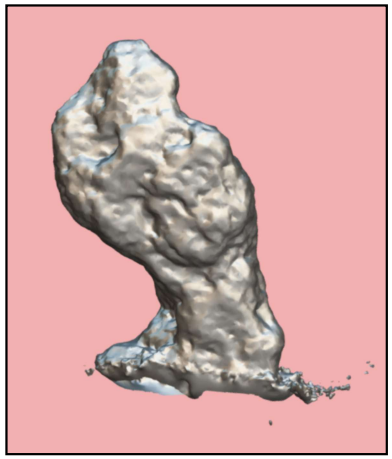

# **Digital | Visual | Cultural III –** *Models, Volume, and 3D Visualisation*

*Programme – day 2: panels and presentations.*

June 18, 2019
St. John's College Auditorium
Oxford, UK

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**9:45 — coffee, tea, and introductions**
Gillian Rose (University of Oxford)

**10:00 — 3D data and models: monitoring coastal heritage sites**
Robert Shaw (The Discovery Programme)
*Ireland and Wales have a coastline and marine environment that contains many archaeological and historical sites that are at risk of being damaged or destroyed by the present and future effects of climate change. CHERISH is a five year Ireland-Wales interreg project, bringing together four partners across two nations. This project is researching these threats to coastal heritage and brings together a cross-disciplinary, cross-border team of specialists in the development of a field toolkit, which will combine multiple complimentary approaches and methods to evaluate current and future risk. This paper will focus on the techniques being utilised, concentrating on UAV mapping and terrestrial laser scanning. It will consider the appropriate equipment and methodologies to ensure geo-referencing and resolutions are achieved, appropriate to the scale and extent of the site or landscape.*

**10:20 — Assemblage and Situation: 3D visualisation and knowledge production in the Cherish Project**
Sterling Mackinnon (University of Oxford)
*The rate at which archaeology and attendant fields are integrating 3D visualisation methodologies and technologies is outpacing any serious effort to critically theorise them. Framing such methods and the technologies as components of a dynamic process of cultural knowledge production, this paper aims to discuss the contingencies and intricacies inherent to the generation of 3D archaeological media. Building a theoretical framework around both theories of assemblage and notions of situated knowledges, it uses on-site observations carried out at CHERISH sites in both Wales and Ireland in spring 2019 as means to explore the material and embodied contours of data acquisition and processing.*

**(10:40 — Q&A)**

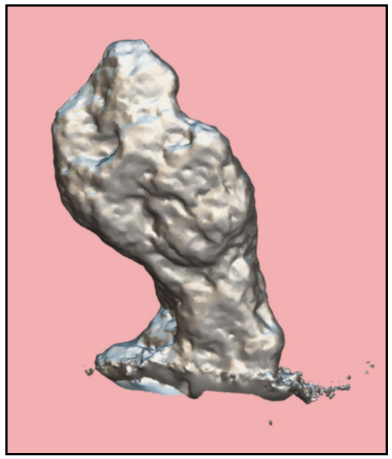
**11:00 — The art of the point cloud**
Paul Chapman (Glasgow School of Art)
*In the last decade point cloud datasets, created using various scanning technologies, have revolutionised the way we document in three dimensions. But a surprising bi-product of this fascinating new technology is the extraordinarily beautiful images created as part of the process. In this talk I will discuss a recent project to collate the very best point cloud imagery from around the world. The images are not only hugely appealing but also intriguing. The vast range of subject matter submitted is startling, from historic sites, topography, architecture and interiors to plants, machines, objects, animals and even people.*

**11:20 — Virtual Reality and the Uncanny**
Linnea Saltin (University of Karlstadt)
*This talk will handle the questions of uncanniness in the Virtual Reality. The Uncanny is the sensation of recognising something as skewed, the feeling of something not being quite right, out of place. As new technologies arrive, questions about their spatial possibilities as well as how to interact with them becomes a question of creating a culture around them as well as a user position within them. But these new spatial relations and our understanding of them is not a given, but can rather seem like magic or something quite uncomfortable at first. I will travel through philosophy and media history to the orientation of being in place to try to handle this discomfort and disorientation of being in place while being out of place in Virtual Reality, as well as a researcher on Virtual Reality.*

**11:40 — Q&A**
**12:00 — Lunch**

**13:00 — Forests of Gestalt**
Alice Ladenburg (Artist) and Alexander Shenkin (University of Oxford)
*Architecture, the process and product of designing and building structures, is perceived as much as a functional response to requirements as a form of artistic expression. Science has a keen interest in understanding the processes and products of natural architectures, and in particular, the architecture of trees. The structure of trees is intimately linked to their function in forest ecosystems, ecosystems which are of central concern in humanity's attempts to grapple with*

***continued on back…***



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*climate change. Nonetheless, how and why trees are constructed the way they are, especially in tropical ecosystems, remains remarkably unknown. While progress on this topic has been halting, new methods that create 3D models from laser scanning and photogrammetry techniques offer promise that advancements may be reignited.*

*Thinkers have been working to understand the function and variation of tree architecture since Leonardo da Vinci posed his tree branching theory. While current technology presents new possibilities, it also brings challenges in the form of novel types of data. How will science proceed? It could benefit from, and perhaps may need, multiple perspectives to help guide this progress. Indeed, da Vinci was a visionary and polymath; an artist, an architect, and a scientist. Perhaps it is the intersection of these seemingly divergent perspectives that allows for a more nuanced and deeper understanding of the natural world so clearly needed in this age of environmental uncertainty.*

*To this end, Forests of Gestalt attempts to foster a profound level of communication between an environmental scientist (Alexander Shenkin, Oxford University) and an artist (Alice Ladenburg) to explore their distinct disciplinary approaches to the measurement and representation of forest environments. They are sharing tools, vocabulary, and ways of knowing to craft new perspectives on tree architecture. Ultimately, the collaboration is an attempt to advance the science of tree architecture and ecosystem ecology by fusing new advances in measurements with radical interdisciplinarity.*

**13:40 — Q&A**

**14:00 — Difficult Forests**
Helen Pritchard (Goldsmith's University)
*This presentation serves as tour of the "Possible Bodies" inventory. In particular it will focus on both "Difficult Forests"—a memoir of the Amazon forest enlivened by imagery derived from LiDAR—and the work of Pascale Barret, which utilised the laser scanning of leaves in unconventional ways. Both works will be compared as a means to reimagine scanning as both a queer type of analytics and clumsy form of computation.*

**.14:20 — Q&A**
**14:30 — coffee, tea, and refreshments**

**15:00 — Distributing Capacities, Distancing Sense: LIDAR as Sovereign**
Sam Hind (University of Seigen)
*As Gabrys and Pritchard (2018, 396) suggested recently, '[d]istinct affective and political capacities are operationalized through sensing practices'. Work in geography, media studies, urban studies and cognate disciplines has sought to explore the extent to which digital technologies, at various scales and through different modes, have exercised these capacities; sustaining existing and advancing novel sensing practices. LIDAR – or, Light Detection and Ranging – is one such example, granting perceptive capacities to prototype autonomous vehicles designed by the likes of Uber and Waymo. This talk builds on existing critiques of knowledge, vision and sensing to explore two things. Firstly, how affective and political capacities are distributed throughout and beyond the prototypical autonomous vehicle, dependent on LIDAR and other, integrated systems. Secondly, how the sensing capacities of specific LIDAR units developed for use in these driving-machines, is dependent the operationalization of 'distance' and with it, a mobilization of Tobler's First Law of Geography. It takes the fatal crash involving a prototype Uber autonomous vehicle in Tempe, Arizona as its empirical basis to explore these perceptive dynamics, arguing that LIDAR is necessarily a localized, situated, composite sensing masquerading as a kind of 'sovereign sensing'.*

**15:20 — Navigating Virtual Rome**
Matthew Nicholls (University of Oxford)
*This talk will both compass research applications of virtual renderings of Rome within the context of the 'spatial turn', looking look at routes, movement through space, and solar illumination of spaces and buildings. It will further investigate public responses to 3D presentation of cultural heritage, including interactive deployment of models, as opposed to photos or digital images.*

**15:40 — Q&A**

**16:00 — Final Thoughts, discussion, and good-byes.**