Analysis of Wall Paintings with FTIR and Raman Spectroscopies

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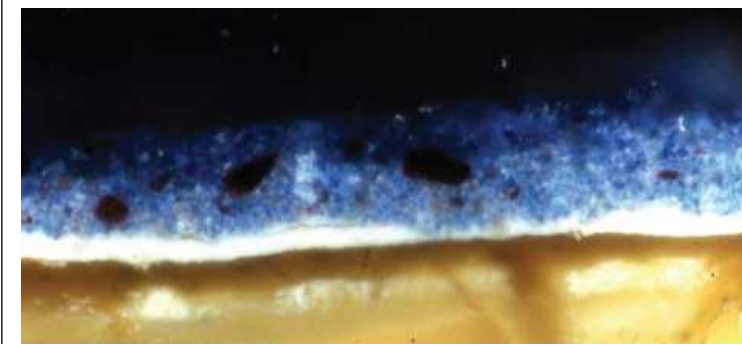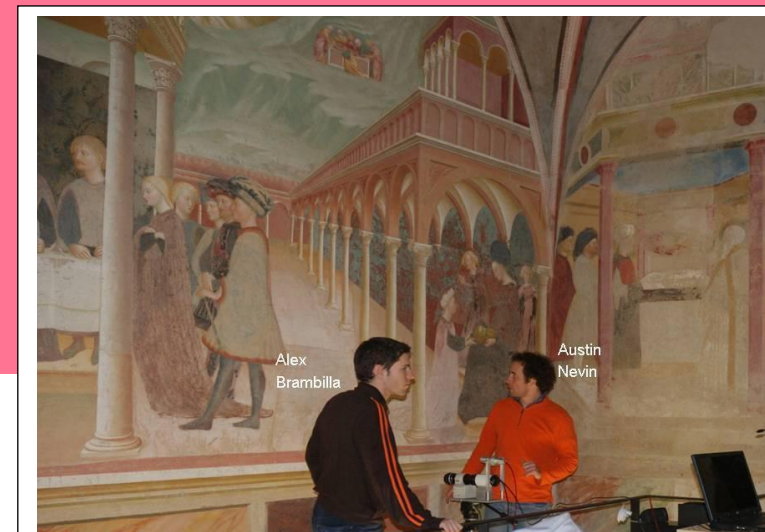**Sala de reuniões do DCR**

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The Life of John the Baptist by Masolino da Panicale and cross-section from Leonardo's Last Supper

Austin Nevin, chemist and conservator, is a Researcher at the CNR-IFN where he has worked since 2011. His research focuses on the analysis of paintings and painting materials, and the study of ancient and modern cultural heritage using optical and spectroscopic techniques. He is the co-author of over 50 publications, one of the editors of the Springer series Cultural Heritage Science and a member of the permanent scientific committee of the LACONA and of the TECHNART conferences.

He has served as the coordinator of the Scientific Research Working Group of ICOM-CC (from 2011-2014) and is a Council Member and Fellow of the IIC (since 2013). Following a degree in Chemistry (MChem) from the University of Oxford (2001) and a 3-year MA in the Conservation of Paintings (Wall Paintings) from the Courtauld Institute of Art (2004), Nevin went on to obtain a PhD from the Courtauld entitled "Fluorescence and Raman Spectroscopy for the analysis of proteinb-based binding media" (2008). Between 2004-2007 he won a Marie Curie Early Stage Training Fellowship at IESL-FORTH (Greece) where his research focussed on the analysis of protein-based binding media using laser-based techniques.

Seminar synopsis

The analysis of wall paintings is particularly challenging due to the large range of inorganic and organic materials used to paint. In addition paintings are often leanly bound and multiple layers may contain altered and degraded pigments and binding media. In the presentation the complexity of wall paintings will be shown together with illustrative examples of the analysis of paintings using FTIR and Raman spectroscopies. Analysis using both Fourier Transform Infrared Spectroscopy for the mapping of Oxalates and Raman spectroscopy for the analysis of red lake pigments in cross-section will be given. Finally, future prospects will be illustrated including novel sample preparation techniques for the analysis of painting cross-sections and applications using high resolution spectroscopy.