

Nathaniel L. Erb-Satullo
Curriculum Vitae

School of Archaeology
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ACADEMIC APPOINTMENTS

2017-present	Departmental Lecturer in Archaeomaterials, School of Archaeology, University of Oxford
2017-present	Non-Stipendiary Lecturer, St. Hugh's College, University of Oxford
2016-2017	Fellow, Department of Anthropology, Harvard University

EDUCATION

Ph.D. 2016	Harvard University, Anthropology <i>Dissertation Title: Metal Production in the Land of the Golden Fleece: Economic Organization and Technological Change in the South Caucasus, 1500-500 BC</i>
M.Sc. 2009	University of Oxford, Archaeological Science, with Distinction
B.A. 2007	Swarthmore College, Physics Major, History Minor, with High Honors

PUBLICATIONS (*peer reviewed)

Submitted/Under Review

- n.d. ***Erb-Satullo, N. L.**, Gilmour, B. J. J., and Khakhutaishvili, N., under review, The metal behind the myths: Iron smelting in the southeastern Black Sea region, *Journal of Archaeological Science*.
- n.d. ***Erb-Satullo, N. L.**, under review, Archaeomaterials, innovation, and technological change, *Advances in Archaeomaterials*.
- n.d. Gilmour, B. J. J., Cox, M., **Erb-Satullo, N. L.**, Khakhutaishvili, N., and Pollard, A.M., submitted, Ancient Colchis and the origins of iron: Interim results from recent field survey work in Guria, western Georgia. In *Wonders Lost and Found: A Book to Celebrate the Archaeological Work of Professor Michael Vickers*, (ed. N. Sekunda). Akanthina, Gdańsk.

In Press/Manuscript Accepted

- n.d. ***Erb-Satullo, N. L.**, accepted for publication, The innovation and adoption of iron in the ancient Near East, *Journal of Archaeological Research*.
- n.d. ***Erb-Satullo, N. L.**, Jachvliani, D., Kalayci, T., Puturidze, M., and Simon, K., accepted for publication, Investigating the spatial organization of fortress complexes in the South Caucasus using multiple survey techniques, *Antiquity*.

In Print

- 2018 ***Erb-Satullo, N. L.**, Gilmour, B. J. J., and Khakhutaishvili, N., 2018, The ebb and flow of copper and iron smelting in the South Caucasus, *Radiocarbon*, **60**, 159-180.
- Erb-Satullo, N. L.**, 2018, Patterns of settlement and metallurgy in Late Bronze-Early Iron Age Kvemo Kartli, southern Georgia. In *Finding Common Ground in Diverse Environments: Landscape Archaeology in the South Caucasus*, (eds. W. Anderson, K. Hopper, and A. Robinson). OREA, Austrian Academy of Sciences, Vienna, 37-52.
- 2017 ***Erb-Satullo, N. L.**, Gilmour, B. J. J., and Khakhutaishvili, N., 2017, Copper production landscapes of the South Caucasus, *Journal of Anthropological Archaeology*, **47**, 109-126.
- ***Erb-Satullo, N. L.** and Walton, J. T., 2017, Iron and copper production at Iron Age Ashkelon: Implications for the organization of Levantine metal production, *Journal of Archaeological Science: Reports*, **15**, 8-19.
- 2015 ***Erb-Satullo, N. L.**, Gilmour, B. J. J., and Khakhutaishvili, N., 2015, Crucible technologies in the Late Bronze-Early Iron Age South Caucasus: Copper processing, tin bronze production, and the possibility of local tin ores, *Journal of Archaeological Science*, **61**, 260-276.
- 2014 ***Erb-Satullo, N. L.**, Gilmour, B. J. J., and Khakhutaishvili, N., 2014, Late Bronze Age and Early Iron Age copper smelting technologies in the South Caucasus: The view from ancient Colchis, *Journal of Archaeological Science*, **49**, 147-159.
- Gilmour, B. J. J., Khakhutaishvili, N., and **Erb-Satullo, N.**, 2014, Ancient metal production sites from southwest Georgia in light of new archaeological evidence, *Phasis*, **17**, 138-158.
- 2012 Eremin, K., Degryse, P., **Erb-Satullo, N.**, Ganio, M., Greene, J., Shortland, A., Walton, M., Stager, L., 2012, Iron Age glass beads from Carthage. In *Historical Technology, Materials, and Conservation: SEM and Microanalysis*, (eds. N. D. Meeks, A. Meek, A. Mongiatti, and C. Cartwright). Archetype Publications and the British Museum, London, 30-35.
- 2011 ***Erb-Satullo, N. L.**, Shortland, A. J., and Eremin, K., 2011, Chemical and mineralogical approaches to the organization of Late Bronze Age Nuzi Ware production, *Archaeometry*, **53**, 1171-1192.
- ***Erb-Satullo, N. L.**, 2011, Alloys from Anau: The manipulation of metallic properties in 3rd Millennium B.C. southern Central Asia. In *Materials Issues in Art and Archaeology IX*, (eds. P. Vandiver, W. Li, J. L. Ruvalcaba Sil, C. L. Reedy and L. D. Frame). Cambridge University Press, Cambridge, 157-163.

In Print (cont.)

- 2010 *Degryse, P., Boyce, A., **Erb-Satullo, N.**, Eremin, K., Kirk, S., Scott, R., Shortland, A. J., Schneider, J., and Walton, M., 2010, Isotopic discriminants between Late Bronze Age glasses from Egypt and the Near East, *Archaeometry*, **52**, 380-388.
- 2010 *McKitterick, C. B., **Erb-Satullo, N. L.**, LaRacune, N. D., Dickinson, A. J., and Collings, P. J., 2010, Aggregation properties of the chromonic liquid crystal Benzopurpurin 4B, *Journal of Physical Chemistry B*, **114**, 1888-1896.

AWARDS AND GRANTS (as PI unless otherwise stated)

External

- 2017 Rust Family Foundation Grant (\$7000)
- 2016 Spatial Archaeometry Research Collaborations (SPARC) Grant, funded by the National Science Foundation through the Center for Advanced Spatial Technologies, University of Arkansas (\$18,513.89)
- 2016 American Research Institute of the South Caucasus Junior Research Fellowship (\$4000)
- 2013-2016 National Science Foundation Doctoral Dissertation Improvement Grant (co-PI; PI-Karl Lamberg-Karlovsky; \$20,000)
- 2010-2015 National Science Foundation Graduate Research Fellowship (\$124,000)
- 2014 American Research Institute of the South Caucasus Graduate Research Fellowship (\$1500)
- 2010 Sigma Xi Grant-in-Aid of Research (\$735)

Institutional

- 2018 John Fell Fund (£7500)
- 2018 Public Engagement with Research Seed Fund (co-applicant; PI-Peter Hommel; £3889.54)
- 2015 Howard T. Fisher Prize in GIS, Harvard Center for Geographic Analysis (\$500)
- 2015 Davis Center Prize for Excellence in GIS (\$500)
- 2015 Jens Aubrey Westengard Scholarship (\$600)
- 2015 Davis Center for Russian and Eurasian Studies Summer Travel Fellowship (\$3500)
- 2014 Jens Aubrey Westengard Scholarship (\$500)
- 2013 Davis Center for Russian and Eurasian Studies Summer Travel Fellowship (\$4000)
- 2012 Davis Center for Russian and Eurasian Studies Summer Travel Fellowship (\$1250)
- 2011 Jens Aubrey Westengard Scholarship (\$1250)
- 2011 Harvard GSAS Summer Pre-Dissertation Fellowship (\$3000)
- 2009 Harvard University Presidential Scholarship (\$10,000)
- 2007 Phi Beta Kappa, Swarthmore College Chapter
- 2007 Phi Beta Kappa Graduate Fellowship (\$3600)
- 2007 Swarthmore College Lockwood Fellowship (\$15,000)
- 2005 Eugene M. Lang Summer Initiative Award (\$3750)
- 2005 Helen F. North Fellowship (\$2300)

Departmental

2015	Lefebvre Fund Departmental Summer Research Grant (\$4500)
2014	Teschmacher Fund Departmental Summer Research Grant (\$2000)
2013	Teschmacher Fund Departmental Summer Research Grant (\$5000)
2012	Teschmacher Fund Departmental Summer Research Grant (\$3680)
2007	Edward Hall Memorial Fund Award, Oxford University (£3300)

PRESENTATIONS

Invited Talks

- 2018 Erb-Satullo, N. L., 2018, Before the Greeks came to Colchis: Technology and society in the land of the golden fleece, 1500-500 BC, Invited talk given at the University of Pennsylvania, Philadelphia, PA.
- 2017 Erb-Satullo, N. L., 2017, Archaeological perspectives on innovation: Metal technologies in the Caucasus 1500-500 BC, Invited talk given at Alma College, Alma, MI.
- 2016 Erb-Satullo, N. L., 2016, Settlement structure and craft production in Late Bronze and Early Iron Age communities in Kvemo Kartli, southern Georgia, Invited talk given at Tbilisi State University sponsored by the American Research Institute of the South Caucasus, Tbilisi, Georgia.
- Erb-Satullo, N. L., 2016, Production, power, and the spread of metal technologies in the Caucasus, 1500-500 BC, Invited talk given at the Davis Center for Russian and Eurasian Studies, Harvard University, Cambridge, MA.
- 2015 Erb-Satullo, N. L., 2015, New approaches to integrating spatial and archaeometric data: Investigating metal production in the South Caucasus 1500-500 BC, Invited talk given at Boston University, Boston, MA.
- 2014 Erb-Satullo, N. L., 2014, Archaeometric approaches to craft production and technological change: A case study from western Georgia, Invited talk given at the University of Oxford, Oxford, UK.
- Erb-Satullo, N. L., 2014, Landscapes of metallurgy and settlement in Kvemo Kartli, Invited talk given at Tbilisi State University sponsored by the American Research Institute of the South Caucasus, Tbilisi, Georgia.
- 2008 Erb-Satullo, N. L., 2008, Chemical and mineralogical analysis of ceramics from Nuzi, Iraq, Invited talk given at the University of Arizona, Tucson, AZ.

Conference Papers

- 2018 Erb-Satullo, N. L., 2018, Bronze, Iron, and Gold: Metallurgical Trajectories in the South Caucasus in the Second and First Millennia BC. Paper presented at the *Academic Symposium on the Chinese Bronze Age from the Perspective of Europe and Asia*, Beijing, China.

Conference Papers (cont.)

- 2018 Erb-Satullo, N. L., 2018, Interaction in mountain zones: A metallurgical perspective on the Caucasus. Paper presented at the Russian-British Seminar *Archaeological Perspectives on Diversity and Interaction*, Suzdal, Russia.
- Erb-Satullo, N. L., 2018, Early iron metallurgy in the Caucasus: Filling in a technological “missing link.” Paper presented at the *Society for American Archaeology 83rd Annual Meeting*, Washington, DC.
- Erb-Satullo, N. L., 2018, Metallurgy and mobility in the Caucasus. Paper presented at the *11th International Congress on the Archaeology of the Ancient Near East*, Munich, Germany.
- 2017 Erb-Satullo, N. L., 2017, Space and scale in the social interpretation of craft production, Paper presented at the *Society for American Archaeology 82nd Annual Meeting*, Vancouver, Canada.
- 2016 Erb-Satullo, N. L., 2016, Craft production in Iron Age fortress complexes: New fieldwork at Mtsvane Gora, southern Georgia, Paper presented at the *American Schools of Oriental Research Annual Meeting*, San Antonio, TX.
- Erb-Satullo, N. L., 2016, Mapping metallurgy in the Caucasus using GIS, Paper presented at *Progress, Problems and Possibility of GIS in the South Caucasus: An International Workshop*, New York, NY.
- Erb-Satullo, N. L., 2016, Metal production on Late Bronze-Early Iron Age fortified hilltops in the South Caucasus, c. 1500-600 BC, Paper presented at the *Society for American Archaeology 81st Annual Meeting*, Orlando, FL.
- 2015 Erb-Satullo, N. L., Gilmour, B. J. J., Khakhutaishvili, N., 2015, Direct evidence for Late Bronze Age tin-bronze alloying in the South Caucasus and the case for local exploitation of tin deposits, Paper presented at the *American Schools of Oriental Research Annual Meeting*, Atlanta, GA.
- Erb-Satullo, N. L., 2015, Applying innovation diffusion theory to archaeology: A case study on the rise of iron technology in western Asia, Paper presented at the *Society for American Archaeology 80th Annual Meeting*, San Francisco, CA.
- 2014 Erb-Satullo, N. L., 2014, The adoption of iron in the Near East: The view from the South Caucasus, Paper presented at the *American Schools of Oriental Research Annual Meeting*, San Diego, CA.
- 2013 Erb-Satullo, N. L., Gilmour, B. J. J., Khakhutaishvili, N., 2013, The organization of copper production on the Black Sea Coast: Implications for technological innovation and the rise of iron production, Paper presented at the *American Schools of Oriental Research Annual Meeting*, Baltimore, MD.
- Erb-Satullo, N. L., Gilmour, B. J. J., Khakhutaishvili, N., 2013, Looking beyond the Levant: Configurations of copper production in the Late Bronze Age and Early Iron Age Southern Caucasus, Paper presented at *Mining for Copper: Environment, Culture, and Copper in Antiquity: International Conference in Memory of Professor Beno Rothenberg*, Timna, Israel.

Conference Papers (cont.)

- 2013 Erb-Satullo, N. L., Gilmour, B. J. J., Khakhutaishvili, N., 2013, Transitional or traditional? Technological choice in copper production at the cusp of the Iron Age in the Southern Caucasus, Paper presented at the *Society for American Archaeology 78th Annual Meeting*, Honolulu, HI.
- 2012 Erb-Satullo, N. L., 2012, Transitional or Traditional? The technology and organization of Late Bronze and Early Iron Age metal production in Western Asia, Paper presented at *The Rise of Iron Production in East and West Asia*, Harvard University, Cambridge, MA.
- 2010 Erb-Satullo, N. L., 2011, Alloys from Anau: The manipulation of metallic properties in 3rd Millennium B.C. southern Central Asia, Paper presented at the *2010 Materials Research Society (MRS) Fall Meeting*, Boston, MA.
- Erb-Satullo, N. L., Eremin, K., and Shortland, A. J., 2010, A chemical and mineralogical investigation of Late Bronze Age Nuzi Ware from the Near East, Paper presented at the *38th International Symposium on Archaeometry*, University of South Florida, Tampa, FL.

Conference Posters

- 2015 Erb-Satullo, N. L., 2015, From micrometers to kilometers: Integrating spatial and chemical datasets in the study of metal production in the South Caucasus c. 1500-600 BC, Poster presented at the *2015 Center for Geographic Analysis Conference*, Cambridge, MA.
- 2012 Erb-Satullo, N. L., Gilmour, B. J. J., 2012, Late Bronze Age and Early Iron Age smelting debris from the Black Sea coast of the Republic of Georgia, Poster presented at the *39th International Symposium on Archaeometry*, Katholieke Universiteit Leuven, Belgium.
- 2011 Erb-Satullo, N. L., Shortland, A. J., Eremin, K., 2011, Local ware, imperial styles: Identifying Nuzi Ware production sites in the Near East through mineralogy and chemistry, Poster presented at the *Society for American Archaeology, 76th Annual Meeting*, Sacramento, CA, and the *Microarchaeology Workshop*, Weizmann Institute of Science, Rehovot, Israel.

CONFERENCE SESSIONS AND WORKSHOPS CHAIRED/ORGANIZED

- 2017 “Spatial Approaches to Craft Production,” Symposium organized and chaired at the Society for American Archaeology 82nd Annual Meeting, Vancouver, Canada, April 1st, 2017.
- 2015 “New Approaches to Technological Change,” Symposium organized and chaired at the Society for American Archaeology 80th Annual Meeting, San Francisco, CA, April 17th, 2015.
- 2012 “The Rise of Iron Production in East and West Asia,” Workshop co-organized at Harvard University, October 10th-14th, 2012.

FIELDWORK

Director and Principal Investigator, Archaeological Research in Kvemo Kartli (ARKK) Project, Republic of Georgia, 2013-present
Team Member, Archaeometallurgical Field Research, Republic of Georgia, 2012-2014
Square Supervisor, Neubauer Expedition to Zincirli, Turkey, 2010
Assistant Trench Supervisor, Poggio Colla Field School, Mugello Valley Archaeological Project, Vicchio, Italy, 2009
Student, Summer of Applied Geophysical Experience (SAGE), Sante Fe, New Mexico, 2007
Field School Student, Poggio Colla Field School, Mugello Valley Archaeological Project, Vicchio, Italy, 2005

TEACHING

Graduate

Lecturer and Course Coordinator, Materials Analysis and the Study of Technological Change, AY 2017-2018, 2018-2019

Undergraduate

Lecturer, Science-Based Methods in Archaeology, AY 2017-2018, 2018-2019
Teaching Assistant, Anthropology 1095: Urban Revolutions: Archaeology and the Investigation of Early States, Spring 2017
Teaching Assistant, Freshman Seminar 70N: Finding Your Inner Neanderthal, Fall 2016
Teaching Fellow, Anthropology 1250: The Pyramids of Giza, Spring 2013
Teaching Fellow, Anthropology 1095: Urban Revolutions: Archaeology and the Investigation of Early States, Spring 2013
Teaching Fellow, Anthropology 1165: Digging the Glyphs: Adventures in Decipherment, Fall 2012
Teaching Fellow, Anthropology 1010: Fundamentals of Archaeological Methods and Reasoning, Fall 2011 and Fall 2012
Teaching Fellow, Anthropology 1202: Forensic Archaeology, Spring 2012

SERVICE

Director-at-Large, American Research Institute of the South Caucasus, 2018-present
Editorial Assistant, *Asian Perspectives: The Journal of Archaeology for Asia and the Pacific*, 2016-present
Graduate Student Organizer, Harvard Archaeology Seminar Series, 2013-2014
Archaeology Graduate Student Representative at faculty meetings, Spring 2011, 2012-2013
Resident Tutor, Dunster House, Harvard University, 2010-2012

LABORATORY/TECHNICAL SKILLS

Reflected and transmitted optical microscopy (ceramic petrography, metallography, ore microscopy)
Scanning electron microscopy with EDS and WDS microchemical analysis
Portable X-ray fluorescence spectrometry
GIS (ArcMap, ArcCatalogue, and ArcScene)
GPS and Total Station Mapping
Agisoft Photoscan

LANGUAGES

Russian (advanced reading, writing, and speaking), German (can read with a dictionary), French (can read with a dictionary)