

Citation for Clarice Poon (Whitehead Prize)

Short citation

Dr Clarice Poon of the University of Warwick is awarded a Whitehead Prize for her pioneering work at the intersection of optimization, imaging sciences, and machine learning. She has made groundbreaking contributions to the design and analysis of large-scale optimization schemes aimed at solving ill-posed inverse problems and advancing supervised machine learning techniques. Poon has provided in-depth mathematical analysis of the super-resolution capabilities of these approaches, showcasing an impressive breadth that covers imaging problems, compressed sensing, neural network training, and optimal transport.

Long citation

Dr Clarice Poon

These techniques cleverly integrate concepts from both smooth and non-smooth optimization, facilitating rapid convergence speeds and reduced computation time per iteration. Her ability to provide a comprehensive mathematical analysis of these methods, demonstrating their relevance and precision across a wide array of scenarios in imaging and learning, is particularly noteworthy.

It is evident that Poon's work has profoundly influenced the mathematics of data sciences. Her ability to understand and mathematise the critical applied questions in these domains renders her contributions not only groundbreaking but also highly pertinent and impactful.