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George A. Elliott* (elliott@math.toronto.edu). *The classification problem for amenable C^* -algebras.*

Sixty years after Glimm's classification of UHF algebras by supernatural numbers, followed by Bratteli's generalization to arbitrary approximately finite-dimensional C^* -algebras (AF algebras) using Bratteli diagrams, which turned out to be equivalent to certain ordered group information, the classification of all reasonably well behaved unital simple (separable amenable) C^* -algebras, in terms of a simple (K-theoretical) invariant, has now been achieved. The non-unital case seems not far behind. Non-simple C^* -algebras, or less well behaved simple C^* -algebras, still present a considerable challenge. (Received September 17, 2019)