

→ Abstracts are available online at [www.caaconference.org/abstracts/](http://www.caaconference.org/abstracts/)

\*Roundtable

**S02 Kelsey M Reese, Kathryn Harris, Using GIS modeling to solve real-world archaeological problems**

**Jade d'Alpoim Guedes**

<b>S02-01</b>	<del>Jade d'Alpoim Guedes</del>	<del>Constructing agricultural frames of reference: An example from Highland Southwest China</del>
<b>S02-02</b>	Katia Francesca Achino, Juan Antonio Barceló	Using geostatistical modeling to solve spatio-temporal questions
<b>S02-03</b>	Kathryn Harris, Iza Romanowska, Benjamin Davies, Stefani A Crabtree	Applied Agent-Based Modeling in archaeology: When and why?
<b>S02-04</b>	Mike Groen	Spatial analysis and predictive modelling and modern clandestine burials
<b>S02-05</b>	Kelsey M Reese	From the empirical to the conjectural: Settlement patterns on the Mesa Verde landform
<b>S02-06</b>	Dita Auziņa	Studying site construction processes through visibility analyses: The case of Aguas Buenas, Nicaragua, a pre-Hispanic (400-1525 AD) mound complex
<b>S02-07</b>	Anita Casarotto, Tessa D Stek, Ruud van Otterloo, Jan Sevink	Assessing visibility and geomorphological biases in archaeological field surveys: A case study on an early Roman colonial landscape in Central-Southern Italy
<b>S02-08</b>	Stephanie E Metz, Harald Stadler, Thomas Bachnetzer	Glacial Archaeology in the Austrian Alps (GAAA)

<b>S02-09</b>	<del>Joe Ree, Olivia Mavrinac, Tobias Richter</del>	<del>Look before you walk: Simulation and adaptive sampling in archaeological survey</del>
<b>S02-10</b>	Gail Michele Higginbottom, Roger Clay	New statistical tests determining the likely reality of a connection between stone circles and astronomical phenomena
<b>S02-11</b>	Tsoni Kolev Tsonev	Least cost path analysis and conditional perception of prehistoric travelers

**S03 Emma Slayton, Crystal Safadi Exploring maritime spaces with digital archaeology: Modelling navigation, seascapes and coastal spaces**

<b>S03-01</b>	Melinda Allen, Benjamin Davies, Alex Morrison, Andrew McAllister	Modeling prehistoric maritime interactions in East Polynesia
<b>S03-02</b>	Gjermund Steinskog	Reconstructing and modelling the Stone Age landscape in Southeastern Norway
<b>S03-03</b>	Emma Slayton, Jan Christoph Athenstädt, Jan Hildenbrand	Uncovering routes to Grenada: Exploring possible routes between mainland South America and the Southern Lesser Antilles
<b>S03-04</b>	Paweł Cwiąkała, Kasper Jan Hanus, Karolina Matwij, Wojciech Matwij, Łukasz Misk, Wojciech Ostrowski	Looking for the lost harbor. Role of non-invasive archaeological methods in the reconstruction of the seascape of an ancient city Paphos
<b>S03-05</b>	Adam Kevin Benfer	Simulating Pre-Hispanic canoe navigation in Lake Cocibolca, Nicaragua
<b>S03-06</b>	Manuela Ritondale, Gaia Pavoni, Roberto Scopigno, Marco Callieri, Matteo Dellepiane	Evocative virtual exploration of underwater sites: Issues and approaches
<b>S03-07</b>	Crystal Safadi	A space and time analysis of the Early Bronze Age Levantine Littoral

<del>S03-P1</del>	<del>Alejandro García Moreno, Manuel R. González Morales, Igor Gutiérrez Zugasti, Alejandro Cearreta, David Cuenca Solana</del>	<del>Changing coasts, changing worlds. A preliminary approach to the evolution of coastal landscapes at the Asón river basin (Cantabria, northern Spain) during the Pleistocene–Holocene transition</del>
S03-P2	Eveline Kiki Kuijjer, Rosemary Helen Farr, Robert Marsh, Ivan David Haigh, Erik van Sebille	Exploitation of prevailing winds and currents by the earliest known seafarers, reaching and colonizing Australasia c 50 000 years ago
S03-P3	Cátia Sofia Machado Teixeira, João Pedro Pereira da Costa Bernardes, Célia Maria Alves Gonçalves	Using GIS modeling to reconstruct the urban landscape of the Roman city of Ossonoba
S03-P4	Moritz Mennenga, Hauke Jöns	The first web based viewer for archaeological underwater sites in Europe: The Splashcos–Viewer

**S04 Evy Berg Databases and archives: How do we handle the digital archives?**

S04-01	Isto Huvila	No one's business: Negotiating the value of archiving archaeology in Sweden
S04-02	Evy Berg, Stian Finmark, Christer Vinje Gimse	From active database to archive: Case of a Sites and Monuments Register
S04-03	Annabel Lee Enriquez, Alison Dalgity, David Myers	Ensuring cultural heritage data longevity with the Arches Heritage Inventory and Management System
S04-04	Cristina Barroso Cruz, Ana Seabra, Filipa Neto	Row, row, row your boat gently... upstream: A methodological approach to access Portuguese bioarchaeological data using a computer database
S04-05	Emily Nimmo, Peter McKeague	Digital archives: More than just a digital skeuomorph?

S04-P1	Øyvind Eide, Arianna Ciula, Cristina Marras, Patrick Sahle	Modelling between digital and humanities: Thinking in practice
S04-P2	Ian Johnson	Sustainability = separation: Keeping database structure, domain structure and interface independent
S04-P3	Ana Seabra, Cristina Barroso-Cruz, Filipa Neto	Bioarchaeology module—Loading please hold... Recording human bioarchaeological data from Portuguese archaeological field reports

**\* S05 Gary Lock, Agiatis Benardou, Costis Dallas, Paul Reilly, Jeremy Huggett Unstable futures/potential pasts: Scenarios for digital computing 2020**

S05-01	<del>Ann Degraeve</del>	<del>Everyday reality and the multidirectional digital future in urban archaeology—The Brussels challenge</del>
--------	-------------------------	---

**S06 Miguel Carrero-Pazos, Alia Vázquez-Martínez, Benito Vilas-Estévez, Miguel Busto-Zapico Computer tools for depicting shape and detail in 3D archaeological models**

S06-01	Rimvydas Laužikas, Albinas Kuncevičius, Tadas Žižiūnas, Egidijus Žilinskas	Automated heritage monitoring software prototype implementing 3D technologies
S06-02	Diego Jiménez-Badillo, Mario Canul Ku, Salvador Ruíz-Correa, Rogelio Hasimoto-Beltrán	A machine learning approach for 3D shape analysis and recognition of archaeological objects
S06-03	Miguel Carrero-Pazos, Benito Vilas-Estévez, Alia Vázquez-Martínez	AsTrend: A las point based methodology for micro surfaces depicting

<b>S06-04</b>	Edgar Francisco Román-Rangel, Diego Jiménez-Badillo	Application of Computer Vision algorithms for automatic classification of archaeological artefacts
<b>S06-05</b>	Samantha Thi Porter, Kele Missal, Leszek M Pawlowicz	A comparison of methods for creating 3D models of obsidian artifacts
<b>S06-06</b>	Sorin Hermon, Laura Longo, Dante Abate, Giusi Sorrentino, Natalia Skakun	Les gestes retrouvés: A 3D visualisation approach to the functional study of Early Upper Palaeolithic grinding stones
<b>S06-07</b>	Alia Vázquez-Martínez, Benito Vilas-Estévez, Miguel Carrero-Pazos, Arturo de Lombera Hermida, Ramón Fábregas-Valcarce, Xosé Pedro Rodríguez-Álvarez	A methodological approach to the study of prehistoric cave engravings: The case of Cova Eirós (Lugo, Spain)
<b>S06-08</b>	Elizabeth Craig-Atkins, Jenny Crangle, Dawn Hadley, Peter Heywood, Tom Hodgson, Steve Maddock, Robin Scott, Adam Wiles	The digital ossuary: Rothwell (Northamptonshire, UK)
<b>S06-09</b>	Vera Moitinho de Almeida, Valentina Vassallo	O brother, where art you? A quantitative approach using 3D models and geometric morphometrics: The case study of the Ayia Irini terracotta figurines
<b>S06-10</b>	Tommaso Empler, Adriana Caldarone	From survey to 3D modeling to 3D printing: Bramante's Nymphaeum Colonna at Genazzano
<b>S06-11</b>	Mikhail V Vavulin, Olga V Zaytceva, Andrei A Pushkarev	3D Reconstruction of Koch, Russian rowing/sailing boat of the 17th Century

<b>S07</b>	<b>Jens-Bjørn Riis Andresen</b>	<b>Integrating 3D photogrammetric data in the field: Challenges, implications and solutions</b>
<b>S07-01</b>	Mohamed al-Farhan, Ahmad al-Hasanat, Mohamed Shalaby, Luca Passone, Thomas Levy, Neil Smith	RAPID Aerial Scanning of UNESCO cultural heritage sites in the Kingdom of Saudi Arabia
<b>S07-02</b>	Carsten Meinertz Risager	Digital workflow on a selection of Danish excavations in the Århus area—With special emphasis on the use of 3D recording
<b>S07-03</b>	Kristin Eriksen, Almut Schülke	The 3D photogrammetry documentation of the Mesolithic grave from Brunstad, Norway
<b>S07-04</b>	Cecilia Falkendal, Ingebjørg Njos Storvik, Kevin Wooldridge	Using 3D photogrammetry in the field: An example from Kvåle Sogndal, Norway
<b>S07-05</b>	David Stott, Matteo Pilati, Carsten Meinertz Risager, Peter Jensen, Casper Skaaning Andersen, Jens-Bjørn Riis Andresen	Supercomputing at the trench edge: Expediting image based 3D recoding
<b>S07-06</b>	Andrei A Pushkarev, Olga V Zaytceva, Mikhail V Vavulin, Anna Y Skorobogatova	Creation of an Early 19th century Siberian ship 3D model
<b>S07-07</b>	Martijn van Leusen, Gary Nobles	3D spatial analysis: Beyond extrusion and sectioning
<b>S07-08</b>	Matteo Pilati	Enhancing evidence and re-evaluating interpretations with 3D GIS and image-based 3D replicas: The case of Borggade (Denmark)
<b>S07-09</b>	Kasper Jan Hanus, Łukasz Misk, Wojciech Ostrowski, Weronika Winiarska	In the fields and on the screens. 3D documentation for the excavations at Paphos Agora, Cyprus

<b>S07-10</b>	Jerzy Sikora, Piotr Kittel	Closing a gap with simple toy. How using a tablet affected documentation workflow on the Rozprza ring-fort excavation
<b>S07-11</b>	Åsa Berggren, Anders Gutehall	The documentation of Neolithic flint mines—An experimentation of methods
<b>S07-12</b>	Nicolo' Dell'Unto, Giacomo Landeschi, Jan Apel	Back and Forth through the contexts: 3D Geographic Information Systems in support of field documentation
<b>S07-P1</b>	Anna Maria Kubicka	Underwater archaeological remains open to public diving—Close range photogrammetry as digital preservation and complex documentations of despairing relicts
<b>S07-P2</b>	George Alexis Pantos	Questions and bottlenecks: The precariousness of computation heavy documentation in the field

**S08 Philip Verhagen, Monica de Cet Modelling approaches to analyse the socio-economic context in archaeology II: Defining the limits of production**

<b>S08-01</b>	Tuna Kalayci	Putting production landscapes into context: A multi-faceted case study from Upper Mesopotamia during the Early Bronze Age
<b>S08-02</b>	Maria Coto-Sarmiento, Xavier Rubio-Campillo, José Remesal	Quantifying change: An evolutionary approach to interpret the amphorae production in the Roman Empire
<b>S08-03</b>	Irmela Herzog	Boundaries of agrarian production in the Bergisches Land in 1715 AD
<b>S08-04</b>	Jamie Joyce, Philip Verhagen	Factors of production: Investigating land and labour as limiting factors in agricultural production in the Dutch Roman limes zone via agent-based modelling
<b>S08-05</b>	Monica De Cet	Socio-economic analysis and GIS modelling: A pilot study from rural society in Northeastern Italy

<b>S08-06</b>	Simon Carrignon, Jean-Marc Montanier, Jerome Michaud, Xavier Rubio-Campillo	Co-evolution of culture and trade : Impact of cultural network topology on economic dynamics
<b>S08-07</b>	Francesca Cadeddu	Defining boundaries: A GIS-based approach to the Sardinian Bronze Age
<b>S09</b>	<b>César González-Pérez, Patricia Martín-Rodilla, Ruth Varela</b>	<b>Archaeological Information Languages and Notations</b>
<b>S09-01</b>	Stephen Stead, Martin Doerr, George Bruseker, Maria Daskalaki	Is that a good concept?
<b>S09-02</b>	Igor Bogdanović, Capuzzo Giacomo, Berta Morell, Juan Antonio Barceló Álvarez	Towards a formalisation of spatio-temporal relationships in chronometric databases

**S10 James Stuart Taylor, Sara Perry, Nicolò Del'Unto, Åsa Berggren Theorising the Digital: Digital Theoretical Archaeology Group (digiTAG) and the CAA**

<b>S10-01</b>	Sara Perry, James Taylor	Theorising the digital turn in archaeology
<b>S10-02</b>	Catalin Nicolae Popa, Oliver Nakoinz	A plea for (non-mathematical) reason. Rethinking the use of computational methods in archaeology
<b>S10-03</b>	Mhairi Maxwell	<del>The biography of a 3D print</del>

<b>S10-04</b>	Matteo Pilati	Epistemological considerations on image-based 3D representations: Bridging the paradigms through the objectification of field interpretation
<b>S10-05</b>	Dominik Lukas	How raw is raw data?
<b>S10-06</b>	Leigh Anne Lieberman, Gregory Tucker	Communication in archaeological fieldwork: Responses to a digital workflow
<b>S10-07</b>	Gareth Beale, John Schofield	The lives of digital machines: Evaluating the significance of historic computing machinery
<b>S10-08</b>	Katie Campbell	Digital interpretive technologies: A way into difficult heritage in the Middle East and Central Asia?
<b>S10-09</b>	<del>Teija Oikarinen</del>	<del>Trends in digitalisation of archaeology: Interdisciplinary and archaeological viewpoint</del>
<b>S10-10</b>	Jeremy Huggett	The apparatus of digital archaeology
<b>S10-11</b>	Piraye Hacigüzeller	Deep maps of digital, post-representational archaeology
<b>S10-12</b>	Lorna-Jane Richardson	Bringing digital sociology to digital archaeology

<b>S11</b>	<b>Julian Richards, Franco Niccolucci, Holly Wright, Kate Fernie</b>	<b>Supporting researchers in the use and re-use of archaeological data: Continuing the ARIADNE thread</b>
<b>S11-01</b>		Introduction to the session
<b>S11-02</b>	Maria Theodoridou, George Bruseker, Maria Daskalaki, Martin Doerr	Methodological tips for mappings to CIDOC CRM
<b>S11-03</b>	Christophe Tuffery, Achille Felicetti, Patrick Jard, Nicolas Holzem, Thomas Guillemard	An essay of mapping archaeological land-record system used by Inrap with CIDOC-CRM and CIDOC-CRMarchaeo extension using 3M online tool
<b>S11-04</b>	Cesar Gonzalez-Perez, Patricia Martin-Rodilla, Elena Epure	Formalisation and reuse of methodological knowledge on archaeology across European organisations
<b>S11-05</b>	David Bader, Aleksandra Michalewicz, Oded Green, Jessie Birkett-Rees, Jason Riedy, James Fairbanks, Anita Zakrzewska	Semantic database applications at the Samtavro Cemetery, Georgia
<b>S11-06</b>	Franca Debole, Nicola Aloia, Christos Papatheodorou, Dimitris Gavrilis, Carlo Meghini	A Catalog for archaeological resources
<b>S11-07</b>	Philipp Gerth, Wolfgang Schmidle, Sebastian Cuy	Using semantic technologies for the deep integration of research items in ARIADNE
<b>S11-08</b>	Elizabeth Fentress, Michael Johnson, Florence Laino, Stuart Eve	Fasti Surveys

<b>S11-09</b>	Mark Mudge, Carla Schroer	The advantages of integrated 3D photogrammetry and Reflectance Transformation Imaging empirical acquisition
<b>S11-10</b>	Manuela Ritondale, Gaia Pavoni, Roberto Scopigno, Marco Callieri, Matteo Dellepiane	Best practices to re-use remote sensing data coming from marine geophysical surveys for the 3D reconstruction of underwater archaeological deep-sites
<b>S11-11</b>	Christopher Power, Andrew Lewis, Helen Petrie, Julian Richards, Katie Green, Mark Eramian, Ekta Walia, Brittany Chan, Isaac Sijaranamual, Maarten de Rijke	Digging into and re-using image data for archaeology
<b>S11-12</b>	Dimitris Gavrillis, Eleni Afiontzi, Johan Fihn, Olof Olsson, Sebastian Cuy, Achille Felicetti, Franco Niccolucci	A data integration infrastructure for archaeology
<b>S11-P1</b>	Valentina Vassallo, Sorin Hermon, Giusi Sorrentino, Uros Damjanovic	Combining analytical and digital data in archaeology: Towards a multidisciplinary ontological solution. The Salamis terracottas case study
<b>S11-P2</b>	Mark Mudge, Carla Schroer	New tools for Digital Lab Notebook creation for use in Reflection Transformation Imaging

<b>S12</b>	<b>Carlo Bianchini, Alfonso Ippolito, Carlo Inglese, Luca James Senatore</b>	<b>Documentation interpretation and communication of Digital Archaeological Heritage</b>
<b>S12-01</b>	Carlo Bianchini, Giulia Pettoello	Multi-shape archaeological modeling and communication
<b>S12-02</b>	Ruth Varela	A methodology for the analysis of graphical representations in archaeology and some preliminary results
<b>S12-03</b>	Vid Petrovic	Developing a workflow for analysing and annotating reconstructed models of underwater sites
<b>S12-04</b>	Martina Attenni, Carlo Bianchini, Alfonso Ippolito	Emerging technologies for archaeological heritage: Knowledge, digital documentation, communication
<b>S12-05</b>	Anne Moreau, Federico Nurra	Towards a European standard for spatial data management for archaeological heritage: Experiences in France and Italy
<b>S12-06</b>	Julia Maria Chyla, Marzena Ozarek-Szilke, Wojciech Ejsmond	Comprehensive field survey: Multidisciplinary approach for a field prospection
<b>S12-07</b>	Carlo Bianchini, Alfonso Ippolito, Carlo Inglese	New actualities for Mediterranean ancient theatres: The Athena Project lesson
<b>S12-08</b>	<del>Donato Maniello, Valeria Amoretti</del>	<del>Handle digital data to turn them into immersive experience using the augmented reality</del>
<b>S12-09</b>	<del>Valeria Pescetti, Juan Torrejón Valdelomar, Alois Hinterleitner, Wolfgang Neubauer</del>	<del>Interpretative 3D mapping of large urban archaeological landscapes: The use of ESRI CityEngine for the interpretation of Ground Penetrating Radar data</del>
<b>S12-10</b>	Michael Hess	Multimodal data fusion for the non-destructive assessment of the Baptistery di San Giovanni in Florence, Italy

<b>S12-11</b>	Marco Carpiceci, Carlo Inglese, Fabio Colonnese	The Exedra of Goreme OAM: An ocean of points to be explored
<b>S12-12</b>	Giulio Poggi, Mirko Buono	Enhancing archaeological interpretation with volume calculations. An integrated method of 3D recording and modeling
<b>S12-13</b>	Paola Derudas, Maria Carla Sgarella	A new approach for the study and presentation of an archaeological context not traditionally exploitable. Applying a fast but extensive 3D survey to the Bisarcio case study, a Medieval and Post-Medieval cemetery (Sardinia)
<b>S12-14</b>	Tommaso Empler	Digital Archaeological Dissemination: Eleniana Domus in Rome
<b>S12-15</b>	Michela Cigola, Arturo Gallozzi, Leonardo Paris, Emanuela Chiavoni	Integrated methodologies for knowledge and valorisation of the Roman Casinum city
<b>S12-16</b>	Giacomo Landeschi, Jan Apel, Stefan Lindgren, Nicolò Dell'Unto	An exploratory use of 3D for investigating a Prehistoric stratigraphic sequence
<b>S12-17</b>	James Miles, Hembo Pagi, Andres Uueni, Jüri Pärtna	The building survey of Kaasan Church
<b>S12-18</b>	Angela Bosco, Andrea D'Andrea, Massimiliano Nuzzolo, Rosanna Pirelli, Patrizia Zanfagna	A virtual reconstruction of the sun temple of Niuserra: From scans to BIM
<b>S12-19</b>	Susanne Rutishauser, Ralph Rosenbauer, Tim Arni, Fabienne Kilchör, Alexander Sollee	Virtual Cilicia Project: Digital globes for communicating digital archaeological heritage
<b>S12-20</b>	Carlo Inglese, Mario Docci, Alfonso Ippolito	Representing Archaeological Architecture—RAA

<b>S12-21</b>	Paolo Di Pietro Martinelli, Valeria Valentini	Visual stratifications: Different levels of representation in relief of archaeological heritage
<b>S12-22</b>	Antonio Pizzo, Carlo Inglese	3D model of Roman architecture in Lusitania. Archaeology and classification of architectural heritage
<b>S12-23</b>	Fabrizio Ivan Apollonio, Elisabetta Caterina Giovannini	Virtual Reconstruction Information Management (VRIM): Some considerations on scientific 3D models
<b>S12-24</b>	Luca J Senatore, Carlo Bianchini	After the paper: Potential and problems in the documentation and communication of archeology in the Information Age
<b>S12-P1</b>	Akihiro Kaneda	How to classification?—A trial examining the effectiveness of an elliptic Fourier descriptor for Japanese archaeological studies
<b>S12-P2</b>	Susanne Rutishauser	Urbanism in the Cilician Plain from Chalcolithic to Byzantine Period

<b>S13</b>	<b>Johanna Stoeger, Eleftheria Paliou, Undine Lieberwirth</b>	<b>Computational approaches to ancient urbanism: Documentation, analysis and interpretation</b>
<b>S13-01</b>	Eleftheria Paliou	Digital archaeology and the science of cities: Some observations on the application of spatial interaction models to the study of Minoan urbanism
<b>S13-02</b>	Hanna Stöger	A tale of two city blocks from Ostia, the port-town of Imperial Rome
<b>S13-03</b>	Scott Branting, Tuna Kalayci	Kerkenes Dag: Materializing an Imaginary City
<b>S13-04</b>	Chiara Piccoli	From data visualization to hypothesis generation: An integrated approach for the study of past cityscapes

<b>S13-05</b>	Jacopo Turchetto, Giuseppe Salemi	On the attack of Constantinople! The Crusaders and the maritime walls of the Golden Horn: A matter of visibility?
<b>S13-06</b>	Kayeleigh Sharp	Computational approaches for studying cultural coexistence in Peru's urban landscape: Contributions and questions
<b>S13-07</b>	Mariza Christina Kormann, Stella Katsarou, Dora Katsonopoulou, Gary Lock	On roof construction and wall strength: Non-Linear Structural Integrity Analysis of the Early Bronze Age Helike Corridor House
<b>S13-08</b>	Undine Lieberwirth, Axel Gering	3D GIS in archaeology—A microscale analysis
<b>S13-09</b>	Sven Straumann	Understanding a Roman insula by the aid of GIS—The Insula 30 in Augusta Raurica (CH)
<b>S13-10</b>	Kristine Stub Precht	Hand drawn section drawings analyzed in real 3D environment
<b>S13-11</b>	Mark A Locicero	Liquid footprints: Water, urbanism, and sustainability in Roman Ostia
<b>S13-12</b>	Kasper Jan Hanus	The waters of life. Digital approach towards the reconstruction of the small scale water management of Angkor (Cambodia)
<b>S13-P1</b>	Sabrina Amaducci	Forum Boarium survey
<b>S13-P2</b>	Francesca Fulminante, Alessandro Guidi, Sergi Lozano, Luce Prignano, Ignacio Morer	Geographical and cultural networks to better understand urbanization processes in central Italy (1175/1150–500 BC ca)
<b>S13-P3</b>	Till Frieder Sonnemann	Patterns and recognition: Mapping indigenous settlement topography in the Caribbean

<b>S14</b>	<b>Iza Romanowska, Stefani Crabtree, Benjamin Davies</b>	<b>Can you model that? Applications of complex systems simulation to explore the past</b>
<b>S14-01</b>	Stefani A Crabtree	Agent-based modeling and complexity science: The next step in archaeological theory?
<b>S14-02</b>	Alice Williams	How agent-based models can be used to investigate the evolution of social complexity in the past: A test of circumscription theory in the Valley of Oaxaca
<b>S14-03</b>	Benjamin Davies, Simon Holdaway, Patricia Fanning	Simulating archaeological landscape formation to understand late Holocene population dynamics and mobility in arid Australia
<b>S14-04</b>	Jean-Marc Montanier, Xavier Rubio-Campillo	Reinforcement learning for decision making in agent-based models
<b>S14-05</b>	Colin D. Wren, Chloe Atwater, Kim Hill, Marco Janssen, Curtis Marean	An agent-based approach to weighted decision making in the spatially and temporally variable South African Palaeoscape
<b>S14-06</b>	Iza Romanowska	The versatileist's story of human dispersal: Climate fluctuation, adaptation and the evolution of human uniqueness
<b>S14-07</b>	Phil Riris, Fabio Silva	Dates and dispersions: Examining the spatio-temporal boundaries of the Guaraní expansion into the La Plata basin with Monte Carlo methods
<b>S14-08</b>	Andrea Zanotti, Richard Moussa, Jean-Pierre Bocquet-Appel	An agent-based modelling approach to a complex problem: Economics and demography of the first farming expansion in the Balkans
<b>S14-09</b>	Ericson Hölzchen, Christine Hertler	An agent-based modeling framework for Out of Africa hypotheses
<b>S14-10</b>	<del>Fabio Silva</del>	<del>Testing archaeological narratives of the spread of rice cultivation in Asia</del>



<b>S14-11</b>	Florencia Del Castillo	An agent based empirical model of collective seasonal hunting
<b>S14-12</b>	Jan Zipser	The emergence and process of formation of the La Tène culture settlement system in Upper Silesia (Southern Poland and Northern Czech) in the light of the simulation modelling <a href="#">See page 49</a>
<b>S14-13</b>	Elizabeth M Gallagher, Mark G Thomas, Stephen J Shennan	Can you analyse that? Fitting simulations to idealised outcomes for the origins of farming
<b>S14-14</b>	Juan Antonio Barceló, Florencia Del Castillo Bernal	Everything seems possible: Exploring the parametric space of a simulated prehistoric scenario
<b>S14-15</b>	Fulco Scherjon	Evolving hominins in HomininSpace—Genetic Algorithms and the search for the perfect Neanderthal
<b>S14-16</b>	Xaver Rubio-Campillo, Rinse Willet	Content or context? Model selection of settlement growth models using entropy maximization
<b>S14-P1</b>	Elizabeth M Gallagher, Peter J Bentley, Stephen J Shennan, Mark G Thomas	The origins of agriculture: Mathematical models, cooperation and the rise of social inequality

**S15** **Stuart Eve, Catriona Cooper** **Interpretations from digital sensations? Using the digital sensory turn to discover new things about the past**

<b>S15-01</b>	Catriona Cooper	Auralization: What can acoustics tell us about digital lived experience?
<b>S15-02</b>	Piotr Dziewanowski, Janusz Różycki	From the largest to the smallest: The use of the latest technology in digitalization of the objects from the collection of the National Maritime Museum in Gdańsk

<b>S15-03</b>	Lawrence Shaw, David John, Harry Manley, Gary Underwood	More than just a pretty picture: A review of the use of 3D printing, touch tables and virtual environments to engage the public with Lidar and the archaeology of the New Forest, U.K.
---------------	---	--

**S16** **Tom Brughmans, Daniel Weidele** **Networking the past: Towards best practice in archaeological network science**

<b>S16-01</b>	Tom Brughmans	A guide to good practice for archaeological network science
<b>S16-02</b>	Lieve Donnellan	Exploring formal SNA approaches to funerary contexts in Early Iron Age Italy
<b>S16-03</b>	Ignacio Morer, José Remesal, Albert Diaz-Guilera, Luce Prignano, Daniel Martin Arroyo	Wine trade from Roman Crete: Onomastic–geographic network analysis
<b>S16-04</b>	Donat Wehner	Least-Cost Networks and Network Analysis: Modelling trade relations in early medieval East Central Europe
<b>S16-05</b>	Thomas Huet	Geometrical and planar graphs in ancient iconography studies, a heuristic tool
<b>S16-06</b>	Discussion	
<b>S16-P1</b>	Anaía Andrade, Joan Anton Barceló, Florencia Del Castillo	Artificial Neural Networks to estimate Paleotemperatures in North Patagonia (Argentina) based on micromammals sequences

<b>S17</b>	<b>Mark Groenhuijzen, Philip Verhagen</b>	<b>The road not taken: Modelling approaches to transport on local and regional scales</b>
<b>S17-01</b>	Devi Taelman, Dimitrij Mlekuž	Transport and trade: An energyscape model and transport network approach for trade in Roman times
<b>S17-02</b>	Luce Prignano, Francesca Fulminante, Sergi Lozano, Ignacio Morer	A network model for the evolution of terrestrial connections in Central Italy (1175/1150–500 BC ca)
<b>S17-03</b>	<del>Pau de Soto</del>	<del>Network analysis to understand the Roman commerce. Connectivity and transport costs of the Roman networks</del>
<b>S17-04</b>	Karim Sadr	Comparison of regional and local transport networks in 17th and 19th century AD pre-colonial stone-walled structures in the southern Gauteng Province, South Africa
<b>S17-05</b>	Jacopo Turchetto	Modelling the road network of central Cappadocia (Turkey): A matter of 'cost' and 'visibility'
<b>S17-06</b>	Mark Groenhuijzen, Philip Verhagen	Testing the validity of network analysis results in research on local transport networks
<b>S17-07</b>	Diego Torres-Iglesias	The need of topographic restitution in local mobility analysis
<b>S17-08</b>	Joan Canela Gràcia, Núria Otero Herraiz	From sea to land: Reflections on freight traffic during the Iron Age of the Northeastern Iberian peninsula (6th to 1st centuries BC)

<b>S19</b>	<b>Anne Moreau, Federico Nurra</b>	<b>New technologies and archeology : The impact of the digital revolution</b>
<b>S19-01</b>	Martin Kermit, Øivind Due Trier	Towards a national infrastructure for semi-automatic mapping of cultural heritage in Norway

<b>S19-02</b>	Dimitri Schreiber, Dominique Meyer, Dominique Rissolo, Falko Kuester	Autonomous stereoscopic photosphere system for archaeological site virtualization
<b>S19-03</b>	Karl Hjalte Maack Raun, Duncan Paterson	Systematic literature review on automated monument detection: A remote investigation on patterns within the field of automated monument detection
<b>S19-04</b>	Anja Wutte, Peter Ferschin, Georg Suter	Spatial analysis of Ancient Egyptian Monuments. Case study: Late Period private funerary monuments of Thebes
<b>S19-05</b>	Dominique E Meyer, Jamie Hodgkins, Fabio Negrino, Christopher E Miller, Caley M Orr, Falko Kuester, Stefano Benazzi, Marco Peresani, Julien Riel-Salvatore, David Strait, Matthias Czechowski	Optimization in the co-registration of large point clouds for archaeological visualization
<b>S19-06</b>	Angela Bosco	3D survey for archaeology: When the solution can be a problem
<b>S19-07</b>	Ana Predoi, Lutz Schubert, Keith Jeffery	Interpolating 3D stratigraphic information from written excavation reports
<b>S19-08</b>	Alessandro Panetta, Paola Derudas	3D photogrammetric documentation in the archaeology of the contemporary past: Preserving the World War II landscape in North-West Sardinia (Italy)
<b>S19-09</b>	Torkel Johansen	Letter from the trenches: Challenges and strategies in the development of a digital collection management architecture
<b>S19-10</b>	Federico Nurra	A proposal for a collaborative Web Mapping for archaeological spatial data: OpenArcheoMap

<b>S19-11</b>	Rozenn Colleter, Guillaume Roy, Thierry Gaugry, Jean-Baptiste Barreau	HumanOS Project: A nomadic osteological inventory
<b>S19-12</b>	Arianna Commodari	Using GIS to study ancient landscapes. The case study of the Pisa centuriation (Italy)
<b>S19-13</b>	Ilan Ryan Smeyatsky, Karim Sadr, Patrick Randolph-Quinney	Discerning and explaining shape variations in Later Stone Age tanged arrowheads, South Africa
<b>S19-14</b>	Jean-Philippe Chimier, Matthieu Gaultier, Isabelle Pichon	Structuring data from documentary study and archives for spatial studies. Examples from funerary archeology
<b>S19-P1</b>	Alexis Gorgues, Florent Comte, Sonia Syllac	From the field to the showroom: The Augmented-Reality Kilns ExhibitOn (ARKEO)
<b>S19-P2</b>	Mar Zamora Merchán	Roman archaeology and GIS visibility studies
<b>S19-P3</b>	<del>Raymond Sauvage, Magnar Mojaren Gran</del>	<del>Digital strategies and workflow. Case studies from large scale excavations in Central Norway</del>
<b>S19-P4</b>	Wuyang Shui	Why 3D printing technique is the useful tool for artifact conservation

<b>S20</b>	<b>Arianna Traviglia, Karsten Lambers</b>	<b>Computer vision vs human perception in remote sensing image analysis: Time to move on</b>
<b>S20-01</b>	Dave Cowley	Why, when and how? Context and computer vision in archaeological prospection and interpretation
<b>S20-02</b>	Sebastian Zambanini, Fabian Hollaus, Robert Sablatnig	Computer vision applied to historical air photos: The registration and object detection challenge

<b>S20-03</b>	Øivind Due Trier, Arnt-Børre Salberg, Lars Holger Pilø	Semi-automatic detection of charcoal kilns from airborne laser scanning data
<b>S20-04</b>	Benjamin Stular	Two methods for semi-automated feature extraction from lidar-derived DEM designed for cairn-fields and burial mounds
<b>S20-05</b>	Iris Caroline Kramer	Using eCognition to improve feature recognition
<b>S20-06</b>	Amandine Robin, Karim Sadr	Automated detection of stone-walled ruins using based on support vector machine and histogram of oriented gradients
<b>S20-07</b>	Kenneth L Kvamme	Experiments in the automatic detection of archaeological features in remotely sensed data from Great Plains USA villages
<b>S20-08</b>	Till Frieder Sonnemann, William Megarry, Eduardo Herrera Malatesta, Douglas Comer	Down to the last pixel: Multiband use for direct detection of Caribbean indigenous archaeology

<b>S21</b>	<b>Leif Isaksen, Keith May</b>	<b>Linked pasts: Connecting islands of content</b>
<b>S21-01</b>	Karsten Tolle, David Wigg-Wolf, Ethan Gruber	An ontology for a numismatic island with bridges to others
<b>S21-02</b>	Carl Anders Olsson	A Linked (Open) Data hub at the Norwegian Directorate for Cultural Heritage: A case study
<b>S21-03</b>	Sebastian Cuy, Wolfgang Schmidle, Florian Thiery	Linking periods: Modeling and utilizing spatio-temporal concepts in the chronOntology project
<b>S21-04</b>	Keith May	The Matrix: Connecting time and space with archaeological research questions involving spatio-temporal phenomena and the conceptual relationships between them

<b>S21-05</b>	Koen Van Daele, Maarten Vermeyen, Sophie Mortier, Leen Meganck	When data meets the enterprise. How we turned a merger of organisations into a confluence of information
<b>S21-06</b>	Valeria Vitale, Jeffrey Becker, Jonathan Prag	Where is the House of the Dwarves? Enhancing granularity in the Pleiades Gazetteer: The examples of ancient Sicily and Pompeii
<b>S21-07</b>	Ethan Gruber	LOD for Numismatic LAM Integration
<b>S21-08</b>	Leif Isaksen, Simon Rainer, Pau de Soto Cañamares, Elton T E Barker	Pelagios Commons: Decentralizing the Web of historical data

**S22 Karsten Lambers, Hans Kamermans Teaching archaeology in the digital age. UISPP official session**

<b>S22-01</b>	Alexis Gorgues, Florent Comte	Dynamic process, static document. How to solve the teacher's baffling problem?
<b>S22-02</b>	Michael Remmy	ArGO. Archaeological Geocaching Online. Teaching and learning archaeology with geocaching
<b>S22-03</b>	Anne Moreau, Sylvain Badey	When I was a child, I wanted to be an archaeologist. What about now? A French case study
<b>S22-04</b>	Heleen Van Londen, Marjo Schlaman, Andrea Travaglia	Towards the integration of green and cultural heritage management. Developing content for blended learning
<b>S22-05</b>	Anna S Agbe-Davies	Archaeological education for a digital world: Case studies from the contemporary and historical US
<b>S22-06</b>	Alessandro Vecchione, Domenica Dininno, Giulio Casazza	Digital data recording at Circus Maximus: A recent experience

<b>S22-P1</b>	Mar Zamora Merchán, Javier Baena Preysler	Teaching GIS in archaeology: What Students focus on
---------------	---	---

**S23 Lars Gustavsen, Christer Tønning, Arne Anderson Stamnes, Erich Nau, Monica Kristiansen**

**Needles in the haystack: Geophysical methods in challenging conditions**

<b>S23-01</b>	Christian Løchsen Rødsrud, Arne Anderson Stamnes, Kristin Eriksen	Magnetic geophysical prospection on prehistoric iron production sites in cultivated contexts: The case of Ånestad, Hedmark in Norway
<b>S23-02</b>	Christine Markussen, Katie Simon, Benjamin Porter, Stephanie Brown	Understanding contrast at Busayra: Geophysical surveys of an Iron Age settlement in Southwest Jordan
<b>S23-03</b>	Manuel Gabler	Opportunities and limitations of archaeological geophysical prospection on the example Uppåkra in Sweden
<b>S23-04</b>	Martina Seifert, Ewdoksia Papuci-Władyka, Tomasz Kalicki, Sebastian Adlung, Michaelis Antonakis, Nikola Babucic, Joanna Krupa, Artur Buszek, Sławomir Chwałek, Dawid Świąch, Tomasz Herbich, Łukasz Misk	Looking through the rocks. Geophysical research on the agora of the ancient city: Nea Paphos—A case study
<b>S23-05</b>	Petra Schneidhofer, Erich Nau, Christer Tønning, Immo Trinks	A geoarchaeological approach to selected issues in Norwegian archaeological geophysical prospection
<b>S23-06</b>	Tuna Kalayci, Apostolos Sarris	Picking needles from a magnet: Obstacles and (hidden) opportunities of magnetic prospection in challenging environments

<b>S23-P1</b>	Christine Markussen	Comparing 3D Ground Penetrating Radar visualization methods: A case study from Austria
<b>S24</b>	<b>David Vogt, Steinar Kristensen, Magne Samdal, Bjarte Aarseth</b>	<b>Digital rock art documentations, new perceptions</b>
<b>S24-01</b>	Xosefina Otero	New eyes to old graphics. Rock art in the Emirate of Sharjah
<b>S24-02</b>	Tatiana Votroubeková	Documenting facades of Etruscan rock-cut tombs: From 3D recording to archaeological analysis
<b>S24-03</b>	Raymond Sauvage	Ex-situ preservation of exposed painted rock art. Applying photogrammetry and color manipulation
<b>S24-04</b>	Erik Kjellman	Photogrammetric rock art detection: Assisting detection of rock art on lichen covered surfaces using photogrammetry and 3D modelling software
<b>S24-P1</b>	Xosefina Otero	New eyes to old graphics. Rock art in the Emirate of Sharjah

<b>S25</b>	<b>Ingvild Solberg Andreassen</b>	<b>Public archaeology and the use of digital platforms</b>
<b>S25-01</b>	Gareth Beale, Nicole Beale	Co-designing digital community archaeologies: Experiences from the re-reading the British Memorial Project
<b>S25-02</b>	Kate Welham, Lawrence Shaw, Mark Dover, Harry Manley, Mike Parker Pearson	Using Google Earth applications to enhance public engagement with cultural heritage: An evaluation of Seeing Beneath Stonehenge
<b>S25-03</b>	Matthew Luke Vincent, Chance Coughenour, Fabio Remondino, Mariano Flores Gutierrez, Victor Manuel Lopez-Menchero Bendicho, Dieter Fritsch	Rekrei: A public platform for digitally preserving lost heritage

<b>S25-04</b>	Meriem Zammel	Photomodelling and webmapping on archeological site of Carthage (Tunisia) and data collection in the museum of Bardo (Tunisia)
<b>S25-05</b>	Gunnar Liestøl, Birgitte Bjørkli, Espen Uleberg	Visualizing original sea level of Stone Age sites on location by means of mobile augmented reality
<b>S25-06</b>	Alex da Silva Martire, Tatiana Bina	DOMUS: Cyber-archaeology and education
<b>S25-07</b>	Leif Harald Fredheim	Democratising the digital: Sustaining community-sourcing platforms for heritage management and conservation by co-creation
<b>S25-08</b>	<del>Michael Ann Bevivino</del>	<del>Breaking the mould: Why do we replicate objects of the past?</del>
<b>S25-P1</b>	Evy Berg	WW2 remains as cultural heritage
<b>S25-P2</b>	Lauren Massari	Archives, archaeology, and architecture: A multimedia approach for 3D reconstructions
<b>S25-P3</b>	Michal Michalski, Robert Carter, Daniel Eddisford, Richard Fletcher, Colleen Morgan	Doha Online Historical Atlas—GIS interactive mapping of space and time in a pearling town

<b>S26</b>	<b>Kate Welham, Paul Cheetham, Derek Pitman, Rebecca Cannell</b>	<b>The portable XRF revolution: Elemental analysis for all?</b>
<b>S26-01</b>	Kate Welham, Derek Pitman, Chloe Duckworth, David Govantes-Edwards, Yvette Barbier, Ricardo Cordoba de Llave	Seeing things differently. The use of combined geochemical and geophysical prospection techniques to investigate early Islamic town planning

<b>S26-02</b>	Derek Pitman, Mark Brisbane, Paul Cheetham, Miles Russell, John Beavis, Rob Symmons, Stephen Clews, Susan Fox, Maurice Tucker	Pipes, pedalis and portable X-ray fluorescence: New avenues for the study of Roman building materials
<b>S26-P1</b>	Luisa Dallai, Vanessa Volpi, Alessandro Donati	A multidisciplinary project for the study of historical landscapes: New archaeological and physicochemical data from the "Colline Metallifere" district

<b>S27</b>	<b>Mieko Matsumoto, Michael Märker, Espen Uleberg, Volker Hochschild</b>	<b>Revealing by visualising: Geographic relations in cultural heritage databases</b>
<b>S27-01</b>	Christian Willmes, Daniel Becker, Michael Märker, Volker Hochschild, G. Bareth	GIS-based data integration for mapping paleoenvironments
<b>S27-02</b>	Richard Jennings	Endangered archaeology in the Middle East and North Africa: The development of a spatial database
<b>S27-03</b>	Michael Märker, Volker Hochschild	Management of raster data and their dynamic visualization within the ROCEEH-ROAD System
<b>S27-04</b>	Mieko Matsumoto, Espen Uleberg	Vertical aspects of Stone Age distribution in Norwegian high mountains
<b>S27-P1</b>	Peter Oskar Pflaumer	Distributions of Age at death from Roman Epitaph inscriptions in North Africa: An application of data mining

<b>* S28</b>	<b>Iza Romanowska, Joan Anton Barceló, Florencia del Castillo</b>	<b>Methodology of archaeological simulation. Meeting of the Special Interest Group in Complex Systems Simulation</b>
<b>S28-01</b>	Juan Barceló	Why model
<b>S28-02</b>	Stefani Crabtree	What is complexity theory and why should we care about it
<b>S28-03</b>	Ben Davies	Simulation as middlerange research
<b>S28-04</b>	Colin Wren	Models: 'Small and elegant' or 'complicated but realistic'?
<b>S28-05</b>	Elizabeth Gallagher	ABMs, because they're worth it? Alternatives to our favourite method
<b>S28-06</b>	Tom Brughmans	Fancy doing some networks?
<b>S28-07</b>	Philip Verhagen	Building on expert advice to create an informed model
<b>S28-08</b>	Iza Romanowska	Lessons already learned: drawing from the best software practice
<b>S28-09</b>	Irmela Herzog	Proof of concept verifying ABM with analytical methods
<b>S28-10</b>	Florencia del Castillo	Validation: The painful moment when the model meets the data
<b>S28-11</b>	Xavi Rubio-Campillo	Model selection: what is the 'best' model?

\*Roundtable

① (New title) The Emergence and Formation Process of the La Tène Culture Settlement System in Upper Silesia (Southern Poland and Northern Czech) in Light of the Simulation Modelling