



# SEAHA

CENTRE FOR DOCTORAL TRAINING IN  
SCIENCE AND ENGINEERING IN  
ARTS HERITAGE AND ARCHAEOLOGY

## **SEAHA Studentship: Comparison of painting lining methods for historic house environments**

The EPSRC Centre for Doctoral Training in Science and Engineering in Arts, Heritage and Archaeology at University College London, University of Oxford and University of Brighton ([www.seaha-cdt.ac.uk](http://www.seaha-cdt.ac.uk)), in collaboration with English Heritage and LaVision UK Ltd., are seeking applications for one fully funded studentship on the topic "Comparison of painting lining methods for historic house environments". Funded by the Engineering and Physical Sciences Research Council (EPSRC) through the Centre for Doctoral Training and co-funded by English Heritage, the four year doctoral research programme will be supervised jointly by UCL Department of History of Art (<http://www.ucl.ac.uk/art-history>) UCL Centre for Sustainable Heritage (<http://www.bartlett.ucl.ac.uk/graduate/csh/csh-home/>), EH Collections Conservation Team (<http://www.english-heritage.org.uk/professional/research/heritage-science/collections-conservation/>), and LaVision UK Ltd. (<http://www.lavision.de/en/>).

This is a prestigious studentship with the project focusing on a very significant proportion of paintings on public display in historic house environments. Due to restrictions on building modifications, it is not possible to carefully control their display environments. As a consequence, the wider relative humidity (RH) fluctuations generate physical stresses in the paintings, owing to their composite nature. Additionally, as canvasses age their physical properties deteriorate and re-lining is frequently required in order to strengthen the painting and allow continued display. Several methods and materials presently exist, however, re-lining treatments are very resource intensive and there is no consensus within the field as to which is the most appropriate for use in uncontrolled environments. The doctoral project will address the following research questions:

- (i) Which re-lining methods perform best in historic house environments?
- (ii) Can a damage function be developed to describe the physical risk to paintings in terms of the environmental parameters?
- (iii) How beneficial is back-boarding only (without glazing)?
- (iv) Can the lining be analysed non-invasively using near infrared (NIR) spectroscopy/single-sided nuclear magnetic resonance (NMR) to determine the state of conservation and remaining lifetime?

The research project will require the use of an exciting range of research methods: digital image correlation, nuclear magnetic resonance and near infrared spectroscopy, among others. This diverse project will enable you to seek employment in any number of multidisciplinary environments: from academia to conservation, including engineering and industry.

As a SEAHA student, you will have unparalleled access to research infrastructure and expertise across three universities and almost 50 heritage, research and industrial partners. In addition to the university doctoral training requirements, SEAHA students take part in an exciting range of cohort activities, ranging from residential events and group projects, to conferences and careers events. Please visit the SEAHA website ([www.seaha-cdt.ac.uk](http://www.seaha-cdt.ac.uk)) for details.

You will have a good first degree in a relevant discipline: preferably material science or chemistry, but also conservation, heritage science, physics or engineering. For further details contact Dr. Emma Richardson, [e.richardson@ucl.ac.uk](mailto:e.richardson@ucl.ac.uk).

SEAHA is a Doctoral Training Centre at University College London (UCL), University of Oxford, and University of Brighton. SEAHA is funded by the Engineering and Physical Sciences Research Council (EPSRC).



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The SEAHA Studentship will cover home fees and a stipend of up to a maximum of £16,726 per year (current rate) for eligible applicants (<http://www.seaha-cdt.ac.uk/opportunities/eligibility-criteria/>), and a substantial budget for research, travel, and cohort activities.

The application should include:

- A covering letter clearly stating your motivation
- The UCL graduate application form which can be downloaded via UCL's web site: <http://www.ucl.ac.uk/prospective-students/graduate/apply/apply-now/ucl-graduate-application-form.pdf>
- Two academic references
- A copy of your degree certificate(s) and transcript(s) of degree(s),
- Proof of meeting the UCL English language proficiency requirements where necessary. For SEAHA candidates, an advanced level certificate is normally required (details of English language proficiency requirements can be found at <http://www.ucl.ac.uk/prospective-students/graduate/apply/english-language/index>)
- A short research proposal (max. 2000 words) written by taking into consideration the above research questions.

The award will be subject to Grant Agreement between UCL, English Heritage and LaVision UK Ltd..

The applications should not be submitted by UCL online admissions system. Instead, they should be sent directly to:

SEAHA Manager  
[manager@seaha-cdt.ac.uk](mailto:manager@seaha-cdt.ac.uk)  
UCL Centre for Sustainable Heritage  
Faculty of the Built Environment  
UCL  
14 Upper Woburn Place  
London WC1E 0NN

UCL Taking Action For Equality.

Application deadline: Monday 30<sup>th</sup> June; Interviews: 15<sup>th</sup> July.

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