

Creating light field content from existing images and videos

The goal of this project is to create appealing visual content for upcoming light field displays from existing imagery, particularly from image and video collections such as historical photos or consumer videos.

Light field displays for the first time offer the viewer more than two views of an object from different perspectives, and they can thus reproduce the appearance of real-world objects which previously unachieved fidelity. This has been demonstrated by first research prototype displays, and commercial light field displays will become available within the next few years. However, cameras for capturing light field images or videos are not yet readily available, which is why this project aims to create light field content from existing imagery, which is readily available. To achieve this goal, the project will research and develop image- and video-based rendering approaches for synthesising visually plausible novel views, as well as new data-driven inpainting techniques for filling occlusion holes in a visually consistent manner.

Requirements

Candidates should normally have a good first degree (equivalent to a First Class or 2:1 Honours), or a Master's degree in computer science, visual computing or a related discipline. A strong mathematical background and strong previous programming experience, preferably in C++ and/or Python, is required. Candidates must have a strong interest in visual computing, and previous experience in computer vision, computer graphics and image processing is highly desirable.

Funding notes

UK and EU students applying for this project may be considered for a University Research Studentship which will cover Home/EU tuition fees, a training support fee of £1000 per annum and a tax-free maintenance allowance of £14,296 (2016/17 rate) for 3.5 years.

Note: ONLY UK and EU applicants are eligible for the studentship; unfortunately, applicants who are classed as Overseas for fee paying purposes are NOT eligible for funding.

We welcome all-year round applications from self-funded candidates and candidates who can source their own funding.

Additional information

Anticipated start date: 2 October 2017.

Informal enquires are welcomed and should be directed to Dr Christian Richardt (c.richardt@bath.ac.uk). Formal applications should be submitted via the University of Bath's website: <http://www.bath.ac.uk/science/graduate-school/research-programmes/how-to-apply/>.

For more general information on studying for a PhD in computer science at Bath, see:
<http://www.bath.ac.uk/science/graduate-school/research-programmes/phd-computer-science/>.

Application

The application deadline for this position is Tuesday, 31 January 2017.

Applications can be submitted via FindA PhD:

<https://www.findaphd.com/search/ProjectDetails.aspx?PJID=80681>.

Applications may close earlier than the advertised deadline if a suitable candidate is found; therefore, early application is recommended.

General mailing list

General@eg.org

<https://europa.cg.v.tugraz.at/mailman/listinfo/general>

Members mailing list

Members@eg.org

<https://europa.cg.v.tugraz.at/mailman/listinfo/members>