The general linear group as a complete invariant for $C^*$-algebras

In 1955 Dye proved that two von Neumann factors not of type $I_{2n}$ are isomorphic (via a linear or a conjugate linear $*$-isomorphism) if and only if their unitary groups are isomorphic as abstract groups. We consider an analogue for $C^*$-algebras. We show that the topological general linear group is a classifying invariant for simple, unital AH-algebras of slow dimension growth and of real rank zero, and the abstract general linear group is a classifying invariant for unital Kirchberg algebras in UCT. This is join work with Prof Thierry Giordano.