Towards an Archaeological Science Framework for the Study of Palaeolithic Flaked Stone Artefacts

SEMINAR PRESENTED BY THE CENTRE FOR ARCHAEOLOGICAL SCIENCE (CAS)

DATE: THURSDAY 12TH MAY

TIME: 12.30PM-1.30PM

VENUE: 43.G01, UOW

PRESENTER: DR SAM LIN

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Sam Lin is a Research Fellow, who recently joined the Centre for Archaeological Science, School of Earth and Environmental Sciences, University of Wollongong. Sam received his B.A. (Honours) from the University of Auckland in 2009, completed his Ph.D. in Anthropology from the University of Pennsylvania in 2014, and worked as a Postdoctoral Fellow at the Max Planck Institute for Evolutionary Anthropology in 2015. His research focuses on the evolution of hominin behaviour through the study of Palaeolithic stone artefacts. Specifically, he employs experimental and modelling approaches to investigate the range of behavioural processes underlying the creation of the stone artefact record. His current projects include the study of stone artefact formation through controlled experiments, the analysis of Palaeolithic artefacts from France, South Africa, and China, and the use of agent-based modelling to assess the effects of different learning mechanisms on stone artefact variability..

SEMINAR OVERVIEW: *TOWARDS AN ARCHAEOLOGICAL SCIENCE FRAMEWORK FOR THE STUDY OF PALAEOLITHIC FLAKED STONE ARTEFACTS*

Research of Palaeolithic flaked stone artefacts is commonly based on classifications of predefined artefact types. While the nature and interpretation of these types have changed over time, the conception that they represent forms of deliberate design and production remains largely unchallenged. As an outcome, explanations for Palaeolithic variability inevitably focus on cultural/functional factors responsible for the intentional production of these typological units. With reference to archaeological science disciplines, this presentation explores an alternative framework whereby archaeological patterns are detected on the basis of processes independent of past hominin intention. Using Middle Palaeolithic artefacts from France as a case study, the research reported here represents a continued effort to employ approaches based on fracture mechanics and solid geometry that were verified through controlled experimentation and statistical modelling. Results demonstrate diachronic variations (within and between archaeological sites) that are otherwise invisible to traditional methods, and highlight the complexity in Neanderthal behaviour underlying the formation of these assemblages during the late Pleistocene.