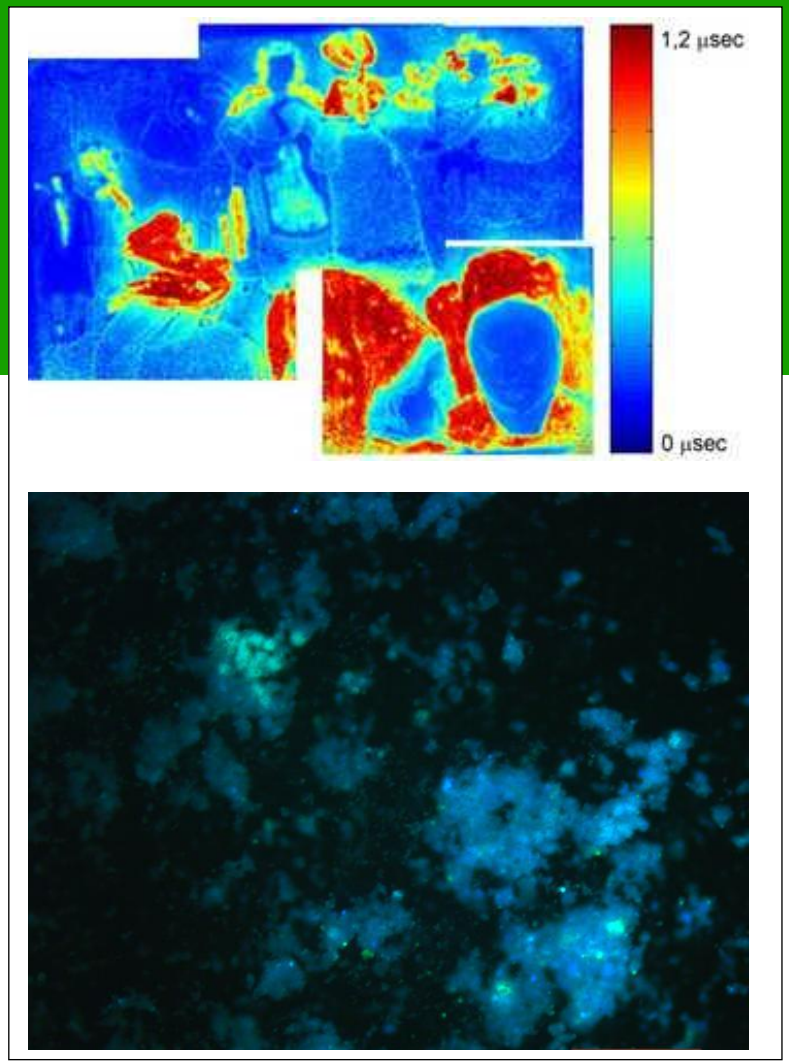
Luminescence imaging of modern pigments and paintings



Van Gogh's painting "Les bretonnes et le pardon de pont Aven" and historical sample of Lithopone

Austin Nevin

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Sala de reuniões do DCR

Faculdade de Ciências e Tecnologia
Universidade Nova de Lisboa

www.dcr.fct.unl.pt • tel 212 948 322

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 basic principles behind luminescence imaging and time-resolved imaging will be presented in order to provide background necessary to understand and to interpret the complex data generated from the analysis of paintings and binding media. Case studies on modern pigments, mainly based on semi-conductors containing Zinc or Cadmium, will demonstrate how luminescence can highlight the presence of impurities in samples (for example Lithopone) as well as the distribution of pigments and pigment mixtures on 19th and 20th C. paintings. Examples of the application of Fluorescence Lifetime Imaging in situ will be shown to highlight both advantages and limitations of imaging and luminescence.