*Joint Winners of the Herman Ramm post-graduate archaeology prize*

**Milk as a plasticiser in lime mortar: a historical and analytical study**

*Helen Mulholland.*

Current research considers that hot-mixed lime mortar has the most compatible functional behaviour with historic fabric, however shrinkage presents an inherent problem. This two-fold research project considers whether organic proteinaceous additives can resist shrinking during curing. Peptide mass mapping is applied using MALDI-TOF MS and an inact protein binding experiment is conducted. The results indicate that hydrolysis occurred during alkaline digestion and that beta-lactoglobulin and beta-casein bind to aggregate within hot-mixed mortar. As a consequence of this, these results suggest that it is possible to use proteinaceous additives in lime mortar. However, further research is required to quantify practical performance.

**Living with the emerging yeomanry of eastern Sussex: a social and spatial analysis of medieval and rural vernacular buildings**

*Rebecca Seakins*

This research provides an understanding of how people used and perceived the spaces in their homes and how and why this varied across a parish and during the transition from the late medieval to early modern periods. Utilising planning analysis, documentary research, and analysis of architectural details, the study found that houses became more complex over the transition and there was variation across the parish, likely due to experimentation and differences in function and wealth.

These results show the value of combining three approaches when studying vernacular architecture, and the importance of preserving vernacular buildings to understand past structures.

***The First Hebrew City: a thematic and analytical gazetteer of German-made ornamental materials on Tel Aviv's Bauhaus buildings***

*Stella Fox*

Inspired by Zionist ideology and fleeing the rise of anti-Semitism, German Jews arrived in Mandate-Palestine in the 1930s on an unprecedented scale. This study explores ways in which these immigrants violated and appropriated formal modern building techniques in order to retain, assert and negotiate pre-existing identities in a new environment, amongst an unfamiliar people, and through buildings, as a form of material culture expression. Adopting an interdisciplinary approach and informed by archaeological techniques (photographic survey, documentary and archival research), this study emphasises the symbiosis between the many tangible and intangible qualities in Tel-Aviv manifest in Zionist ideology, nature and ornament. This study identifies such qualities, sets a research agenda to inform current national and international policy, and outlines the potential for future collaboration.