



**Royal College of Art**

Postgraduate Art and Design

 **The National Archives**



Arts & Humanities  
Research Council

**Studentship (AHRC Collaborative Doctoral Award)  
Visualising historic time to integrate data across multiple datasets**

The School of Design, Royal College of Art (RCA) and The National Archives (TNA) in London are seeking applications for one fully funded Thames Consortium Studentship. Funded by the AHRC, the three year PhD research programme will be supervised jointly by the RCA ([www.rca.ac.uk](http://www.rca.ac.uk)) and TNA ([www.nationalarchives.gov.uk](http://www.nationalarchives.gov.uk)). The studentship begins in late September 2014.

Deadline for applications: midnight (UK time) 28 April 2014. Interviews likely to be week beginning 26 May.

**The research**

The student will undertake a PhD on the visualisation of archive data with particular emphasis on time-wise interactive visualisations such as timelines and other chronographics. The research is intended to break new ground in representing multiple datasets. We see this as a problem of design, technology, and historiography, where data visualisation and interactivity hold the key to making sense of large data sets. This research builds on the achievements of an existing PhD project at the RCA which has already produced important advances for partners in museums and archives, disseminated through practical demonstrations, conference presentations and papers.

Well-designed interactive chronographics have all the usual advantages of visualisation, enabling users to spot patterns, trends, clusters, gaps, and outliers – in short, to make sense of data. When applied to historic data sets additional insights include spotting connections through and across time and related parameters, and understanding the context of individual events, actions and artefacts. When representing more than one dataset in a single interactive visualisation, insights will be achievable which were previously inaccessible.

Our principal aim is two-fold:

1. To enhance the presentation of historical data, making patterns and relationships visible at a glance.
2. To enable datasets to be interrogated, using a range of interactive techniques, so that new knowledge emerges that was unavailable by other means.

This project complements the AHRC-funded Big Data project 'Traces through Time' led by The National Archives in partnership with the Institute of Historical Research, King's College London, Brighton University and the University of Leiden, to identify and link individuals across large historical datasets spanning a wide timeframe. A key output of that project will be the identification of relationships between individuals appearing in different datasets across time, including the 'fuzziness' and varying levels of confidence that are a feature of historical data. The RCA PhD project will deliver vital insights into the presentation and visualisation of historical datasets, exposing links and patterns to help users make sense of the data and enhancing access to historical collections for researchers, staff and students alike.

You will produce a series of software demonstrators illustrating the interactive visualisation of historic data, applied practically to existing large datasets. These will be supplemented by

evaluation reports on user trials, conference papers and journal articles. An analysis of best practice in current and historic time-visualisation will be augmented by visual analytics approaches to sense-making with large datasets. It is important that you have a critical but open attitude to best practice in other fields of interaction and user experience design.

### **Context**

Timelines have recently emerged from obscurity in terms of design practice and history. Rosenberg and Grafton's visual history of the timeline *Cartographies of Time* (Princeton Architectural Press, 2010) is one indicator of their growing importance. The research will be jointly supervised by Dr Stephen Boyd Davis, Research Leader in the School of Design at the RCA (<http://www.rca.ac.uk/more/staff/dr-stephen-boyd-davis/>) and Dr Sonia Ranade, Digital Records Specialist at The National Archives.

Dr Boyd Davis specialises in the uses of space in design. He previously co-directed a PhD project on learning historical chronology from virtual environment visualisations under a Leverhulme award. He has advised the BBC and other institutions on timelines for their websites. He has unique expertise in chronographics, including eighteenth-century timeline visualisations and contemporary practice, with many publications, conference presentations and invited talks in this field.

Dr Ranade is an Information Scientist and Digital Records Specialist at The National Archives, with expertise in the management and preservation of digital records. She is an experienced technical project manager with a background in the design and delivery of highly usable online services and a particular interest in the application of technology to aid discovery in archival collections. She leads TNA's Data Science projects, and is currently the Principal Investigator on the ARHC-funded Big Data project *Traces through Time* which will seek to trace and link the lives of individuals within historical records, allowing their stories to emerge from the documentary evidence that survives them.

### **About you**

You will have a strong desire to combine in-depth study and practical design development. You will be enthusiastic (and preferably knowledgeable) about visualisation and visual analytics, and have some understanding of working with large datasets. Your experience will include the design and development of interactive software. You will also be interested in the history of visualisation. You will probably have experience in JavaScript and perhaps frameworks such as jQuery, d3 or Raphael. However, though experience is desirable, your eagerness to learn is more important, so please get in touch and discuss your application if you are worried about the technical aspects of the studentship.

You will be committed to evaluation as well as making, since it is essential that the products of the research are usable and likeable as well as functioning effectively. By the commencement of the PhD studentship, you should have a good first degree and a postgraduate (Master's) degree in a relevant subject (not necessarily a design subject). You are welcome to submit an online or other digital portfolio, in any widely used format, to demonstrate your achievements. Where you have engaged in collaborative projects it is essential that you clearly identify your own contribution.

### **About The National Archives**

The National Archives is the Government's archive for England, Wales and the United Kingdom. Our role is to collect and secure the future of the government record, both digital and physical, to preserve it for generations to come, and to make it as accessible and available as possible. We are the guardians of some of Britain's most iconic national documents, dating back a thousand years to the start of the country's system of government. These records range from medieval manuscripts to modern 'born-digital' datasets, and the collection is growing at an unprecedented rate.

Providing access to the richness of our digital heritage relies on new tools and techniques to help researchers interpret and understand the data. We need new ways of discovering, linking and visualising our records. Time-wise interrogation and exploration of data is a particularly powerful tool for historical research and this project has the potential to really transform access to our unique collections.

### **Funding**

The studentship will cover home fees (full time) and a stipend of £15,863 per year (current London rates) for UK students or EU students who have lived in the UK for three years prior to the award. Overseas students may also be eligible if they fulfil a range of residency requirements stipulated on the AHRC guidelines.

More information on the AHRC's doctoral maintenance and fee rates for 2014/15 can be found at <http://www.ahrc.ac.uk/Funding-Opportunities/Postgraduate-funding/Pages/Current-award-holders.aspx>. The student will be eligible for an extra £550 per year CDP allowance, in addition to (up to) £1,000 per year from TNA to cover research and travel costs.

### **How to apply**

Please complete the online application, available here: <https://applications.rca.ac.uk/>

When you reach the screen titled "Course", please pick "AHRC Scholarship - Visualising Historic Time" and "PhD".

You must include a research proposal and indicative bibliography with your application. See <http://www.rca.ac.uk/studying-at-the-rca/apply/application-process/mphil-phd-application-process/> for general guidance on PhD applications, especially paragraph 7. Two academic references are required.

**You are very welcome to discuss your ideas with Dr Stephen Boyd Davis: [stephen.boyd-davis@rca.ac.uk](mailto:stephen.boyd-davis@rca.ac.uk).**