Whitehead Prize: citation for Stuart White

Short citation:

Professor Stuart White of the University of Oxford is awarded a Whitehead Prize in recognition of his contributions to the structure and classification theory of nuclear C*-algebras and their interplay with von Neumann algebras.

Long citation:

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White received his PhD in 2006 in Edinburgh and has since then made deep and important contributions in very diverse areas of operator algebras. In its main focus — the structure theory of nuclear C*-algebras and their interplay with von Neumann algebras — his research programme directly or indirectly addresses the most important open problems in this area. This breadth of interests has enabled him to link a range of very distinct methods, and to introduce a number of important new techniques. His contributions to the Kadison–Kastler problem, to the Toms–Winter conjecture, and to the Elliott classification programme are seminal, and they will continue to open up further unexpected connections and solutions to long-standing problems.

In a series of exciting contributions to perturbation theory, White and collaborators provided the first class of nonamenable von Neumann algebras which are stable under closeness, then showed that a number of properties and invariants (including the Cuntz semigroup) is stable under small perturbations, and eventually settled the Kadison–Kastler conjecture for separable nuclear C*-algebras. In a 2015 paper White and company completed the proof of the regularity conjecture for nuclear C*-algebras in the simple and monotracial case. In a more recent joint effort it is shown that Jiang–Su stability implies finite nuclear dimension for simple unital nuclear C*-algebras. Probably White's most visible contribution to date is the paper resolving Rosenberg's conjecture on quasidiagonality of amenable group C*-algebras, which also was a decisive step for the classification of stably finite simple nuclear C*-algebras. All of these results have substantially influenced their respective areas, and have led to a plethora of exciting further developments.