2014.  
*Vogelherd Cave Project* (Niederstotzingen, Germany). Directors: Nicolas Conard and Mohsen Zeidi, 2012.  
*Hohle Fels Project* (Blaubeuren, Germany). Directors: Nicolas Conard and Maria Malina, 2012.

**2005-2009** *Sagzabad Project* (Ghazvin, Iran). Directors: Hasan Fazeli Nashli, Hossein Azizi. Tehran University, 2009.  
*Rahmatabad Project* (Shiraz, Iran). Directors: Hasan Fazeli Nashli, Hossein Azizi. Tehran University, 2008.  
*Khodaafarin Dam Project* (East Azerbaijan province, Iran). Directors: Ali Zalaghi and Bayram Aghalari. Tehran University, 2008.  
*Sialk Project* (Kashan, Iran). Directors: Hassan Fazeli Nashli and Robin Coningham. Tehran University, 2007.  
*Noshabad and Sialk Project* (Kashan, Iran). International excavation project; directors: Hassan Fazeli Nashli and Robin Coningham. Supported by Tehran University, 2006.  
*Ghaberstan Project* (Ghazvin, Iran). Directors: Rahmat Molasalehi, Haydeh Laleh, Hassan Fazeli Nashli. Tehran University, 2005.

## LANGUAGES

Farsi (Native)  
English (fluent)  
German (Conversation and Reading Knowledge)

## ADDITIONAL SKILLS

RStudio  
Photogrammetry using Agisoft MetaShape  
3D laser scanning  
Petrographic analysis  
QGIS

## REFERENCES

Dr. Ryan Williams  
Director & Professor  
School of Human Evolution and Social Change

Arizona State University  
[prwill@asu.edu](mailto:prwill@asu.edu)  
Telephone: +1480.965.9813

Dr. Yohannes Haile Selassie  
Director, Institute of Human Origins  
Virginia M. Ullman Professor of National History and Environment  
School of Human Evolution and Social Change  
Arizona State University  
[yhaileselassie@asu.edu](mailto:yhaileselassie@asu.edu)  
Telephone: +1602.543.4338

Dr. Kathryn Ranhorn  
Assistant Professor,  
Institute of Human Origins  
School of Human Evolution and Social Change  
Arizona State University  
[Kathryn.ranhorn@asu.edu](mailto:Kathryn.ranhorn@asu.edu)  
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Dr. Theodore G. Schurr  
Associate Professor, Department of Anthropology  
University of Pennsylvania  
[tgschurr@gmail.com](mailto:tgschurr@gmail.com)  
Telephone: +1 215.888.0374

Dr. Deborah Olszewski  
Adjunct Professor, Department of Anthropology  
University of Pennsylvania  
[deboraho@sas.upenn.edu](mailto:deboraho@sas.upenn.edu)  
Telephone: +1 610.7890.422

Dr. George M. Leader  
Visiting Assistant Professor, Department of Sociology and Anthropology  
The College of New Jersey  
[leaderg@tcnj.edu](mailto:leaderg@tcnj.edu)  
Telephone: +1 717.903.2216

Dr. Dennis Sandgathe  
Senior Lecturer, Department of Archaeology  
Simon Fraser University  
[dms@sfu.ca](mailto:dms@sfu.ca)  
Telephone: +1 778.782.4817