

*Abstract submitted for 61st Annual Meeting of the Australian Mathematical Society*

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**Title:** Graded Steinberg algebras and their representations

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**Session:** Category Theory, Algebraic Topology, K-Theory

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We study the category of left unital graded modules over the Steinberg algebra of a graded ample Hausdorff groupoid. We show that this category is isomorphic to the category of unital left modules over the Steinberg algebra of the skew-product groupoid arising from the grading. To do this, we show that the Steinberg algebra of the skew product is graded isomorphic to a natural generalisation of the the Cohen–Montgomery smash product of the Steinberg algebra of the underlying groupoid with the grading group. This is joint work with Pere Ara, Roozbeh Hazrat, Aidan Sims.