I^3-Lab: We are hiring

Founded in 2022 with a generous philanthropic donation, the Imperial I^3-Lab is a joint initiative between Imperial College London, the IOTA Foundation, the Imperial College Transition to Zero Pollution initiative, and several industry partners.

The **mission** of the I^3-Lab is to act as a lighthouse for translational research activities in the area of the circular economy, the sharing economy, and in related areas. Roughly speaking, the Circular Economy refers to new economic models that seek to decouple economic growth from resource consumption; thereby promoting the elimination of waste and the continual use of resources. Traditional *Circular Economy* research has focussed, to a large extent, on new materials to underpin circularity, or methods to promote efficient material flows. An important, but often overlooked aspect of the circular economy, is the aspect of behavioural change. Consumer behaviour is often driven by ownership models that support sole-ownership of both expensive and cheap consumer goods. Circularity is not always served well by such models. Indeed, service based models, in which goods are never owned by consumers, has the potential to transform society. Advantages of service based models include the following.

(a) Facilitation of waste collection at end-of-life. Since all goods are centrally owned, and not distributed throughout society, waste is easier to collect.

(b) Durability. Since service providers sell access, rather than ownership, durability is promoted rather that the current *cheap but safe* model of manufacturing.

(c) *Access poverty*. Eliminate new forms of poverty by removing upfront costs and giving all citizens fair and equal access to good choices.

(d) *Influence:* The ability to influence consumption/pollution via new actuation methods.

(e) *Ethical and fair busines models.* Promote ethical business models.

The **added value** of the I^3-Lab is our focus on the co-design of new digital infrastructures, technologies, and analytics, that will enable widespread servitization of goods and services. Resolving the technology issues to enable servitization at scale gives rise to frontier challenges in several areas of engineering embracing new notions of ownership and behavioural change. The objective of the I^3-Lab is to promote these goals by developing these digital tools and to demonstrate their utility in real use-cases that promote circularity.

We are now hiring and welcome applications from candidates with a passion for technology and societal challenges. More specifically, we are currently seeking to recruit a number of **Ph.D. candidates and postdocs,** to commence in October 2022 to work on projects in the areas of transportation and mobility; energy; food and health; and in circular business models. A wide spectrum of projects are available ranging from: theoretical projects that concern the design of digital ledgers, digital twins, new digital market places, the mathematics of DLTs, as well as the use of control theory, game theory and machine learning techniques to design feedback policies, to more applied projects with our partners. **Ideal candidates** will have a passion for the environment; a driving ambition to explore the intersection between digital technologies and human behaviours; and have outstanding records of achievement.

Applications from candidates with a background in Electrical Engineering; Mathematics Computer Science; Control Engineering and Design Engineering are particularly welcome. **For further details please contact:** r.shorten@imperial.ac.uk **before May 18th, 2022.**