

An International workshop organized by:

# CHES

LEMBERSKY CONFERENCES IN HUMAN EVOLUTIONARY STUDIES

# FRONTIERS IN ARCHAEOLOGICAL SCIENCES



**RUTGERS**  
THE STATE UNIVERSITY  
OF NEW JERSEY

**ThermoFisher**  
SCIENTIFIC

OCTOBER 23-25, 2017

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Rutgers University

Alexander Library - 4th Floor 169 College Ave, New Brunswick, NJ 08901

# MONDAY | OCTOBER 23

9:00 AM - 10:00 AM	Registration
10:00 AM - 10:15 AM	Welcome from CHES Director <b>Ryne Palmobit</b> , Rutgers University
10:15 AM - 11:00 AM	Keynote Address <b>Paul Goldberg</b> , Rutgers University <i>Linking Geoarchaeology and Micromorphology: Past, Present, and Future</i>
11:00 AM - 11:30 AM	Coffee Break
11:30 AM - 12:00 PM	<b>Francesco Berna</b> , Simon Fraser University <i>Integrating FTIR micro-spectrometry, petrography and soil micromorphology to study human activities and site formation processes</i>
12:00 PM - 12:30 PM	<b>Sarah Hlubik</b> , Rutgers University <i>Fire evidence at the 1.6 mya open air site of FxJ20 AB, Koobi Fora, Kenya and implications for future fire studies in the Pleistocene.</i>
12:30 PM - 1:30 PM	Lunch Break
1:30 PM - 2:00 PM	<b>Rachel Kulick</b> , University of Toronto <i>Urban Micromorphology: A Microecological Narrative of a Neopalatial</i>
2:00 PM - 2:30 PM	<b>Ellery Frahm</b> , Yale University <i>Faster, Stronger, Smarter: Next-Generation Portable XRF in the Archaeological Sciences</i>
2:30 PM - 3:00 PM	<b>Alex Brittingham</b> , University of Connecticut <i>Polycyclic Aromatic Hydrocarbons as a Proxy for Fire in Archaeological Sediments</i>
3:00 PM - 3:30 PM	Coffee Break
3:30 PM - 4:00 PM	<b>Andrew Sillen</b> , University of Cape Town <i>Strontium isotopic aspects of Paranthropus robustus teeth; implications for habitat, residence, and growth</i>
4:00 PM - 4:30 PM	<b>John Krigbaum</b> , University of Florida <i>Stable Isotopes and Canopy Effects: New Perspectives on Space and Time in Tropical Southeast Asia</i>
4:30 PM - 5:00 PM	<b>Hylke de Jong</b> , Rutgers University <i>An <math>^{87}\text{Sr} / ^{86}\text{Sr}</math> prospectus on halite consumption</i>

# TUESDAY | OCTOBER 24

10:00 AM - 10:30 AM

**Amanda Henry**, Leiden University

*Plant microremains as markers of ancient diet and behavior*

10:30 AM - 11:00 AM

**Justin Nels Carlson**, University of Kentucky

*Middle to Late Holocene (7000-3000 cal. BP) Archaeological Site Formation Processes at Crumps Sink and Changing Land Use Strategies in the Mammoth Cave Plateau and Sinkhole Plain, South-Central Kentucky, USA*

11:00 AM - 11:30 AM

Coffee Break

11:30 AM - 12:00 PM

**Matthias Meyer**, Max Planck Institute for

Evolutionary Anthropology

*Archaic human DNA*

12:00 PM - 12:30 PM

**Viviane Slon**, Max Planck Institute for Evolutionary Anthropology

*Targeted retrieval of mitochondrial DNA from archaeological sediments*

12:30 PM - 1:30 PM

Lunch Break

1:30 PM - 2:00 PM

**Carolina Mallo**, Universidad de la Laguna

*What is that Black Stuff? Micro-contextual Investigations of Charred Organic Matter in the Archaeological Sedimentary Record*

2:00 PM - 2:30 PM

**Lucia Leierer**, Universidad de la Laguna

*A Coupled Micromorphological and Molecular Study of Combustion Structure Assemblages at the Middle Paleolithic Site of El Salt, Spain*

2:30 PM - 3:00 PM

**Rory Connolly**, Universidad de la Laguna

*Preliminary Results from a Multiproxy Palaeoenvironmental investigation at a Middle Paleolithic Rock Shelter (Abric del Pastor) in Alicante, Spain*

3:00 PM - 3:30 PM

Coffee Break

3:30 PM - 5:00 PM

**Will Wihlborg, Ron Rubinovitz**

Fisher Thermo-Scientific

*Infrared Spectroscopy in Archaeology: Portable FT-IR systems to Microanalysis. (FTIR hands on, bring your own samples!)*

6:30 PM - 8:30 PM

**Reception at the Department of Anthropology**

Ruth Adams Building, 131 George Street, 3rd Floor  
*Light Food and Beverages served*

# WEDNESDAY | OCTOBER 25

10:00 AM - 10:30 AM

**Dan Cabanes**, Rutgers University  
*High-resolution analyses in Paleolithic contexts: a microarchaeological approach.*

10:30 AM - 11:00 AM

**Kristen Wroth**, Boston University  
*Neanderthal pyrotechnology and plant use at Roc de Marsal: the evidence from phytolith analysis.*

11:00 AM - 11:30 AM

Coffee Break

11:30 AM - 12:00 PM

**Shira Gur-Arieh**, Tübingen University  
*Identifying Dung Spread Floors in A Humid Tropical Environment: A Geo-ethnoarchaeological Case Study from Two Rural Houses in South India*

12:00 PM - 12:30 PM

**Antonio Rosas**, National Museum of Natural Sciences  
*Archeo-paleontological fieldwork: from landscapes to DNA. The case of El Sidrón.*

12:30 PM - 1:30 PM

Lunch Break

1:30 PM - 2:00 PM

**Filipe Natalio**, Weizmann Institute of Science

2:00 PM - 2:30 PM

**Josie Mills**, University College of London  
*Tracking the Hunters: Geochemical Profiling of Neanderthal Stone Tools as a means of Reconstructing Migration and Patterns of Landscape Use in the Middle Palaeolithic of La Manche*

2:30 PM - 3:00 PM

**Gilliane Monier**, University of Minnesota  
*Lithic Residue Analysis using FTIR Microspectroscopy*

3:00 PM - 3:30 PM

Coffee Break

3:30 PM - 4:00 PM

**Kristie Primeau**, SUNY Albany  
*Soundscapes in the Past: A GIS Approach to Landscape Scale Archaeoacoustics*

4:00 PM - 4:30 PM

**Daniel Adler**, University of Connecticut  
*The Challenges and Benefits of Coordinated Field Research in Archaeological Science*

4:30 PM - 5:00 PM

General discussion & Farewell

## **About the Center for Human Evolutionary Studies**

The **Center for Human Evolutionary Studies** is an interdisciplinary research Center dedicated to promoting the discovery, teaching, and public dissemination of knowledge on the origin, evolution, and history of humanity in the broadest sense. Currently, CHES comprises faculty and graduate student members and affiliates across SAS and SEBS. It is the intellectual home to a diverse team of internationally recognized scientists devoted to expanding our understanding of human evolution through research, education, and outreach. Our strengths lie in our multidisciplinary approach to study of human evolution, our distinguished faculty and research associates, and our highly competitive graduate and undergraduate students, including a number of foreign students from countries in which some of our research projects are based. We also enjoy privileged access to some of the world's premier fossil localities for the investigation of the fossilized remains and archaeological traces of our early human ancestors.

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### **Scientific Committee**

The Scientific Committee for this conference is made up of the following individuals from the Rutgers University Department of Anthropology:

**Dan Cabanes, Ph.D.**, Assistant Professor

**Craig S. Feibel, Ph.D.**, Chair, Professor

**Carmel Schrire, Ph.D.**, Distinguished Professor

**Hylke de Jong, Ph.D.**, Teaching Instructor