Whitehead Prize: citation for Chunyi Li

Short citation:

Dr Chunyi Li of the University of Warwick is awarded a Whitehead Prize for his deep contributions to a wide range of questions in algebraic geometry, in particular in the theory of stability conditions and moduli spaces.

Long citation:

Dr Chunyi Li of the University of Warwick is awarded a Whitehead Prize for his deep contributions to a wide range of questions in algebraic geometry, in particular in the theory of Bridgeland stability conditions and moduli spaces.

In a remarkably original work (joint with Xiaolei Zhao) he described the birational geometry of moduli spaces of stable sheaves on the projective plane (and its non-commutative deformations). The main contribution is an extension and generalisation of a research program initiated by Arcara, Bertram, Coskun, Huizenga, and Woolf, thus completing a beautiful series of mathematical papers, starting from the work of Drézet-Le Potier and Gorodentsev–Rudakov.

In a major series of papers, he then established the existence of Bridgeland stability conditions on the quintic threefold, thus settling a conjecture which had been open for about twenty years. This is a beautiful piece of work that represents a culmination of several previous attempts by other people. The approach is so innovative that he obtained along the way several surprising results in the theory of vector bundles on varieties and it led to a new research direction, including deep applications to the theory of counting invariants.