We live in an age of burgeoning information and increasingly fast information access. The World Wide Web has allowed us to make many positive changes in our society and environment, for example through social networking and e-publishing. It can be argued, however, that some simple, pleasurable experiences have been lost by this increasing reliance on interaction with the digital world. Serendipity is one example. Many people, for example, do not go to libraries anymore. Yet, many of us can remember a "happy accident" when browsing library shelves and picking up a nicely bound volume, purely because of its aesthetic qualities, only to find the volume containing useful and surprising information inside. In the digital world, it is becoming harder to notice such connections, partly because we are more narrowly focused in how we search for new knowledge, and partly because the search systems we use are very literal and not imaginative at all.

The SerenA project aims to design a Serendipity Arena, which will proactively search information available in users’ documents and on the Web to identify relevant knowledge and connections related to their work and their environment. The aim is not merely to search for shared keywords, like existing systems, but to use state-of-the-art technology from automated reasoning and computational creativity to identify things that users did not know they needed to know, using more advanced search based on metaphor and analogy. SerenA will be implemented as a physical presence in the working environment, and via personal technology, such as smartphones.

The post holder will be based in Lancaster’s Computing Department and will be responsible for developing and implementing new algorithms for supporting serendipitous connections in the digital world. The nature of these algorithms will be informed by psychological studies undertaken by researchers at UCL and Nottingham. Therefore, the exact nature of the algorithms is not decided at this stage, but will be based around ontology extraction from textual documents and matching of ontologies across disciplinary boundaries, where "matching" here will incorporate a theory of serendipity. The research associate will, therefore, be well versed in one or more techniques relevant to algorithm development including: soft computing, data mining, automated reasoning, NLP, ontologies and semantic web. The research associate will have an MSc or PhD in one of these areas but, because of the multidisciplinary nature of the project, will also be expected to quickly synthesize and apply techniques from related areas as appropriate.

The post offers significant growth potential for the right candidate. The project consortium includes world leading academics in their fields and thus offers excellent career progression opportunities through the network of contacts that will be built in the project. Lancaster’s Computing Department is consistently ranked in the top ten in the UK and offers a congenial and highly interactive working environment. The position would suit a researcher who enjoys the challenge of working with a team of researchers from different disciplines.