Big Historical Data Conference
November 22-25, 2023
Max Planck Institute for Geoanthropology
Jena, Germany

Wednesday, November 22

8:45-9:00	**Welcome address**
9:00-10:30	**Session 1: Big Databases: How large-scale archives can boost archaeological research I**
	Session organisers: Martina Farese, Giulia Formichella, and Noemi Mantile

1-1	Ricardo Fernandes	The Pandora Initiative: promoting fairer data collaboration
1-2	Martina Farese	From the Neolithic to the Middle Ages: a big data view of foodways in ancient Italy
1-3	Antonio Caruso	STARC OSTEOARCH: An open access resource for recording and sharing human osteoarchaeological data
1-4	Claire Ebert	Tracking human diet and migration using the Caribbean and Mesoamerica Biogeochemical Isotope Overview (CAMBIO)
1-5	Natalia Riabogina	Building archaeobotanical and archaeozoological database in the BIAD: structure, creation experience and comparative analysis perspectives
1-6	Victor Yan Kin Lee	Bridging human paleogenetics and archaeology: problems with existing practices and prospects for overcoming them

10:30-11:00	**Coffee break**
11:00-12:30	**Session 1. Big Databases: How large-scale archives can boost archaeological research II**
	Session organisers: Martina Farese, Giulia Formichella, and Noemi Mantile

1-7	Andrew Kandel	The ROAD Database as a Research Tool for Exploring Human Evolution
1-8	Felix Riede	Cultural evolutionary trends as revealed by a novel, expert-sourced dataset on lithic technology, toolkits, and artefact shapes for the Final Palaeolithic/earliest Mesolithic of Europe (15-11ka BP)

1-9	David Laguna-Palma	An open and interdisciplinary approach to modelling movement along the ancient Lybian Sea
1-10	Efthymia Nikita	MetaMobility Databases: Promoting Greco-Roman bioarchaeology
1-11	Antonio Campus	Big Archaeological (Legacy) Data. Collection, dissemination and reuse for large scale analysis
1-12	Maite I. Garcia-Collado	Exploring large-scale historical processes using IsoIberMed: a new isotope database for bioarchaeological samples from Medieval Iberia

12:30-13:30 **Lunch**

13:30-14:00 **Session 1: Big Databases: How large-scale archives can boost archaeological research III**
Session organisers: Martina Farese, Giulia Formichella, and Noemi Mantile

1-13	Sean Hixon	Presenting a compilation of isotopic data from Madagascar
1-14	Carlo Cocozza	The IsoMemo Initiative: Enhancing archaeological and historical research through isotope databases

14:00-15:00 **Session 2. Big Zooarchaeological Data: Challenges and potentials for multi-scalar analysis across millenia I**
Session organisers: Angela Trentacoste, Jesse Wolfhagen, and Sarah Whitcher Kansa

2-1	Sarah Whitcher Kansa	From small to big data in zooarchaeology
2-2	Kitty Emery	Crosswalking, linking, and verbatim interpretations: adventures in legacy zooarchaeological biodiversity open data publishing
2-3	Canan Kakirlar	Cross-disciplinary reuse potential of big zooarchaeology data: What do we need?
2-4	David Orton	Assessing approaches to chronological uncertainty in large-scale zooarchaeological data synthesis

15:00-15:30 **Coffee break**

15:30-16:30 **Session 2. Big Zooarchaeological Data: Challenges and potentials for multi-scalar analysis across millenia II**
Session organisers: Angela Trentacoste, Jesse Wolfhagen, and Sarah Whitcher Kansa

2-5	Matthew Hill Jr.	Tracking long-term subsistence among the Native North American Great Plains hunters

2-6	Max Price	Wool they won't they: Combing the zooarchaeological evidence for wool production in Northern Mesopotamia c. 4500-1500 cal. BC
2-7	Anthony King	The RomAniDat network: a zooarchaeological Big Data initiative for the ancient Roman world
2-8	Roberto Ragno	Understanding variation in zooarchaeological NISP data: Bayesian betabinomial models for Italian contexts in the 1st millennium CE

Big Historical Data Conference Programme, 2023

Thursday, November 23

| 9:00-10:30 | **Session 3: Environments of big cultural heritage data integration I** |
| | *Session organisers: Michael Fisher and Dovydas Jurkenas* |

	3-1	Michael Fisher	Heritage-environment interaction: Theorising Big (Palaeo)Data nntegration across the nature-culture divide
	3-2	Julian Richards	ARIADNE: aggregating archaeological datasets at an international scale
	3-3	Pablo Barruezo-Vaquero	Transdisciplinary data integration into a computational ontology: some reflections from the DataARC Project on modelling human–non-human entanglements
	3-4	Thomas Huet	"Shared heritage": management and integration of cultural heritage data across Arches-based platforms in the Global South
	3-5	Jonas Gregorio de Souza	Mapping the archaeological Pre-Columbian heritage in South America
	3-6	MAHSA and MAEASaM Teams	Modelling heritage information in two diverse regions: reflections on the integration of heterogeneous big data from the MAHSA and MAEASaM projects

10:30-11:00	**Coffee break**
11:00-11:30	**Session 3. Environments of big cultural heritage data integration II**
	Session organisers: Michael Fisher and Dovydas Jurkenas

| | 3-7 | Dovydas Jurkenas | Hordes of Data: Multilayered documentation and collection of archaeological heritage and environmental data across the Mongolian landscape |
| | 3-8 | Ankhsanaa Ganbold | Creating the Mongolia cultural heritage database (immovable historical and cultural heritage) |

| 11:30-12:30 | **Session 4. Archaeological time-series: The quest for robust ^{14}C-dated proxies for the intensity of prehistoric activity** |
| | *Session organisers: John Meadows and Peer Kröger* |

| | 4-1 | Jan Kolar | Large radiocarbon datasets in relation to archaeological context and metadata |
| | 4-2 | Fiona Laviano | Building a database of dated Neanderthal fossil remains to estimate the spatiotemporal pattern of Neanderthal extirpation |

	4-3	Jiyoung Park	Investigating long-term population dynamics in the Han River Basin using radiocarbon dating
	4-4	Thomas Huet	NeoNet, an app for radiocarbon modelling of the Late Mesolithic / Early Neolithic transition in South-Central and South-Western Europe

12:30-13:30 **Lunch**

13:30-14:30 **Session 5: Data and people in interaction: Network analysis for everyone**
Session organisers: Vera Klontza and Barbora Ruffini

	5-1	Tamás Czuppon	Hidden information or misuse? Data and network analysis on burial customs (6-9 c. AD)
	5-2	Freg J. Stokes	Mapping networks of capital and resistance in tropical South America
	5-3	Britt Davis	Neutron activation analysis and networks: Possibilities and constraints
	5-4	Christopher Carleton	'Symbolic scaling' in ancient and contemporary cities

14:30-15:00 **Session 6. Leveraging Big Data, GIS, and machine learning in remote sensing I**
Session organisers: Manuel Peters and Amina Jambajantsan

	6-1	Stefania Merlo	An experiment with automated detection of diverse archaeological features in an African context using deep-learning and free satellite multispectral imagery
	6-2	Ahmed Mahmoud	Automated change detection monitoring of archaeological sites using machine learning and Google Earth Engine

15:00-15:30 **Coffee break**

15:30-16:00 **Session 6. Leveraging Big Data, GIS, and machine learning in remote sensing II**
Session organisers: Manuel Peters and Amina Jambajantsan

	6-3	Manuel J. Peters	Multi-scale automated feature detection in the Argentinean Andes: A comparative analysis of satellite and UAV
	6-4	David Stott	Positive false positives: Searching for annular landforms in Northern Europe

16:00-17:45	**Session 7. AI for historical and archaeological Big Data analysis II** *Session organiser: Jochen Büttner*		
	7-1	Jakob Hauser	Enhancing the Seshat databank: A computationally readable mapping of historical facts to scholarly references
	7-2	Hassan El-Hajj	Prompt me a dataset: Large-scale ML dataset creation in the humanities
	7-3	Mathieu Aubry	Discovering and analyzing patterns in large historical image databases
	7-4	Jambajantsan Amina	Leveraging satellite imagery and Deep Learning in Mongolian archaeology
	7-5	Jianyin Roachell	Deep Learning and Bayesian analysis of historical time series data
	7-6	Adam Izdebski	Applying Bayesian machine learning to causality modelling in historical social-ecological systems: case studies from early modern Greece and Poland
	7-7	Raphael Schlattmann	Trajectories of change: Using text embeddings to track knowledge evolution
18:00-19:00	**Dinner & Group photo**		
19:00-19:30	**Plenary**		

Friday, November 24

9:00-10:30	**Session 8: Insights from reusing large prehistoric and interdisciplinary databases** *Session organisers: Christian Sommer, Angela Bruch, Nicholas Conrad, Christine Hertler, Miriam N. Haidle, Volker Hochschild, Zara Kanaeva, Andrew Kandel, and the ROCEEH Team*		
	8-1	Samantha Scott Reiter	Columns and rows: publishing, preparing, harmonizing and preserving protocols, guidelines and resources from the Big Interdisciplinary Archaeological Database
	8-2	Anaïs Vignoles	Shortcomings related to archaeological bibliographic databases used for macro-scale modeling: the SIGMENT database for estimating Middle and Recent Gravettian lithic technical tradition distributions in Western Europe
	8-3	Giulia Marciani	Beyond labels. Exploring patterns of formal description of lithic variability in Late Pleistocene technologies
	8-4	Rimtautas Dapschauskas	Using big data to gain new insights about large-scale developments of human behavioral evolution: ROAD and Middle Stone Age ochre use
	8-5	Christian Sommer	Mapping archaeological cultures and periods with network cartography
	8-6	Jesús Rodríguez	Modelling the adaptations of hominins to climate in Europe from MIS14 to MIS11
10:30-11:00	**Coffee break**		
11:00-12:30	**Session 9. Palaeoclimatic and palaeoenvironmental databases: Exploring the dynamics of human-environmental systems** *Session organiser: Achim Brauer*		
	9-1	Pedro Andrade	Long-term arsenic exposure evidence in northern Chile revealed through analysis of compiled osteological and elemental data
	9-2	Michele Abballe	Modelling the evolution of the hinterland of Ravenna: human-environment relationships in an extremely dynamic alluvial landscape
	9-3	Michela Leonardi	Palaeoecology made easy: pastclim and tidysdm, two new R packages to make the best use of palaeo big data
	9-4	Margherita Colucci	A case study: modelling human-malaria coevolution through time using paleoclimatic and palaeoenvironmental databases

| 9-5 | Ümit Cevher Elmas | Paleoenvironmental databases: A case study from Lake Burdur |
| 9-6 | Thomas Giesecke | The Neotoma Palaeoecology Database as a research tool to assess human landscape interactions during the Quaternary |

| 12:30-13:30 | **Lunch** |
| 13:30-15:00 | **Session 10: History unleashed: Harnessing the knowledge stored in historical documents** |

Session organisers: Adam Izdebski and Carlo Cocozza

10-1	Luke Anderson-Trocmé	Unraveling French Canadian ancestry: An interplay of genetics, genealogies, and geography
10-2	David Max Findley	Harmonizing big datasets: PANTROPOCENE, Land use modelling, and the historical tropics
10-3	Daniel Baránek	From historical sources to Wikibase
10-4	Etienne Wasmer	A cross-verified database of locations visited by notable individuals
10-5	Clément Gorin	A convolutional network approach to mining historical map data
10-6	Sonia Medina Gordo	[POSTER] Script-based automation practices: some experiences for managing early medieval society through written evidence

| 15:00-15:30 | **Coffee break** |
| 15:30-16:45 | **Session 11. Modelling expansions in South America: Integrating archaeology and linguistics** |

Session organisers: Fabrício Ferraz Gerardi and Bruno de Souza Barreto

11-1	Paul Heggarty	Combining archaeology, language and genetics into a single human (pre)history through time, space, and ecology
11-2	Rafael de Almeida Lopes	Using spatial and chronological modelling to understand the Polychrome Tradition Expansion in Central Amazon
11-3	Bruno de Souza Barreto	Demic diffusion, cultural transmission and change: assessing the spread of the Koriabo pottery style as an archaeological correlate of the Cariban-languages expansions in northern Amazonia

	11-4	Fabrício Ferraz Gerardi	A phylogenetic study of the Cariban language family
	11-5	Kathrin Nägele	Beyond broad strokes – the future of ancient DNA in the Americas
16:45-17:00	**Closing remarks**		

Saturday, November 25

10:00-12:00	Guided tour of Jena