



TUESDAY MORNING

8:30 AM - *Keynote Address*

Dr. Ken Kvamme
SCE Auditorium

9:30 AM *Coffee Break*

Open Open Open. The Rise of Open Scientific Publishing and the Archaeological Discipline: Managing the Paradigm Shift

Education and Dissemination

Room: SCE 216

Organizers: Arianna Traviglia, Xavier Rodier

- 9:50 AM **Rocks-Macqueen, Doug, Tom Levy**, *The Last of the Publishers*
- 10:10 AM **Roued-Cunliffe, Henriette, Peter Jensen**, *What is Open Data in an Archaeological Context?*
- 10:30 AM **Brin, Adam, Francis Pierce-McManamon, Leigh Anne Ellison**, *The Challenges of Open Access for Archaeological Repositories*
- 10:50 AM **Kondo, Yasuhisa, Atsushi Noguchi**, *Best Practices and Challenges in Promoting Open Science in Archaeology: Two Narratives from Japan*
- 11:10 AM **Rodier, Xavier, Olivier Marlet**, *How to Combine Archaeological Archives, Linked Open Data and Academic Publication, a French Experience*
- 11:30 AM **Buard, Pierre-Yves, Elisabeth Zadora-Rio**, *Publishing an Archaeological Excavation Report in a Logician Workflow*
- 11:50 AM **Kansa, Eric, Anne Austin, Ixchel Faniel, Sarah Kansa, Ran Boynter, Jennifer Jacobs, Phoebe France**, *A Reality Check: The Impact of Open Data in Archaeology*

Same as it ever was... Same as it ever was

Critical Reflections

Room: SCE 217

Organizers: Hugh Corley, Lorna-Jane Richardson

- 9:50 AM **Pageau, Hanna**, *An Inclusive Archaeology: Being Able in Archaeology*
- 10:10 AM **Foreman, Penelope**, *"Well, actually...": The Othering of Women in the Computing and Programming Communities and Its Effects on Digital Archaeology*
- 10:30 AM **Ni Chiobhain Enqvist, Delia**, *Whose (Maritime) Archaeology is It Anyway?*
- 10:50 AM **Hassett, Brenna, Suzanne Pilaar Birch, Victoria Herridge, Rebecca Wragg Sykes**, *TrowelBlazers: Raising Horizons for a Diverse Digital Archaeology*
- 11:10 AM **Corley, Hugh**, *Privilege and Digital Archaeology*
- 11:30 AM **Richardson, Lorna-Jane**, *Digital Archaeology and Digital Inequalities: A View from a Sociology Department*
- 11:50 AM *Discussion*

Urbanism at the Micro, Meso and Macro Scales: Advances in Computational and Quantitative Methods to Study Cities and their Built Environments

GIS

Room: SCE Auditorium

Organizers: Eleftheria Paliou, Adrian Chase

- 9:50 AM **Cabaniss, Andrew**, *Diversity from the Bottom Up: Modeling Cities as Communities of Diverse Households*
- 10:10 AM **Cesaretti, Rudolf**, *Re-Evaluating Settlement Population Estimation: An Analogue-Based Method for Modeling Patterned Variation in Population Density*
- 10:30 AM **Levine, Evan, Daniel Plekhov**, *Patterns of Urbanism in Bactria: Reevaluating a Paradigm Through Remote Sensing*

- 10:50 AM **Hermitt, Elijah, Erika Maxson, Kirk French, Damien Marken, Derek Shaffer, Timothy Murtha**, *Hydrologic Design in Three Maya Cities: Using Regional Topographic Data, Hydrologic Analysis in GIS and Archaeology for a Comparative Analysis of Palenque, Tikal, and El Peru*
- 11:10 AM **Baumanova, Monika, Ladislav Smejda, Heinz Ruther**, *The Streets of Timbuktu Old Town. Moving Goods, People and Ideas on the Coast of the Sahara*
- 11:30 AM **Shpuza, Ermal**, *The Effect of Gridiron Street Pattern on the Urban Growth of Adriatic and Ionian Coastal Cities 1800-2010*
- 11:50 AM **Crawford, Katherine**, *Unravelling Urban Religious Landscapes: Modelling Processions at Ostia*
- 12:10 PM **Klassen, Sarah, Jonathan Weed, Damian Evans**, *Discerning the Urban Morphology of Angkor Using a Semi-Supervised Algorithm for Manifold Learning*

General Papers

General - GIS

Room: SCE House

- 9:50 AM **Hanus, Kasper**, *An Analysis of Selected Variables that Affect the Production of Cost Surfaces*
- 10:10 AM **Becker, Daniel, Christian Willmes, Andreas Bolten, María de Andrés-Herrero, Gerd-Christian Weniger, Georg Bareth**, *Influence of Differences in Digital Elevation Models and their Resolution on Slope-Based Site Catchment Modelling*
- 10:30 AM **Beusing, Ruth**, *Temporal-GIS Tools for Mixed and Meso-Scale Archaeological Data*
- 10:50 AM **James, Vivian**, *Context as Theory: Towards Unification of Computer Applications and Quantitative Methods in Archaeology*
- 11:10 AM **Sharp, Kayeleigh**, *Testing the 'Small-Site' Approach with Multivariate Spatial Statistical and Archaeological Network Analysis*
- 11:30 AM **Groen, Mike**, *Geospatial Analysis, Predictive Modelling and Modern Clandestine Burials*
- 11:50 AM **Slayton, Emma, Jan Athenstädt, Corinne Hofman, Jan Hildenbrand**, *Seafaring with Mental Sign Posts: Connecting Materials with Canoe Routes in the Archaic Age Northern Lesser Antilles*

The Creation of Big Data Labs for Archaeology, Heritage, and Global Initiatives

Broader View - Digital Archaeology and the Humanities

Room: SCW 460/462

Organizers: Thomas Levy, Michael Decker

- 9:50 AM **Decker, Michael, Thomas Levy, Maurizio Forte, Ethan Watrall**, *Introduction*
- 10:00 AM **Decker, Michael**, *CVAST: The USF Center for Virtualization and Applied Spatial Technologies*
- 10:20 AM **Levy, Thomas, Margie Burton**, *The UC San Diego Center for Cyber-Archaeology and Sustainability*
- 10:40 AM **Forte, Maurizio**, *The Dig@Lab at Duke University*
- 11:00 AM **Watrall, Ethan**, *MATRIX: The Center for Digital Humanities & Social Sciences*
- 11:20 AM **Tanasi, Davide**, *Learning Through Objects: 3D Digital Imaging, 3D Printing and Haptic Technology for Public Outreach in Archaeology*
- 11:40 AM **Colobran, Miquel, Juan Antonio Barcelo, Igor Bogdanovic**, *Reusing Archeological Information to Improve Modeling and Research: An Interoperability Data Schema*
- 12:00 PM **Watrall, Ethan**, *Mbira: A Platform to Build, Serve, and Manage Mobile Heritage Experiences*

NEH Roundtable on Advanced Challenges in Theory and Practice in 3D Modeling

3D Acquisition / Object Modeling

Room: SCW 464

Organizers: Alyson Gill, Heather Richards-Rissetto, Lisa Snyder

- 9:50 AM **Carter, William**, *The Life of Attributes: Meta and Paradata as 3D Point and Object DNA for Heritage Providence*
- 10:10 AM **Clinton, Miriam**, *A Workflow to Integrate 3D Data Acquisition with Traditional Artifact Study? Lessons from Mouliana*
- 10:30 AM **Ulguim, Priscilla**, *3D Digital Models and Bioarchaeology: Challenges and Proposals for Practice*
- 10:50 AM **Massari, Lauren, William Rourk, Shayne Brandon, Jama Coartney, Worthy Martin, Chip German**, *Challenges in Processing, Delivering, and Archiving Large Amounts of 3D Data*
- 11:10 AM **Mudge, Mark**, *Computational Photography, Scientific Imaging, and the Preservation of 3D Digital Representations*

- 11:30 AM **Richards-Rissetto, Heather**, *Challenges of Peer-Review: Where Does 3D Archaeological Scholarship Fall under the Umbrella of Digital Humanities Scholarship?*
- 11:50 AM **Richards-Rissetto, Heather, Alyson Gill**, *Roundtable*

Rip – Model – Learn: Towards the Total Model

Broader View - Digital Archaeology and the Humanities

Room: SCW 466/468

Organizers: Carlo Bianchini, Alfonso Ippolito, Carlo Inglese,
Luca Senatore

- 9:50 AM **Luce, Fabio**, *Digital Surveying and Ideal Reconstruction for Total Hybrid Model: The Case of Fort Presanella in Val di Sole.*
- 10:10 AM **Filippucci, Marco, Fabio Bianconi, Federica Magi Meconi**, *Models and Parameterization of the Five Orders of Architecture*

- 10:30 AM **Eve, Stuart, Guy Hunt, Michael Johnson, Jessica Ogden, John Layt**, *10 Years of Online Archaeological Databases - Revolution, Convolution, Evolution*
- 10:50 AM **Empler, Tommaso**, *3D Modeling to Reconstruct a Paleontological Site: Museum of Casal de' Pazzi in Rome*
- 11:10 AM **Senatore, Luca, Michela Cigola, Arturo Gallozzi**, *New Methodologies for Knowledge and Valorization: The Digital Survey Made by Remote-Controlled Mobile Platform: The Case Study of the Roman Casinum City*
- 11:30 AM **Caldarone, Adriana**, *3D Printing and Augmented Reality: Integration, Methods and Communication for Cultural Heritage.*
- 11:50 AM **Bercigli, Monica, Stefano Bertocci**, *Digital Documentation of Masada Fortress in Israel: Integrated Methodologies of Survey and Representation*
- 12:10 PM **Carnevali, Laura, Marco Carpiceci, Andrea Angelini**, *Problems Concerning Elaboration and Representation in Italian Rock-Hewn Architecture*

TUESDAY AFTERNOON

Archaeology In and Out of the Classroom: Digital Approaches to Archaeological Instruction

Education and Dissemination

Room: SCE 216

Organizer: Jeffrey Emanuel

- 2:00 PM **Gandolfi, Eleonora**, *Public Engagement in Compulsory-Age Education with MOOCs: A Case Study from the Italian and English Context*
- 2:20 PM **Rourk, Will, Andrew Johnston, Lauren Massari, Shayne Brandon, Arin Bennett, Jama Coartney, Worthy Martin**, *Cultural Heritage Data Synthesis for Architectural History Field Methods*
- 2:40 PM **Golubiewski-Davis, Kristina, Samantha Porter, Matt Edling, John Soderberg, Gilbert Tostevin**, *The Use and Reuse of 3D Scanned Lithic Refits*
- 3:00 PM **Galvin, Elizabeth, Jennifer Wexler**, *Virtual Viewing: Engaging Audiences with the African Rock Art Digital Collection at The British Museum*

The Technology Lag: A Panel Discussion Regarding the Use of the Computing Technologies Toolkit For Cultural Resource Compliance Projects

Critical Reflections

Room: SCE 216

Organizers: Brian Seymour, Michael Scafuri, Sarah Kessick,
Timothy Dodson

- 4:00 PM **Seymour, Brian**, *Introduction / Roundtable*

Ground-penetrating Radar Advancements in the Americas

Geophysics/Remote Sensing

Room: SCE 217

Organizer: Peter Leach

- 2:00 PM **Morris, Isabel**, *Today's Surveys and Tomorrow's Inversions: GPR Attribute Analysis*
- 2:20 PM **Sturm, Jennie**, *Ground-Penetrating Radar in Chaco Canyon, New Mexico: 40 Years of Mapping Chaco's Buried Past*

- 2:40 PM **Lowry, Sarah, Shawn Patch**, *Mississippian Villages in East Tennessee: Geophysical Case Studies at Five Sites to Examine Community Layout and Land Use*

- 3:00 PM **Leach, Peter, Richard Boisvert**, *High-Frequency GPR for Real-Time 'Digital Bisection' of Archaeological Features*

Non Invasive Methods to Assess Above and Underground Spatial Pattern

Geophysics/Remote Sensing

Room: SCE 217

Organizers: Michael Märker, Christian Sommer

- 4:00 PM **Märker, Michael, Ivano Rellini, Luigi Mucerino, Volker Hochschild**, *Assessment of Subsurface Neolithic/ Palaeolithic Sites in the Southern Gargano Area, Apulia, Italy*
- 4:20 PM **Stavilă, Andrei**, *Bronze Age Tell or Not? Research Methods for Revealing the Internal Habitation Pattern of Alioș – „Valea Alioșu” Site, Timiș County, Romania*
- 4:40 PM **Pihokker, Matthew**, *Determining Spatial Relationships between Domestic Sites and Cemeteries of the Central Peloponnese*
- 5:00 PM **Hegyi, Alexandru, Petru Urdea**, *2D and 3D Electrical Resistivity Tomography Imaging of Archaeological Structures - Case Studies from Romania*

Urbanism at the Micro, Meso and Macro Scales: Advances in Computational and Quantitative Methods to Study Cities and their Built Environments

GIS

Room: SCE Auditorium

Organizers: Eleftheria Paliou, Adrian Chase

- 2:00 PM **Chase, Adrian**, *Erasing the Garden City: Interpolation of Architectural Volume from LiDAR Derived DEMs*
- 2:20 PM **Prufer, Keith, Amy Thompson**, *Processes of Urban Development Among the Ancient Maya of Uxbenká and Ix Kuku'il, Southern Belize*
- 2:40 PM **Hare, Timothy**, *Mapping and 3D Modeling at the Household, Neighborhood, and Regional Levels Using UAVs, Photogrammetry, and LiDAR*
- 3:00 PM **Forte, Maurizio, Nevio Danelon, David Johnston, Katherine McCusker, Everett Newton**, *Vulci3000 Project - A Digital Challenge*

- 3:20 PM **Landeschi, Giacomo, Stefan Lindgren, Jesper Blid Kullberg, Henrik Gerding, Alcestis Papadimitriou, Jenny Wallensten, Nicolò Dell'Unto, Angeliki Kossiva,** *Integrated Digital Methods for Investigating a Hidden Cityscape: The Case of Ancient Hermion*
- 3:40 PM *Coffee Break*
- 4:00 PM **Kubicka, Anna,** *The Metrological Research of Machu Picchu Settlement: Application of a Cosine Quantogram Method for 3D Laser Data*
- 4:20 PM **Vadala, Jeffrey, Brian Denham,** *Virtual Reality as a Tool for Spatial Analysis at Cerro Maya, Belize (Cerro)*
- 4:40 PM **Goodwin, Graham, Heather Richards-Rissetto,** *Modeling Acoustics in Ancient Maya Cities: Moving Towards a Synesthetic Experience Using 3D Simulation*
- 5:00 PM **Hanus, Kasper,** *Understanding Urban Pattern of Silk Road Oasis-Cities Using Archival Aerial Images.*
- 5:20 PM *Discussion*

The Creation of Big Data Labs for Archaeology, Heritage, and Global Initiatives

Broader View - Digital Archaeology and the Humanities

Room: SCW 460/462

Organizers: Thomas Levy, Michael Decker

- 2:00 PM **Johnson, Andrew, Steve Savage, Tom Levy,** *The ASOR Cultural Heritage Initiative-TerraWatchers Collaborative: Crowd-Sourced Monitoring of At Risk Cultural Heritage Sites in the Middle East*
- 2:20 PM **Banaszek, Łukasz, Kamila Oleś,** *Making Use of the Publicly Available Spatial Data and Bringing the Past to the People: A Case Study of the Pomeranian Wall, Poland*
- 2:40 PM **McCusker, Katherine, Maurizio Forte, David Johnston, Everette Newton,** *Adding the Aerial Multi-Spectral Perspective: A Holistic View of Vulci through Multi-layered Data Sets*
- 3:00 PM **Harrison, Laura,** *Mobilizing a Salvage Archaeology Dataset to Build a 3D Interpretive Visualization*
- 3:20 PM **Smitheram, Craig, George Pavlidis, Thomas Levy,** *The Center for Cyber-Archaeology and Sustainability (CCAS): Pedagogy and Student Engagement in At-Risk World Heritage Initiatives*
- 3:40 PM *Coffee Break*

- 4:00 PM **Lercari, Nicola, Jeffrey Weekley,** *Leveraging the UC Merced WAVE and Pacific Research Platform to Create At-Risk Global Cultural Heritage Networks*
- 4:20 PM **Frey, Jon,** *From Analog to Digital in Archaeological Archives*
- 4:40 PM **Spring, Adam,** *Solutions in Photogrammetric Selectivity: Optimizing High Fidelity Meshes from Casual Photography-The Trajan's Forum Project Examples*
- 5:00 PM **Forte, Maurizio, Nevio Danelon, Julia Liu,** *The Trajan's Forum Project: Dig@lab and the Framework of Big Data.*
- 5:20 PM **Liss, Brady, Matthew Howland, Thomas Levy,** *Running on Autopilot: Testing Google Earth Engine for the Automatic Identification of Archaeological Features in Satellite Imagery*

Methods, Tools, Disruption ... : From Information Delivery to Interaction

Broader View - Digital Archaeology and the Humanities

Room: SCW 464

Organizer: Ian Johnson

- 2:00 PM **Gunn, Scott,** *Archaeological Field Data Collection Using Ruggedized Android Tablets and Free and Open Source Software*
- 2:10 PM **Brennan, Matthew, Bernard Frischer,** *Photomodeling for Rapid Documentation and Survey of Complex Urban Spaces and Archaeology*
- 2:20 PM **Laugier, Elise, Jesse Casana,** *Cultural Heritage Monitoring Using Time-Sequenced Satellite Imagery: A Case Study from the Syrian Civil War*
- 2:30 PM **Casana, Jesse, Jackson Cothren,** *The CORONA Atlas Project: Orthorectification and Analysis of Declassified, Cold War-Era Satellite Imagery*
- 2:40 PM **Meyer, Dominique, Eric Lo, Thomas Wypych, Dominique Rissolo, Falko Kuester,** *From Air to Model- A Workflow for Automated UAV Surveying, Data Transmission and Rapid Cloud Distributed Photogrammetry Processing*
- 2:50 PM **Tolle, Karsten, David Wigg-Wolf,** *Improving Data Quality by Rules – A Numismatic example*
- 3:00 PM *Discussion*

Geographic Relations in Databases on Cultural Heritage

Networks/Modeling

Room: SCW 464

Organizers: Michael Märker, Volker Hochschild, Espen Uleberg,

Mieko Matsumoto

- 4:00 PM **Perucchetti, Laura, Peter Bray, Mark Pollard**, *The Use of GIS to Understand the Circulation of Metal in the Prehistoric Alps.*
- 4:20 PM **Uleberg, Espen, Mieko Matsumoto**, *Display matters? Enhanced Visualization for Unique Aspects of Norwegian Stone Age Site Distribution*
- 4:40 PM **Willmes, Christian, Daniel Becker, Yasa Yener, Olaf Bubenzer, Georg Bareth**, *Open Science, e-Science and Geospatial Data Management to Support Research in Archaeology*
- 5:00 PM **Märker, Michael, Volker Hochschild, Christian Sommer**, *How to Integrate and Illustrate Aspects of Landscape Evolution and Human Evolution*
- 5:20 PM *Discussion*

Rip – Model – Learn: Towards the Total Model

Broader View - Digital Archaeology and the Humanities

Room: SCW 466/468

Organizers: Carlo Bianchini, Alfonso Ippolito, Carlo Inglese,

Luca Senatore

- 2:00 PM **Mancini, Matteo Flavio, Leonardo Baglioni**, *Integrated Surveying Techniques for Analysis of Archaeological Artifact*

- 2:20 PM **Gallozzi, Arturo, Leonardo Paris, Wissam Wahbeh**, *3D Models and Interactive Communication for Archaeology: The Nymphaeum Ponari in Cassino*
- 2:40 PM **Carpiceci, Marco, Carlo Inglese, Andrea Angelini**, *Survey, Representation, Analysis and Cataloguing of the Rock-Hewn Architecture in Cappadocia*
- 3:00 PM **Chiavoni, Emanuela, Daniela Esposito**, *The Archaeological Park of the Porto of Traian: Knowledge, Preservation and Fruition*
- 3:20 PM **Piumatti, Paolo, Rosa Tamborrino**, *3D Digital Modelling and Digital Urban History: A Methodology for Studying the Processes of Transformation of Nubian Temples and Landscape in the Site of Lake Nasser.*
- 3:40 PM *Coffee Break*
- 4:00 PM **Pirinu, Andrea**, *Graphic Analysis of Historic Documents, Architectural Survey, Applied Geophysics in Support of Archaeological Investigation: The Urban Wall of Cagliari (Sardinia, Italy)*
- 4:20 PM **Attenni, Martina, Alfonso Ippolito**, *Representing Intangible Heritage: Questions About Method*
- 4:40 PM **Inglese, Carlo, Carlo Bianchini, Alfonso Ippolito, Martina Attenni, Valeria Caniglia**, *Tradition and Innovation: From Worksite Plans to Digital Models*
- 5:00 PM **Porfiri, Francesca, Carlo Bianchini**, *The Microcosm of Tiberius's Cave in Sperlonga: Analysis, Investigation and Digital Reconstruction of the Ancient "Sculpture's Theatre"*
- 5:20 PM **Bianchini, Carlo, Alessandro Viscogliosi, giorgia potestà, Gaia Lisa Tacchi**, *Tradition and Hi-Tech in the Construction of a Total Model: The Complex of Pietrabbondante*

POSTERS

Tuesday Evening: 5:40 PM - 7:30 PM

Room: SCE House

Posters from The Creation of Big Data Labs for Archaeology, Heritage, and Global Initiatives

Elliott Smith, Rosemary, Carolyn Breeze, Taylor Harman, Arkin Gupta, Franklin Reece, Margie Burton, Thomas Levy, ArchaeoSTOR: *A User-Friendly Archaeological Database*

Lu, Qin-Qin, Zhengyao Jin, *Scientific Database and the Big Data Approach for the Bronze Age of China*

Du Vernay, Jeffrey, *3D Mapping and Visualizing the Galerie de Paléontologie et d'Anatomie Comparée at the Muséum National d'Histoire Naturelle, Paris*

McLeod, James, *Three-Dimensional Documentation and Examination of a Medieval Period Cistern at Alarcos in the Castilla-La Mancha Region of Spain*

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

Banaszek, Łukasz, Kamila Oleś, *Data Hub for Early Medieval Architecture? Crossing the Borders of an Unfriendly Tradition*

General Posters

Bergervoet, Michael, *Geospatial and Ethnographic Analysis of the Red Wing Stone Cairns*

Brenningmeyer, Todd, *Documenting Ephemeral Settlements of Modern Greece*

Canela Grácia, Joan, Núria Otero Herraiz, *Cultural Heritage preservation through Open Data and GIS: A methodological proposal for North-eastern Iberian Peninsula.*

Dennis, L. Meghan, *Reclaiming "Ethics" in a Post-GamerGate World: Participatory Standards and the Establishment of an Ethical Framework of Practice in Archaeogaming*

Harper, Charlie, Jeremy Vause, *Batten Down the Hatches! Digitizing and Displaying Finds from the Spanish Plate Fleet Wrecks*

Holmes, Rachael, Ashely Green, *Accounting for Environmental Factors: Approaches to enhancing horizontal resolution and interpretability in geophysical surveys*

Jones, Steven, Eileen Ernenwein, *Towards A More Efficient Approach To Grave Detection: Experiments Using Microtopography, Ground Penetrating Radar, Magnetometry, And Electromagnetic Induction*

Lockhart, Jami, Timothy Mulvihill, Jeffrey Mitchem, *A Multiscale Geospatial Analysis of a Protohistoric Mississippian Landscape.*

Menzer, Jeremy, Jay Franklin, *Geophysical Survey of Mississippian Mound Sites on the Upper Cumberland Plateau, Tennessee*

Muccigrosso, John, *Creating a Database of Roman Temples*

Nicu, Ionut Cristi, *Cultural heritage landscape vulnerability using analytical hierarchy process and geographic information systems. An approach to historical maps*

Sea, Claiborne, Eileen Ernenwein, *Landscape Scale Geophysical Survey of the Singer-Hieronymus Site Complex in Scott County, Kentucky: Determining the Development of Village Infrastructure Using Non-Invasive Techniques*

Smith, Tyler, Greg Lewis, Allison Mueller, *3D Scanning and Printing Ancient Greek Vases: From Deep Storage to Rapid Prototyping*

Smith, Karen, Jun Zhou, Haoshou Yu, Song Wang, Colin Wilder, *SnowVision 1.0: Toward the automatic matching of stamped pottery sherds to carved wooden paddle designs*

Tankersley, William, *An Approach to Digital Data Collection for Cultural Resource Management*

Traviglia, Arianna, *Automating detection of landscape patterning: a similarity-based approach*

Velandria, Yoly, *Pre-Hispanic agricultural technologies and water control systems in northwestern Venezuela*

Whitmore, Deidre, *Seeking Context: Archaeological Practices Surrounding the Reuse of Spatial Information*

Wright, Holly, Gabriele Gattiglia, Michael Remmy, *Archaeological Automatic Interpretation and Documentation of cEramics (ArchAIDE)*

Yang, Yunyun, *A Study of the Cultural Development and Landscape Distribution of the Majiayao Culture in Gansu and Qinghai Provinces in China*



WEDNESDAY MORNING

Mechanics, Mods and Mashups: Games of the Past for the Future Designed by Archaeologists

Education and Dissemination

Room: SCE 216

Organizers: Erik Champion, Michael Nitsche

- 8:30 AM **Booker, Emily**, *"I Don't Want to Set the World on Fire": Ruin Interactions and Attitudes in Fallout 4*
- 9:00 AM **Bryant, Robert, Sandra Blakely, Joanna Mundy, Cole Furrh**, *Sailing with the Gods: Argonauts and Samothracians in an Ancient Sea*
- 9:30 AM **Eve, Stuart**, *How Waterloo was Won*
- 10:00 AM **Linde, Lennart**, *Blur the Lines – Games as Tools for Archaeological Research*
- 10:30 AM *Coffee Break*
- 10:50 AM **Underberg-Goode, Natalie**, *Arpilleras and Ayni: Roleplaying Reciprocity*
- 11:20 AM **Hiriart, Juan**, *Designing and Using Game Environments as Historical Learning Contexts*
- 11:50 AM *Discussion*

Automation is Here to Stay! The Hitchhiker's Guide to Automated Object Detection and Image Processing in Remote Sensing

Geophysics/Remote Sensing

Room: SCE 217

Organizers: Arianna Traviglia, Dave Cowley

- 8:30 AM **Cowley, Dave, Arianna Traviglia**, *Hitching the Right Ride? Concepts and Issues for Developing Automated Object Detection and Image Processing in Remote Sensing Archaeology*
- 8:50 AM **Kramer, Iris**, *Creating a Future for Automation by Targeting Models to their End-Users*
- 9:10 AM **Zambanini, Sebastian, Simon Brenner, Robert Sablatnig**, *Adapting to the Problem at Hand: Image Registration and Object Detection for Automatic WW2 Aerial Photograph Processing*
- 9:30 AM **Green, Ashely, Paul Cheetham, Timothy Darvill**, *Information Systems and Ad Hoc Workflow Models as Viable Applications to Improve the Pre-excavation Detection of Characteristic Human Interments*
- 9:50 AM **Ramel, Jean-Yves, Clément Laplaige, Xavier Rodier, Shuo Bai**, *Extraction of Linear Structures from LIDAR Images Using a Machine Learning Approach*
- 10:30 AM *Coffee Break*
- 10:50 AM *Discussion*

General - Data Management and Textual Analysis

General

Room: SCE 218

- 8:30 AM **Bischoff, Robert**, *Moving Forward with Digital Databases: Current Opinions and Potential Solutions*
- 8:50 AM **Schroer, Carla, Mark Mudge**, *Digital Lab Notebook Creation for Computational Photography*
- 9:10 AM **Casey, Christian**, *Digital Demotic: Opportunities and Challenges*
- 10:30 AM *Coffee Break*
- 10:50 AM **Gad, Moataz, Yasmin Mohamed**, *Treatment of Lime Stone Colored with Egyptian Blue Pigment Using Different Techniques of Documentation*

- 11:10 AM **Bray, Peter, Mark Pollard**, *The Characterisation Hypothesis for Scientific Metallurgy: Classes of Structure in Chemical Datasets and their Visualisation*
- 11:30 AM **Sonnemann, Till, Jason Laffoon, Termeh Shafie**, *Enhancing Archaeological Material Provenance Studies by Manipulating Isoscapes*
- 11:50 AM **Foreman, Penelope**, *The Colour Out of Space: Digital Media as Mouthpieces for Material Agency*

From Physical to Digital, From Interactive to Immersive: Uses of Three-Dimensional Representation, Mixed Reality, and More in the Sharing and Exploration of Archaeological Data

VR

Room: SCE Auditorium

Organizer: Jeffrey Emanuel

- 8:30 AM **Vurpillot, Damien**, *Making Virtual Reality Real: What Can We Learn by Bringing Together Virtual Reality and Visual Attention Analysis?*
- 8:50 AM **Bremer, Thomas, Sebastian Plesch, Kay Kohlmeier, Susanne Brandhorst, Arie Kai-Browne, Timo Falke**, *VR:TA - A Virtual Reality Toolset for Archaeologists*
- 9:10 AM **Hollis, Luke**, *MorgantinaVR: Cityscale Handheld AR and Cross-Platform VR for Visualizing Georeferenced Datasets as a Part of a Microservices Software Architecture*
- 9:30 AM **Burns, Bryan, Jordan Tynes**, *Excavation Progress and Artifact Manipulations in a Virtual Environment*
- 9:50 AM **Kamash, Zena**, *Digital Digestion: Roman Food and Digital Objects at Corinium Museum*
- 10:10 AM **Wescoat, Bonna, Arya Basu**, *On the Dynamics of Interactive Exploration over Animation as Methods of Experiential Simulation in the Sanctuary of the Great Gods on Samothrace*
- 10:30 AM *Coffee Break*
- 10:50 AM **Rudov, Ivan**, *Combined Method of 3D Model of Archaeological Objects Optimization for a Mobile App.*
- 11:10 AM **Beale, Nicole, Gareth Beale, Julian Richards, Dawn Hadley, Jonathan Hook, Guy Schofield**, *Virtual Reality and Storytelling for Viking Archaeology*
- 11:30 AM **Löwenborg, Daniel, John Ljungkvist, Daniel Westergren, Sebastian Wiberg, Staffan Hagberg**, *Augmented History – A Virtual “Window to the Past”*

- 11:50 AM **Gonzalez-Perez, Cesar, Martin Pereira-Fariña, Chris Reed**, *Toward an Argument Evaluation System on Cultural Heritage Based on Anchoring Inference Theory*
- 12:10 PM *Discussion*

Women in CAA

Critical Reflections

Room: SCW 460/462

Organizers: Katie Simon, Sara Gale, Lisa Fischer

- 8:30 AM **Simon, Katie**, *Introduction*
- 8:40 AM **Ernenwein, Eileen**, *Implicit Gender Bias? What's That?*
- 8:50 AM **Rocks-Macqueen, Doug**, *Is Equality Enough?*
- 9:00 AM **Wendrich, Willeke**, *Bringing out the Best: Mentoring Women in Digital Archaeology*
- 9:10 AM **Wallrodt, John**, *Increasing Academic Approaches to CAA*
- 9:20 AM *Discussion*
- 9:50 AM **Fredrick, David**, *Collision Detection: Reflections on Gender from Game Space to Other Spaces*
- 10:00 AM **Gonzalez-Tennant, Edward**, *Cyberfeminist Perspectives on the Future of Digital Archaeology*
- 10:10 AM *Discussion*
- 10:30 AM *Coffee Break*
- 10:50 AM **Sturm, Jennie**, *Women in Business in the CAA fields*
- 11:00 AM **Lowry, Sarah**, *Technical Women in Cultural Resource Management: Amplifying the Importance of Non-Traditional Skill Sets in Modern Archaeology*
- 11:10 AM **Simon, Katie**, *That Was Not OK. Now What?*
- 11:20 AM *Discussion*
- 11:40 AM **Gale, Sara**, *How to Maintain an A-Game!: The Importance of Continued Education for Women in Technical Fields*
- 11:50 AM **Fischer, Lisa**, *A “Digital Divide”: Working to Close the Gender Gap*
- 12:00 PM *Discussion*
- 12:25 PM **Fischer, Lisa**, *Closing Remarks*

Data, Theory, Methods, and Models. Approaching Anthropology and Archaeology through Computational Modeling

Networks/Modeling
Room: SCW 464

Organizers: Stefani Crabtree, Iza Romanowska, Philip
Verhagen

- 8:30 AM **Crabtree, Stefani**, *An Introduction to Modeling*
- 8:50 AM **Allison, James**, *Agent-Based Modelling of the Relationships Among Kinship, Residence, and Exchange*
- 9:10 AM **Weaverdyck, Eli**, *Military Markets in Moesia Inferior: Using Location Analysis and Comparative Modelling to Identify Market Places on Rome's Lower Danubian Frontier*
- 9:30 AM **Coto-Sarmiento, Maria, Simon Carrignon, Xavier Rubio-Campillo, José Remesal**, *Identifying Social Learning Mechanisms in the Amphorae Production within Roman Empire*
- 9:50 AM **van Havre, Grégoire**, *The Dynamics of Brazilian Rock Art Landscape: An Agent-based Modelling Approach to Theories*
- 10:10 AM **Riris, Phil**, *Experiments in Modelling Environmental Impact: A Case Study of Post-Contact Piaroa (Wothuha) Land Use Patterns*
- 10:30 AM *Coffee Break*
- 10:50 AM **Kruse, Kristin**, *Spatial Pressure on Alpine Settlements? An Equation Based Case Study in the Silvretta Massif (Switzerland, Canton of Grisons)*
- 11:10 AM **Reynolds, Adam, Paul Hooper, Stefani Crabtree, Julia Clark**, *Optimizing Long Run Energy Harvesting Strategies in Central Asian Nomadic Pastoralists*
- 11:30 AM **Romanowska, Iza**, *Hominin Dispersal, Environmental Change and the Evolution of Behavioural Plasticity*
- 11:50 AM **Hölzchen, Ericson, Christine Hertler**, *Modeling Resource-Driven Out of Africa Hypotheses – Potential and Challenges*
- 12:10 PM **Davies, Benjamin, Simon Holdaway**, *Making Sense of the Surface: Using Spatial Simulation to Understand Stone Artifact Scatters*

- 12:30 PM **Barceló, Juan**, *When All Agents Die: Analyzing the Possible Failures of Agent-Based Models.*

3D Digitization of Sculpture

3D Acquisition / Object Modeling
Room: SCW 466/468

Organizers: Bernard Frischer, Gabriele Guidi

- 8:30 AM **Frischer, Bernard**, *Digitizing Sculpture: Where We've Been, Where We're Going*
- 8:50 AM **Vassallo, Valentina, Nicolò Dell'Unto, Sorin Hermon**, *A Quantitative Approach Using 3D Models for a Typo-Technological and Manufacturing Study of Terracotta Statuettes: The Case Study of the Ayia Irini (Cyprus) Small Figurines*
- 9:10 AM **Brennan, Matthew**, *The Prado Muses - Rethinking the Unity of a Statue Group with the Help of 3D Models*
- 9:30 AM **Kubicka, Anna, Aleksandra Brzozowska**, *3D Models of Architecture Remains in Archaeological Context: Visualisation as a Tool in Interdisciplinary Research of Polish Archaeological Mission in Kato Paphos on Cyprus.*
- 9:50 AM **Varner, Eric**, *Digitizing Ancient Sculpture at the Michael C. Carlos Museum, Emory University*
- 10:10 AM **Guidi, Gabriele, Umair Malik**, *Best Practices and Metrological Issues in Massive 3D Digitization of Sculptures*
- 10:30 AM *Coffee Break*
- 10:50 AM **Koutsoudis, Anestis, Georgios- Alexis Ioannakis, Christodoulos Chamzas**, *Incorporating Texture in the Retrieval Process of 3D Models Exploiting Spatial-Consistency of Texture Maps*
- 11:10 AM **Christiaisen, Leif, Seymour**, *Image-based Rendering Solution for High-resolution, Browser-based 3D Graphics*
- 11:30 AM **Burns, Bryan, Jordan Tynes**, *3D Models for Curatorial Dialogue and Undergraduate Education*
- 11:50 AM **Sherman, William**, *High-Throughput Computing for Large-Scale Digitization*
- 12:10 PM *Discussion*

WEDNESDAY AFTERNOON

Computer Applications in Archaeological Pedagogy: Best Practices for Teaching and Learning

Education and Dissemination

Room: SCE 216

Organizers: Anna Agbe-Davies, Julia Chyla

- 2:00 PM **Watrall, Ethan**, *Building Scholars and Communities of Practice in Digital Heritage and Archaeology*
- 2:20 PM **Bollwerk, Elizabeth, Lynsey Bates, Leslie Cooper, Jillian Galle**, *Lessons Learned from Teaching and Training with the Digital Archaeological Archive of Comparative Slavery (DAACS)*
- 2:40 PM **Lockyear, Kris**, *Flippin' R*
- 3:00 PM **Martin-Rodilla, Patricia, Cesar Gonzalez-Perez**, *Educational Experiences in Archaeological Information Modelling with the Mind Maps and Object-Oriented Paradigms*
- 3:20 PM **Lambers, Karsten, Fulco Scherjon, Iza Romanowska**, *A Small Private Online Course on 'Modelling and Simulation in Archaeology' at Leiden University*
- 3:40 PM *Coffee Break*
- 4:00 PM **McMichael, A.L., Jon Frey, Tommy Truong, Eric Martin**, *Augmenting Art History: AR in the Survey Classroom*
- 4:20 PM **Pikov, Nikita**, *Augmented Reality (AR) and Digital Photogrammetry as a Way of Preserving and Popularization of Archeological Collections*
- 4:40 PM **Freeman, Mark, Jeanne Moe**, *Project Archaeology: Assessing Paper and Digital Approaches to Online Learning*
- 5:00 PM *Discussion*

Differing Perspectives: The Wide World of Geophysical Prospection

Geophysics/Remote Sensing

Room: SCE 217

Organizers: Christine Markussen, Petra Schneidhofer

- 2:00 PM **Kalayci, Tuna, Meropi Manataki, Apostolos Sarris**, *The More the Merrier? Two Conflicting Stances on Multi-Array Sensors*

- 2:20 PM **Casana, Jesse, Austin Hill, Elise Laugier**, *Advancing Methodologies for Archaeological Aerial Thermography*
- 2:40 PM **De Smedt, Philippe**, *The Interpretive Potential of Geophysical Landscape Archaeology: An Electromagnetic Perspective.*
- 3:00 PM **Herrmann, Jason**, *What to do with Ambiguous Anomalies?*
- 3:20 PM **Ernenwein, Eileen, Jeremy Menzer**, *3D Ground Truth: Integrating Above Ground Photogrammetry, Ground Penetrating Radar, and Subsurface Laser Scans of a Medieval Tunnel, Mourjou, France*
- 3:40 PM *Coffee Break*
- 4:00 PM **Cooper, Lorna**, *Relocating a Forgotten Asian Market Garden in Historic Perth (1833-1936): Using GIS to Integrate and Interrogate Excavated, Archival and Geophysical Information*
- 4:20 PM **Cannon, Cayla, Eileen Ernenwein, Jay Franklin**, *In Search of the People Who Lived Here Before: From Historic to Prehistoric Significance at a Tennessee State Historic Site*
- 4:40 PM **Miszk, Łukasz, Martina Seifert, Nikola Babucic, Ewdoksia Papuci-Władyka**, *Old or New? Human Impact and the Mapping of Ancient Nea Paphos*
- 5:00 PM **Grap, Rachel, Eileen Ernenwein**, *Big Geophysics with Small Tools: Looking for the Big Picture One Step at a Time at Tel Shimron*
- 5:20 PM *Discussion*

General - 3D Modeling

General

Room: SCE 218

- 2:00 PM **Johnson, Adam**, *Shifting Stones and Data Points: Using Terrestrial Laser Scanning to Assess Damage to Monumental Architecture in Hawai'i*
- 2:20 PM **Guidi, Gabriele, Laura Micoli, Sara Gonizzi Barsanti**, *Diachronic 3D Reconstruction of Historical Sites in Urban Context*
- 2:40 PM **Cennamo, Gerardo Maria**, *The Giusso Castle and the Foundation Area of Sicignano degli Alburni (SA): Survey and 3D Modeling for Social and Territorial Valorization Strategies*

Decolonising Digital Archaeology

Critical Reflections

Room: SCE 218

Organizers: Andrew Dufton, Jessica Ogden

- 4:00 PM **Sheldrick, Nichole**, *Accessing Archaeology: Creating an Open-Access Heritage Database for the Endangered Archaeology in the Middle East & North Africa (EAMENA) Project*
- 4:20 PM **Huntsman, Theresa, Eric Kansa**, *Context and Community: Accountable, Open Presentation of Digital Archaeology*
- 4:40 PM **Kamash, Zena**, *'Postcard to Palmyra': Exploring Visitor Responses to the Replica of the Triumphal Arch from Palmyra in Trafalgar Square, London*
- 5:00 PM **Bianchini, Carlo, Mohammed El Khalili, Nizar Al Adarbeh, Alekos Diacodimitri**, *Survey, 2D and 3D Modelling of the Roman Nymphaeum in Amman: a Multilateral, Cooperative Research Experience*
- 5:20 PM **Heitman, Carrie**, *Decolonizing an Archive of Archives?*

Path Modelling and the Materiality of Movement

GIS

Room: SCE Auditorium

Organizers: Philip Verhagen, Laure Nuninger, Axel Posluschny

- 4:00 PM **Caswell, Edward, Michelle De-Gruchy, James Edwards**, *Walking Across Beach Sand is Hard and Other Discoveries: First Results of Assessing the Time Cost of Moving through Various Terrains*
- 4:20 PM **Kalayci, Tuna**, *The Volume of Ancient Movement: A Satellite Remote Sensing Approach*
- 4:40 PM **Field, Sean**, *Least Cost Path Modelling: Computing Functional Correlations in Chacoan Road Systems*
- 5:00 PM **Rothenberg, Miriam**, *Do All Roads Really Lead to Rome? Modelling Mobility in the Ager Veientanus and the Sangro Valley, Italy*
- 5:20 PM *Discussion*

Visualization as Analysis in Archaeology

Broader View - Digital Archaeology and the Humanities

Room: SCW 460/462

Organizers: Neha Gupta, Michael Carter

- 2:00 PM **Dallas, Costis**, *Curation at the Sensor's Gaze: Connecting Representation and Performance in Archaeological Visualization*
- 2:05 PM **Gupta, Neha, Rodolphe Devillers**, *Geographic Visualisation as Knowledge Generation in Archaeology*
- 2:10 PM **Huggett, Jeremy**, *Continuous Interactivity in Archaeological Visualisation*
- 2:15 PM **Carter, William**, *Making and Meaning-Making in Virtual Archaeology*
- 2:20 PM **Higginbottom, Gail, Vincent Mom**, *Place: The Physical Embodiment of Collective Information*
- 2:25 PM **Denham, Brian**, *Applied Technological Approaches in Heritage and Heritage Management: The Black Butte River Mapping Project*
- 2:30 PM **Kansa, Eric, Neha Gupta**, *Visualizing and Navigating Chronology in Large Digital Collections*
- 2:35 PM **Triplett, Edward, Emma Buckingham**, *Recontextualizing Decades-Old Excavation Materials through 3D Visualization*
- 2:40 PM **Kubicka, Anna, Aleksandra Brzozowska-Jawornicka**, *3D Models of Architecture Remains in Archaeological Context: Visualization as a Tool in Interdisciplinary Research of Polish Archaeological Mission in Kato Paphos on Cyprus.*
- 2:45 PM **Kotoula, Eleni, David Robinson, Matthew Baker, Clare Bedford, Devlin Gandy, David Wheatley, James Miles, Jennifer Perry**, *The Gordian Knot Project: An Integrated Approach for Rock Art Visualization*
- 2:50 PM **Pattee, Aaron**, *Analyzing the Medieval Landscape of the Pfalz—Castles in the Area of Kaiserslautern*
- 2:55 PM **Pattee, Aaron, Effie Athanassopoulos, Kami Ahrens, Cole Juckette**, *Campus Archaeology and 3D Modeling: An Archaeological Collection of Historic Artifacts from the University of Nebraska-Lincoln*
- 3:00 PM **Juckette, Cole, Effie Athanassopoulos, Aaron Pattee, Kami Ahrens**, *Campus Archaeology and Digital Mapping: Urban Space and Commerce in Lincoln Nebraska, 1870-1920s.*
- 3:05 PM **Kulhanek, Karin, Andreas Pastoors**, *Tracking in 3D*
- 3:10 PM *Discussion*
- 3:40 PM *Coffee Break*
- 4:00 PM **Kulhanek, Karin, Andreas Pastoors**, *Roundtable*

The Ups and Downs of Archaeological Simulation

Networks/Modeling

Room: SCW 464

Organizers: Iza Romanowska, Juan Barceló

- 2:00 PM **Rocks-Macqueen, Doug**, *The Long Road Ahead for Simulations in Archaeology*
- 2:20 PM **Linde, Lennart**, *Think Different! - Why "Model Thinking" Shaped the Archaeological Thought Beyond the Hype on ABM*
- 2:40 PM *Discussion*

Quality Assurance and Quality Control in Image-Based Modeling

3D Acquisition / Object Modeling

Room: SCW 466/468

Organizers: Adam Spring, George Bevan

- 2:00 PM **Sherman, William**, *Introduction*
- 2:20 PM **Bryan, Paul**, *Structure-from-Motion (SfM) – A Reliable Survey Tool for Archaeology or an Unreliable Black-Box?*

- 2:40 PM **Bevan, George, Jason Birch**, *Some Considerations on Semi-Global Matching for High-Accuracy Heritage Recording Applications*
- 3:00 PM **Seguin, Maxime**, *Training with Free and Open-Source Photogrammetric Softwares: One of the Answers to Rectify the Situation?*
- 3:20 PM **Bevan, George, Jones Kristen**, *An Analytical Stereoplotting Workflow for Archaeological Excavation: Reviving a 20th-Century Photogrammetric Technique for the 21st.*
- 3:40 PM *Coffee Break*
- 4:00 PM **Meyer, Dominique, Danielle Mercure, Eric Lo, Jamie Hodgkins, Dominique Rissolo, Falko Kuester**, *Evaluating Photogrammetric Reconstructions of Faunal and Lithic Artifacts Compared to Traditional Microscopic Observation, Structured Light Imaging, Laser Scanning, Magnetic Resonance Imaging and Computerized Tomography Scanning*
- 4:20 PM **Kleinkemper, Larry**, *The Key to Creating a GREAT Model from Laser Scanning and Photogrammetry*
- 4:40 PM **Liu, Julia, Adam Spring**, *From Scan to Sculpture: Ensuring Quality Control in Digital Restoration.*
- 5:00 PM **Peters, Caradoc**, *Using Inscribed Stone Surfaces To Examine Low Cost 3D imaging*



THURSDAY MORNING

Web-based Infrastructure as a Collaborative Framework across Archaeological Fieldwork, Lab Work, and Analysis

Collaborative Data Management

Room: SCE 216

Organizers: Fabrizio Galeazzi, Heather Richards-Rissetto

- 8:30 AM **Johnson, Ian**, *Building Web-Based Integration from Data Model through Tablet Data Collection to Analysis*
- 8:50 AM **Jensen, Peter**, *Semantically Enhanced 3D: Introducing a Web-Based Platform for Spatial Integration of Excavation Documentation*
- 9:10 AM **Cuy, Sebastian, Jan Wieners, Daniel de Oliveira**, *iDAI.Field 2.0 - A Modern & Open Framework for Field Recording*
- 9:30 AM **Landeschi, Giacomo, Danilo Marco Campanaro, Nicolò Dell'Unto**, *A 3D Web-Aided Resource for Pompeian Studies (3D WARPS)*
- 9:50 AM **Zerbini, Andrea**, *Building a Heritage Management Platform for Endangered Archaeology in the Middle East and North Africa*
- 10:10 AM **Lang, Matthias, Michael Derntl**, *Spacialist – A Virtual Research Environment for the Spatial Humanities*
- 10:30 AM *Coffee Break*
- 10:50 AM **Pouncett, John, Chris Green, Chris Gosden, Mark Pollard**, *A Tale of Two Projects: The Role of Web-GIS in Collaborative Research*
- 11:10 AM **Karenowska, Alexy**, *What do Web-Based Platforms Mean for the Ambitions of Archaeology?*
- 11:30 AM **Wright, Holly**, *One Size does not Fit All: Reflections on Online Research Infrastructures*

- 11:50 AM **Opitz, Rachel**, *Publishers and Archives as Fieldwork Collaborators*

- 12:10 PM *Discussion*

3DVR Caveats and Accomplishments

VR

Room: SCE 217

Organizer: Willeke Wendrich

- 8:30 AM **Wendrich, Willeke**, *3DVR Caveats and Accomplishments - Introduction*
- 8:50 AM **Elgewely, Eiman**, *Evaluation and Enhancement of the Virtual Experience: The Case Study of the "Reviving Karanis in 3D" Project*
- 9:10 AM **Mezzano, Michela, Noemi Mafriaci**, *Saving the Nubian Temples: The Study of the History through Digital Tools*
- 9:30 AM **Champion, Erik**, *PublicVR and its Relevance to 3DVR and Virtual Heritage*
- 9:50 AM **Payne, Angie, Vance Green, Fred Limp**, *History Erased and History Recovered: (Re)Creating the Rohwer Japanese Internment Camp*
- 10:10 AM **Wolter, Thomas**, *Photogrammetric Feature Documentation and Cave Modelling*
- 10:30 AM *Coffee Break*
- 10:50 AM **Vurpillot, Damien**, *Exploring Massive Point Clouds: How to Make the Most Out of Available Digital Material*
- 11:10 AM **Kuester, Falko, Vid Petrovic**, *Giga-Point Rendering for 3D VR*
- 11:30 AM **Follett, Forrest, Kyle Urquhart**, *A 3D Visualization of Ceramic Materials from Gabii, Italy*
- 11:50 AM *Discussion*

Mobile GIS and Field Survey - Current Possibilities, Future Needs

GIS

Room: SCE Auditorium

Organizers: Nazarij Buławka, Julia Chyla

- 8:30 AM **Knoop, Peter**, *Best Practices for Mobile GIS and Information Technology in the Field*
- 8:50 AM **Hill, Austin**, *Low Cost, High Accuracy Drone Survey Methods*
- 9:10 AM **Chyla, Julia, Miłosz Giersz, Wiesław Więckowski, Patrycja Prządka-Giersz, Roberto Pimentel-Nita**, *One Step Further beyond Field Survey*
- 9:30 AM **Miszk, Łukasz, Wojciech Ostrowski, Weronika Winiarska**, *Urban sprawl vs. Archaeological Site: A View from Paphos.*
- 9:50 AM **Pethen, Hannah**, *Accessing the Inaccessible: Detailed 'Off-Site' Archaeological Survey using Satellite Imagery and GIS at the Hatnub Travertine Quarries, Egypt*
- 10:10 AM **Buławka, Nazarij**, *Ancient Landscapes and Present-day Agriculture – On the Example of Tejen River (Turkmenistan)*

Contributions to Settlement Theory? Archaeological Location Analysis and Modelling

GIS

Room: SCE House

Organizer: Kenneth Kvamme

- 8:30 AM **Smith, Karl**, *Locations in Experience: Visibility, Seafaring, and the Placement of Pembrokeshire's Iron Age Coastal Promontory Forts*
- 8:50 AM **Negre, Joan**, *A Geographically Based Ripley's Function to Assess Settlement Patterning*
- 9:10 AM **Zipser, Jan**, *Possible Strategy of Land Use by the Przeworsk Culture People in Widawa Basin (South-Western Poland) and the Probable Settlement Processes*
- 9:30 AM **Micle, Dorel**, *Landscape and Economics: A GIS Location Analysis of Middle Age Water Mills from Banat Region (Romania)*
- 9:50 AM **Tsonev, Tsoni**, *Complexity of Mesolithic Settlements in Northeastern Bulgaria*
- 10:10 AM *Discussion*
- 10:30 AM *Coffee Break*
- 10:50 AM **Higginbottom, Gail, Roger Clay**, *Human Scale and its Impact on Location Modelling*

- 11:10 AM **Whitley, Thomas**, *Blurring the Lines Between Prediction and Interpretation: Some Thoughts on the Contributions of Energetics, Mobility, and 3D Models to Settlement Theory.*

- 11:30 AM **Shaffer, Derek, Timothy Murtha, Charles Golden, Bruce Cook, Elijah Hermitt**, *Sites, Landscapes, and LiDAR in the Maya Lowlands: Leveraging High Resolution Regional LiDAR for Improved Predictive Models.*

- 11:50 AM **Hobbs, Elizabeth, Michael Bergervoet**, *Designing Locational Models to Test Settlement Theory*

- 12:10 PM *Discussion*

Everything wrong with...

Critical Reflections

Room: SCW 460/462

Organizers: Doug Rocks-Macqueen, Stefani Crabtree, Philip

Riris

- 8:30 AM **Dennis, L. Meghan**, *Ethics? Ethics? Anyone?*
- 8:40 AM **Crabtree, Stefani**, *Communicating Archaeological Research to the Press and the Public*
- 8:50 AM **Rocks-Macqueen, Doug**, *F*ck Public Archaeology*
- 9:00 AM **Huggett, Jeremy**, *Everything Wrong With ... Digital Archaeology*
- 9:10 AM **Gruber, Ethan**, *Challenges in Analysing Sensitive or Uncertain Data in a Semantic Web Environment*
- 9:20 AM **Graham, Shawn**, *Everything Wrong with Bots: On Algorithmic Madness*
- 9:30 AM **Riris, Phil**, *"Twitter is Actually Stupid" - @fart*
- 9:40 AM **Layt, John**, *Open Source: You're Doing it all Wrong*
- 9:50 AM *Discussion*
- 10:30 AM *Coffee Break*
- 10:50 AM **Newhard, James**, *Turning the Ship without Rocking the Boat: Establishing Archaeological GIS within an Undergraduate Experience*
- 11:00 AM **Brughmans, Tom**, *Everything Wrong with Exploratory Network Analysis of Archaeological Similarity Networks*
- 11:10 AM **Walthew, Jessica**, *The Aura as Metadata, The Aura of Metadata*
- 11:20 AM **Opitz, Rachel**, *How We Measure Shape*

- 11:30 AM **Johnson, Phyllis**, *How Can Something so Small Cost so Much? Cost- and Time-Efficiency in Microartifact Analysis*
- 11:40 AM **Eriksen, Kristin**, *3D-models in Archaeology*
- 11:50 AM **Romanowska, Iza**, *Everything Wrong with Archaeological Models*
- 12:00 PM **Cooper, Catriona**, *Everything Wrong with Acoustical Modelling*
- 12:10 PM *Discussion*

Archaeological Networks: Uncertainty, Missing Data, and Statistical Inference

Networks/Modeling

Room: SCW 464

Organizers: Tom Brughmans, Matt Peeples

- 8:30 AM **Blair, Elliot**, *Social Networks of Mission Santa Catalina de Guale: Comparing and Contrasting Unimodal and Bimodal Approaches*
- 8:50 AM **Upton, Andrew**, *Frontier Networks: Cultural Transmission and Multiple Relations at the Intersection of Mississippian and Oneota Worlds*
- 9:10 AM **Munson, Jessica, Viviana Amati, Habiba Habiba, Jonathan Scholnick, Matthew Looper, Yuriy Polyukhovych, Martha Macri**, *Diffusion Networks and the Transmission of Dynastic Rituals in Classic Maya Society*
- 9:30 AM **Golitzko, Mark**, *Historical Contingency in Network Data: Examples from Museum Collections Research*
- 9:50 AM **van Havre, Grégoire**, *Networks as a Theoretical Framework for Rock Art Studies in Northeast Brazil*
- 10:10 AM **Johnson, Kent**, *Social Network Analysis of Ancient Families: Exploring the Effects of Known Unknowns using Phenotypic Data from Documented Collections of Human Skeletal Remains*
- 10:30 AM *Coffee Break*
- 10:50 AM **Crabtree, Stefani**, *Analyzing Trophic Networks among the Ancestral Pueblo*
- 11:10 AM **Groenhuijzen, Mark, Philip Verhagen**, *Continuity and Discontinuity in Transport Networks of the Dutch Limes Zone*
- 11:30 AM **Prignano, Luce, Sergi Lozano, Ignacio Morer, Francesca Fulminante**, *Comparing Network Models for the Evolution of Terrestrial Connections in Central Italy (950—500 BC ca)*

- 11:50 AM **Brandes, Ulrik, Tom Brughmans**, *New Methods for Visibility Networks in Landscape Archaeology*
- 12:10 PM *Discussion*

Close Range 3D Data Acquisition, Processing, Querying and Presentation in Cultural Heritage

3D Acquisition / Object Modeling

Room: SCW 466/468

Organizers: Dirk Rieke-Zapp, Vera Moitinho de Almeida, Diego Jiménez-Badillo

- 8:30 AM **Kampel, Martin, Juraj Sarkisjan**, *Feasibility Study of Consumer Electronic Scanning Devices for Pottery Documentation*
- 8:50 AM **Filippucci, Marco, Fabio Bianconi, Sofia Catalucci, Gianluca Rossi**, *Drawing, Survey, Measure to Analyzing the Reliability of Photomodelling for Cultural Heritage*
- 9:10 AM **Kristensen, Steinar, Magne Samdal**, *One Stone, Two Men, Three Methods: Different Methods – Different Data? Rockart Analysis Testing RTI, Photogrammetry and Laserscan*
- 9:30 AM **Krohn, Anna, Miriam Clinton, Ian Roy**, *One Size Does Not Fit All: A Comparison of 3D Data Capture*
- 9:50 AM **Noble, Tommy, Neffra Matthews**, *Good Photogrammetry, Good Data, Good Science*
- 10:10 AM *Discussion*
- 10:30 AM *Coffee Break*
- 10:50 AM **Rossi, Maria Laura, Carlo Inglese, Antonio Pizzo, Leonardo Paris**, *Geometry as Matrix of Construction of Roman Stone Bridges. The Augustus Bridge in Narni.*
- 11:10 AM **Scafuri, Michael**, *The Integration of Multiple 3D Documentation Methodologies in the Modeling and Analysis of an American Civil War Submarine.*
- 11:30 AM **Mudge, Mark, Carla Schroer**, *Challenges and Insights from the Photogrammetric Capture of a Large-Scale Diego Rivera Fresco*
- 11:50 AM **Johnson, Tyler**, *3D User Interfaces at the Nexus of Technical Processing and Creative Design in Digital Archaeology*
- 12:10 PM **Kai-Browne, Arie, Thomas Bremer, Kay Kohlmeyer, Julia Gonnella, Sebastian Plesch, Susanne Brandhorst**, *Contextualizing Cultural Heritage – The Cupola of the Torres de las Damas in the Alhambra*

THURSDAY AFTERNOON

Corpus of Analysis in the Research on Ancient Eastern Mediterranean and Western Asia: Encoding, Information Collection, Digital Collaboration, and Investigating Strategies

Collaborative Data Management

Room: SCE 216

Organizers: Vanessa Juloux, Alessandro di Ludovico

- 2:00 PM **Di Ludovico, Alessandro**, *Data Description and Integrated Study of Ancient Near Eastern Works of Art: The Potential of Cylinder Seals*
- 2:20 PM **Ramazzotti, Marco**, *Landscape Archaeology and Artificial Intelligence: The Neural Hypersurface of the Mesopotamian Urban Revolution*
- 2:40 PM **Prosser, Miller**, *Digital Philology in the Ras Shamra Tablet Inventory Project: Text Curation through Computational Intelligence*
- 3:00 PM **Eraslan, Doğu**, *Epigraphic Interoperability in/of Encoded Ancient Texts: Some Principals and Deliverables at the Current State of our Encoding Schemes Based on an Encoding of Quadrilingual Vase of Darius I and Some Prospects for the Future*
- 3:20 PM **Pagé-Perron, Émilie, Terhi Nurmikko-Fuller, Vanessa Juloux**, *Enhancing Collaboration between Digital Assyriology Projects Through Open Access Practices*

Exploring the Symbiotic Relationships of Archaeology and Spatial Humanities

Broader View - Digital Archaeology and the Humanities

Room: SCE 216

Organizers: Armin Volkmann, Heather Richards-Rissetto

- 4:00 PM **Athanassopoulos, Effie, Kim Shelton**, *Archaeological Practice and 3D Modeling: A Medieval Ceramic Assemblage from Nemea, Greece*
- 4:20 PM **Isaksen, Leif, Rainer Simon, Elton Barker, Valeria Vitale, Rebecca Kahn**, *Supporting Community Annotation with Recogito 2*

- 4:40 PM **Rabinowitz, Adam, Ryan Shaw, Patrick Golden, Elijah Fleming, Lorraine Haricombe**, *In Search of Common Ground: Time, Tradition, and Temporal Reconciliation in PeriodO2*
- 5:00 PM **Schmidle, Wolfgang, Sebastian Cuy, Nathalie Kallas, Florian Thiery, Jan Wieners**, *Analyzing Reasons for Different Datings of Periods using the ChronOntology Time Gazetteer*
- 5:20 PM **Kondo, Yasuhisa, Akira Saito, Nozomi Mizota, Tomoko Koyama**, *Synergistic Collaboration between Data Visualization Experts and Historians in Developing a Geodatabase of Forced Resettlement in the Colonial Andes*
- 5:40 PM *Discussion*

3D Technologies Applied to Music and Sound

VR

Room: SCE 217

Organizers: Bernard Frischer, Jared Katz

- 2:00 PM **Till, Rupert**, *Integrating Accurate Interactive Acoustics, Music and Soundscapes into Interactive 3D Models of Archaeological Sites and Landscapes*
- 2:20 PM **Kolar, Miriam, José Cruzado Coronel**, *Auralizing Ancient Spaces: Sonic Representation from Architectural Models, In-Situ Measurements, and Experimental Analogues*
- 2:40 PM **Katz, Jared**, *3D Maya Music: Use of 3D Models for the Creation of Typologies and for Public Outreach*
- 3:00 PM **Puglisi, Julia**, *Acoustics of the South Theatre at Hadrian's Villa: A Preliminary Study using I-Simpa*
- 3:20 PM **Kimber, Andres**, *Sound and Vision of Cup-marked Stones in Rejala Heritage Reserve, Estonia*
- 3:40 PM *Coffee Break*
- 4:00 PM **Koller, Jared**, *Multi-Sensory Landscape Analysis of Spanish Mission Building Practices in the Philippines*
- 4:20 PM **Cooper, Catriona**, *Listening to the Commons: Acoustically Modelling the Pre-1834 House of Commons, Westminster*
- 4:40 PM *Discussion*

Contributions to Settlement Theory? Archaeological Location Analysis and Modelling

GIS

Room: SCE House

Organizer: Kenneth Kvamme

- 2:00 PM **Verhagen, Philip, Antonin Nüsslein, Laure Nuninger**, *To Boldly Go Where No One Has Gone Before: Integrating Socio-cultural, Environmental and Temporal Factors in Site Location Analysis and Predictive Modelling*
- 2:20 PM **Kvamme, Kenneth**, *The Dimensions of Settlement Choice*
- 2:40 PM **Cuthbertson, Patrick**, *A Landscape-Based Approach Assessing Hominin Occupation and Dispersal in Lower-Middle Pleistocene Central Asia*
- 3:00 PM *Discussion*

Structural Analysis for Cultural Heritage

3D Acquisition / Object Modeling

Room: SCW 460/462

Organizers: Falko Kuester, Michael Hess, Dominique Rissolo

- 2:00 PM **Ippolito, Alfonso, Carlo Inglese, Martina Attenni, Valeria Caniglia**, *Quantity vs Quality: Advantages and Disadvantages of Imaged Based Modelling*
- 2:20 PM **Guidi, Gabriele, Sara Gonizzi Barsanti, A**, *Novel Pipeline for the Structural Analysis of 3D Digitized Cultural Heritage*
- 2:40 PM **Napolitano, Rebecca, Tim Michiels, Branko Glisic**, *Digital Workflow for Structural Analysis of Discontinuous Media*
- 3:00 PM **Hess, Michael**, *Non-Destructive Techniques for the Structural Health Assessment of Historic Buildings*
- 3:20 PM **Wittich, Christine, Tara Hutchinson**, *Seismic Response of Geologic and Heritage Structures: Geometry Acquisition, Numerical Modeling, and Probabilistic Interpretation*
- 3:40 PM *Coffee Break*
- 4:00 PM **Wood, Richard, M. Ebrahim Mohammadi**, *Lidar Damage Evaluation of Historic Temple after the 2015 Gorkha Earthquake*
- 4:20 PM **Schubert, Lutz, Keith Jeffery**, *Interpreting Shell Middens through Physics Simulation*

- 4:40 PM **Miles, James**, *The Potential of Structural Analysis in Archaeological Simulation and Interpretation: A Case Study of Medieval Winchester Cathedral Close*

- 5:00 PM **Gil, Ana**, *A Methodology for Architectural Heritage's Digital Reconstructions: Lisbon Religious Houses as Case Study*

- 5:20 PM **Meyer, Dominique, Gianmarco Guerra, Eric Lo, Michael Hess, Davide Forcellini, Falko Kuester**, *Comparing Measured Frequency Responses of the Third Tower of San Marino to Simulation Derived Frequency Responses from a Photogrammetry and LIDAR Acquired 3D Model*

- 5:40 PM **Rissolo, Dominique, Michael Hess, Jose Huchim Herrera, Eric Lo, Vid Petrovic, Dominique Meyer, Falko Kuester, Fabio Amador**, *Preliminary Structural Assessment of a Unique Maya Building Platform at Oxkintok, Yucatan*

Archaeological Networks: Uncertainty, Missing Data, and Statistical Inference

Networks/Modeling

Room: SCW 464

Organizers: Tom Brughmans, Matt Peeples

- 2:00 PM **Rivals, Cécile**, *The Modeling of Urban Spatial Dynamics in Long Time Spans*
- 2:20 PM **Habiba, Habiba, Viviana Amati, Jessica Munson, Jonathan Scholnick, Yuriy Polyukhovych, Matthew Looper, Martha Macri**, *Inferring Influence Networks of Grapheme Innovation in Classic Maya Hieroglyphic Writing*
- 2:40 PM **Gjesfjeld, Erik**, *Centrality Measurements and their Application to Archaeological Data*
- 3:00 PM **Peeples, Matthew, John Roberts**, *Bootstrap Methods for Assessing Variability in Archaeological Networks*
- 3:20 PM **Cardinal, James**, *Unscrambling the Egg: Quantitative, Assemblage-Based Component Consociation Methods for Densely Mixed or Disturbed Contexts*
- 3:40 PM *Coffee Break*
- 4:00 PM **Collins-Elliott, Stephen**, *Accounting for Sample Size: Measuring Cultural Distinction through Monte Carlo Approximations of Hellinger Distances*
- 4:20 PM **Gauthier, Nicolas**, *Assessing the Impact of Parametric Uncertainty in a Simple Model of a Social-Ecological Network*
- 4:40 PM **Gravel-Miguel, Claudine**, *Using an ABM to Evaluate the Impact of Missing Links on our Interpretation of Social Networks*

5:00 PM *Discussion*

**Close Range 3D Data Acquisition,
Processing, Querying and Presentation in
Cultural Heritage**

3D Acquisition / Object Modeling

Room: SCW 466/468

Organizers: Dirk Rieke-Zapp, Vera Moitinho de Almeida, Diego
Jiménez-Badillo

2:00 PM **Rieke-Zapp, Dirk**, *Quantitative Analysis
Based on 3D data - Examples*

2:20 PM **Pakhunov, Alexander, Ekaterina Devlet,
Alexander Popov**, *How Can We Trace
Translocated Boulders with Petroglyphs at
the Riverbank?*

2:40 PM **McKee, Arlo**, *A Glimpse at Site Formation
Processes from 3D Laser Scanning Ceramic
Sherds in East Texas*

3:00 PM **Porter, Samantha, Morgan Roussel,
Marie Soressi**, *A Comparative Analysis of
Châtelperronian and Protoaurignacian
Blade Core Technology Using Data Derived
from 3D Models*

3:20 PM **Murray, Michael**, *Practical Applications of
Underwater Laser Scanning in Maritime
Archaeology Compared to Micro-
Bathymetry Sonar and Photogrammetry*

3:40 PM *Coffee Break*

4:00 PM **Jiménez-Badillo, Diego, Salvador Ruíz-
Correa, Mario Canul-Ku, Rogelio
Hasimoto-Beltrán**, *Application of a 3D
Morphing Technique to Analyze the Style of
Archaeological Models*

4:20 PM **Hanes, Laurence, Tim Collins, Sandra
Woolley**, *Classifying the Surfaces of Virtual
Cuneiform Tablet Fragments*

4:40 PM **Mara, Hubert**, *Revealing Degraded Script
in High Resolution 3D Measurement Data
with GigaMesh*

5:00 PM *Discussion*