Using Photogrammetry to Trace Architectural Variability

In 2019, excavations begun on what appears to be a cluster of terrace houses (Hoff et al. 2021; cf. Bergmann 2012, 233-4) at Antiochia ad Cragum, one of the first domestic areas to be studied from the Late Roman/Byzantine Period in Southern Turkey. After the hiatus caused by the COVID-19 pandemic, work continued in 2022, focusing on the lowest levels of the multi-story domestic structures. This poster will analyze the 2022 data and document how photogrammetric methods allowed the excavators to track several phases of the structures' construction. As the poster will show, photogrammetry and 3D image creation were utilized to make a detailed study of the dividing wall between two rooms in the lowest level of the main structure. Observations of this wall made in 2019 raised questions about its role with respect to the original construction (Hoff et al. 2021). The 3D model made visible small structural irregularities that provided clues to different construction phases. The insights drawn from the model were then used to guide the physical excavation. This poster has three columns: one dedicated to the abstract and different phases of excavation that happened this summer to provide context; another larger one in the middle detailing the reasoning and methods behind the photogrammetric documentation, as well as a depiction of the image itself; and one last column to explain how the 3D model produced was utilized by our team throughout the excavation process to learn more about the wall in question.

Works Cited

Bergmann, Bettina. 2012. “Housing and Households: The Roman World.” In *Classical Archaeology*, edited by Susan E. Alcock and Robin Osborne, 228-244. Hoboken, NJ: Blackwell Publishing.

Hoff et al. 2021. "Antiochia ad Cragum Archaeological Research Project: 2019 Season.” Kazı Çalışmları 42.3: 165-82.