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Simplicity of partial skew group rings

Let R be a commutative ring, G a group and α a partial action by ideals that contain local units. In this talk we will describe a simplicity criterion for the partial skew group ring R*G in terms of maximal commutativity and G-simplicity of R. If time permits we will sketch how to use this result to give a new proof of the simplicity criterion for Leavitt path algebras and how to apply it in partial topological dynamical systems.