Complete Selflessness for Reduced Free and Graph Products of C*-Algebras

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Selflessness, introduced by Robert and strengthened by Ozawa through the notion of complete selflessness, provides a C*-algebraic analogue of II_1-factor phenomena in the tracial setting. In this talk, I will present recent joint work establishing complete selflessness for large classes of reduced free products and reduced graph products of C*-algebras under a natural Avitzour-type condition, without assuming rapid decay. As a consequence, these algebras satisfy the uniform Dixmier property and exhibit a structural dichotomy: they are either monotracial, in which case they have strict comparison and admit a unique embedding of the Jiang–Su algebra up to approximate unitary equivalence, or they are traceless and, under faithfulness assumptions, purely infinite.