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Alexandru Chirvasitu* (chirva@uw.edu), University of Washington, Department of Mathematics, Seattle, WA 98195, and **Paul Smith**. *Quantum symmetry for quantum projective spaces*.

AS-regular algebras are non-commutative analogues of smooth projective schemes, with those of global dimension four behaving in many ways like three-dimensional projective space. In this talk I will introduce a specific family of such algebras arising from certain elliptic solutions for the quantum Yang-Baxter equation and study the phenomenon whereby a quantum group acts on each algebra in the family.

The quantum group action gives rise to autoequivalences of the category of (graded) modules that do not come from genuine algebra automorphisms. This then helps in classifying certain well-behaved modules that play the role of lines inside the quantum projective space.

(joint w/ S. Paul Smith) (Received January 16, 2016)