



## Sustainable Innovation 2023 Accelerating Sustainability in the Creative Economy and Creative Industries Online: 24<sup>th</sup> International Conference 20<sup>th</sup> – 26<sup>th</sup> March 2023 University for the Creative Arts Epsom, Surrey, UK



## Dr Darshil Shah, Associate Professor, Centre for Natural Material Innovation, University of Cambridge, UK

Shah is Associate Professor in Materials Science and Design at the University of Cambridge's Department of Architecture, and senior scientist at the Centre for Natural Material Innovation (CNMI). Understanding the relationships between materials, society, technology, history and nature, Shah's research aims to design and innovate with natural materials by exploring low-energy methods of manufacture, improving structural performance, introducing multifunctionalities, translating across disciplines and application sectors. A megawatt wind turbine with a wooden tower and <u>flax biocomposite blades</u>. An affordable anklefoot disability orthosis from recycled plastic waste. An off-grid low-energy house constructed from industrial hemp materials. A room-temperature processing method for artificial spider silk-like textile fibres. A green policy that weaves agroforestry and construction in a circular bioeconomy approach enabling aggressive decarbonisation. These are examples of how Shah's research and design at the CNMI imagines the replacement of anthropogenic materials with bio-based materials, such as engineered timber, bamboo, natural fibres and their composites. Shah's work is published in over 60 peer-reviewed journal papers, has attracted numerous awards such as the International Quadrant Award 2015 and the JEC Asia 2013 Innovation Award, has been exhibited at the Dutch Design Week 2021, London Design Biennale 2021 and Royal Society Summer Science Exhibition 2019, and regularly appears in international media such as on BBC, Reuters, Guardian, Dezeen, and Telegraph.