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 Hitch-hiker'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 Kohlmeyer, 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	**Löwenborg, Daniel, John Ljungkvist, Daniel Westergren, Sebastian Wiberg, Staffan Hagberg**, *Augmented History – A Virtual "Window to the Past"*	
11:30 AM	**Gonzalez-Perez, Cesar, Martin Pereira-Fariña, Chris Reed**, *Toward an Argument Evaluation System on Cultural Heritage Based on Anchoring Inference Theory*	
11:50 AM	*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*
			Fredrick, David, *Collision*
9:50 AM	*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*
			Sturm, Jennie, *Women in*
10:50 AM	*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, undefined undefined, 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*

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*
		Kulhanek, Karin, Andreas
4:00 PM	**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*

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*