Lancaster University

THE Awards 2019 – Research Project of the Year: STEM

Institution/Nominee	Lancaster University
Title	The Random Revolution
Key personnel	Rob Young Sam Jarvis Ben Robinson Alex Robson Michael Thompson Ramon Bernardo GavitoGillian Whitworth
URL	https://quantumbase.com/sse/solution/
Submission	Lancaster University has developed the world's first practical Quantum Random Number Generator, creating unbreakable encryption. With the number of connected smart devices up to 30bn by 2022, security is paramount. The Q-RAND® device can be integrated cheaply into new and existing microelectronics; a major Silicon Valley company is currently negotiating a potential licensing deal. Three significant engagement events have brought this research before a global audience. At the Royal Society Summer Science Exhibition 2018, *The Random Revolution* was visited by over 10,000 people including the Head of GCHQ, The Times and the BBC. Thousands of visitors also attended Lancaster exhibits at both *New Scientist Live* in London and the Forum international de la Cybersécurité, a major European showcase for cybersecurity research and commercialisation. This success has led to a repeat invitation to return to the Royal Society Summer Science Exhibition 2019 for an unprecedented third year running.