

Abstract:

With the continuing trend in the decrease in the both the size and cost of hyperspectral imagers, novel applications are emerging where per-pixel spectroscopy for material characterization are important. One such area is cultural heritage imaging, where hyperspectral imagery provides the ability to separate materials due to (sometimes) subtle differences in their material properties. We are collaborating with researchers at the Universities of Oxford, London, and Durham in the UK to study the Gough Map of Britain, a medieval map about which little is known. This unique collaboration includes researchers from the fields of Imaging Science, Conservation Science, Chemistry, Materials Science, Geography, and History. Our primary focus has been on pigment identification and mapping utilizing various algorithmic approaches. In this presentation I will give an introduction to the hyperspectral imaging done on the map, discuss the qualities of the map that are sources of questions for historians of cartography, as well as present results from our analysis that inform the historical study of the tools, techniques, timelines, and potentially the “why” of the construction of the Gough Map of Britain. I will also introduce other cultural heritage imaging projects that are ongoing.