PhD Studentship: Transitioning to a circular textiles economy in Leicester: exploring the potential of sustainable wool for innovation

Project description

Guided by an ambitious goal of reinvigorating the glory of Leicester's textiles industry, this exciting project aims to evaluate the technical, social and economic capacity of the city to develop a circular textile economy, as an alternative to fast fashion. As the global industry undergoes its transition from the 'take, make, dump' linear economy towards a circular economy, there is a need for successful prototypes and business models. The agility of the textile sector, matched with Leicester's extensive yet geographically close network of manufacturers, offers a unique microcosm to explore issues of global importance, including developing a circular industry.

The reduction of ecologically detrimental production processes requires systemic change. This project entails an investigation of the potential of Leicester's industry to shift towards circularity through an analysis of local infrastructure for materials and design, manufacturing and distribution, use and reuse, collection and recycling. The research will involve an assessment of the capacity of Leicester and Leicestershire's textile industry for the adoption of a circular, sustainable model, with a focus on creating a prototype of washable wool which can be reused and upcycled, creating a circular product, as a case study. With recent awareness on the high carbon footprint of imported fibres and/or producing fibres from oil derivatives, attention is shifting to traditional fibres, including wool, to enable fibre processing, spinning, finishing, and textile manufacturing within a closer geographical area, thereby significantly reducing carbon emissions.

The scale of the challenge facing the sector requires interdisciplinary perspectives that consider the entire textile value chain - from concept to the consumer. This research will be supervised by an interdisciplinary team with a combined experience of fibre and textile production technology for circular and sustainable business models.

Funding

DMU is offering a fully-funded 3-year PhD scholarship for this work, **commencing on 1st October 2021**. The stipend is pegged to the UKRI rate, currently at £15,609 per annum. **Lead Supervisor** is Dr Claire Lerpiniere (CLerpiniere@dmu.ac.uk). The second supervisors for this project are Dr Divya Jyoti (divya.jyoti@dmu.ac.uk) and Professor Jinsong Shen (jshen@dmu.ac.uk). Professor Shen and Dr Lerpiniere are members of the Textiles Engineering and Materials Research Group: https://www.dmu.ac.uk/business-services/a-z-business-services/art-design-and-humanities/textiles-engineering-and-materials-(team).aspx

Applicants must:

- Possess a UK Honours degree with at least an upper second class (or overseas equivalent), a Masters Degree or an academic or professional qualification plus experience in their sector or industry.
- Demonstrate competence in the use of the English language. Please see section 5b here for further details on meeting our English language entry criteria.

How to apply

Please go to the scholarships page which outlines the 2-stage process for applying for these scholarships.