![University of BRISTOL]

Title: MyWorld: Intelligent Low Light Denoising, Colorisation Enhancement

Type of award	PhD Research Studentship
Department	Electrical and Electronic Engineering, Visual Information Laboratory
Scholarship Details	Minimum £17,668 p.a. in 2022/23
Duration	3 years
Eligibility	Home (UK) and EU citizens who have confirmation of UK settlement or pre-settlement status under the EU Settlement Scheme
Start Date	From Sept 2022

PhD Topic Background/Description

Broadcasters and streaming organisations are commissioning content with increasingly challenging acquisition specifications that extend our experiences into faster, smaller, more colourful, darker, and generally more immersive spaces. This project aims to create an AI enabled production workflow that jointly optimises low light content addressing denoising, contrast enhancement and colorization. Distortions are endemic in low-light video and noise increases with decreasing light intensity. While faster lenses support wider apertures, and high-quality sensors offer improved low-light performance, there is still a significant gap between the demands of commissioners and the capability of acquisition hardware. Distortion management is thus essential in any production workflow.

Launched in April 2021, MyWorld is a brand-new five-year programme, the flagship for the UK's creative technology sector, and is part of a UK-wide exploration into devolved research and development funding (UKRI video). Led by the University of Bristol, MyWorld will position the South West as an international trailblazer in screen-based media. This £46m programme will bring together 30 partners from Bristol and Bath's creative technologies sector and world-leading academic institutions, to create a unique cross-sector consortium. MyWorld will forge dynamic collaborations to progress technological innovation, deliver creative excellence, establish, and operate state of the art facilities, offer skills training and drive inward investment, raising the region's profile on the global stage.

URL for further information: http://www.myworld-creates.com/
https://www.bristol.ac.uk/news/2020/june/myworld-ukri-funding-announcement.html

Candidate Requirements

Applicants must hold/achieve a minimum of a master's degree (or international equivalent) in a relevant discipline. Applicants without a master's qualification may be considered on an exceptional basis, provided they hold a first-class undergraduate degree. Please note, acceptance will also depend on evidence of readiness to pursue a research degree.

If English is not your first language, you need to meet this profile level:
Profile E
Further information about English language requirements and profile levels.

Basic skills and knowledge required

Essential: Excellent analytical skills and experimental acumen.

Desirable: A background understanding in one or more of the following:

- Image processing
- Artificial intelligence/Machine learning/Deep learning
- Computational imaging/Computational photography

Scholarship Details

Stipend at the UKRI minimum stipend level will also cover tuition fees at the UK student rate. Funding is subject to eligibility status and confirmation of award.

To be treated as a home student, candidates must meet one of these criteria:

- be a UK national (meeting residency requirements)
- have settled status
- have pre-settled status (meeting residency requirements)
- have indefinite leave to remain or enter.

Application Process

- All candidates should submit a full CV and covering letter to myworldrecruitment@myworld-creates.com (FAO: Professor David R. Bull) by the deadline.
- Formal applications for PhD are not essential at this stage, but can be submitted via the University of Bristol homepage (clearly marked as MyWorld funded): https://www.bristol.ac.uk/study/postgraduate/apply/
- A Selection Panel will be established to review all applications and to conduct interviews of short-listed candidates.
- Candidates will be invited to give a presentation prior to their formal interview, as part of the final selection process. It is expected that the shortlisting selection process will commence **6 December 2022**, with interviews to follow.
- The initial closing date for applications is **30 November 2022**. The positions will however remain available until all scholarships are awarded.

For questions about **eligibility and the application** process please contact SCEEM Postgraduate Research Admissions sceem-pgr-admissions@bristol.ac.uk