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

SEAHA Studentship: Thinking out of the box – modelling preventive conservation benefits of boxes

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), in collaboration with London Metropolitan Archives (https://www.cityoflondon.gov.uk/things-to-do/london-metropolitan-archives/Pages/default.aspx) and the company Conservation by Design Ltd. (http://www.conservation-by-design.com/), are seeking applications for a fully funded studentship on the topic "Thinking out of the box – modelling preventive conservation benefits of boxes". Funded by the Engineering and Physical Sciences Research Council (EPSRC) through the Centre for Doctoral Training and co-funded by Conservation by Design Ltd., the four year doctoral research project will be supervised jointly by UCL Institute for Sustainable Heritage (https://www.ucl.ac.uk/bartlett/heritage/), as well as London Metropolitan Archives and Conservation by Design Ltd.

In the context of archival and library storage, boxes are a very well established method of storage of archival material and serve a variety of purposes: as physical protection (e.g. during handling), as a buffer against adverse effects of the environment (e.g. T and RH fluctuations, absorption of pollutants), against pests and as protection against fire and water. Boxes represent long-term investment and need to last several decades as re-boxing is capital and resource intensive. It could be argued that boxes both protect the object (i) from the potentially negative effects of the external environment, and (ii) from itself. However, it is currently difficult to model which of these two options is more important and in what environmental conditions. E.g. in highly polluted environments, it might be more beneficial to protect the object from the external environment, while in purer post-industrial environments, it might be more important that emissions from the objects are captured (or removed from within the box though ventilation holes).

The doctoral project will aim to address the following research questions:

(i) What new materials exist that could improve the protective properties of archival boxes?
(ii) What is the chemical protective effect of boxes?
(iii) Can protection against environmental fluctuations that boxes offer be modelled?
(iv) What protection could boxes offer in catastrophic events?
(v) What approaches can be considered by collection managers to enable improved decision making?

The research project will require the use of an exciting range of laboratory and field research methods: classical chemical analysis, spectroscopy, environmental assessment, statistical analysis and mathematical modelling. The project will require an advanced understanding of research challenges within memory institutions, and frequent interaction with non-scientists. Extended stays at the archives and in the company are planned. This exceptionally interesting and interdisciplinary 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 60+ 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) for details.

You will have a good first degree (min 2:1) in conservation or in a science discipline, preferably material science, chemistry, physics, engineering or heritage science. Other science disciplines will be considered.

For any further details regarding the project contact Professor Matija Strlic, m.strlic@ucl.ac.uk.

The SEAHA Studentship will cover home fees and a stipend of up to a maximum of £18,172 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. Non-EU applicants are not eligible for funding.

The application should include:

- A covering letter clearly stating your motivation, and stating your understanding of eligibility according to these guidelines: https://www.epsrc.ac.uk/skills/students/help/eligibility/
- Names and addresses of two academic referees
- A copy of your degree certificate(s) and transcript(s) of degree(s),
- A short research proposal (max. 2000 words) written by taking into consideration the project research questions.

The award will be subject to a Grant Agreement between UCL, London Metropolitan Archives and Conservation by Design Ltd.

The application should be submitted by email direct to the SEAHA Centre Manager and not by the UCL online admissions system.

SEAHA Manager
manager@seaha-cdt.ac.uk
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UCL Taking Action For Equality.

Application deadline: The position is open until filled.