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J. Scott Carter* (carter@jaguar1.usouthal.edu), Department of Mathematics and Statistics,
ILB 325, Mobile, AL 36688. *Introduction to Quandle Algebras.*

This talk is based on on-going work with Alissa Crans, Mohamed Elhamdadi, and Masahico Saito. We develop the idea of self-distributivity in the more general context of a bialgebra. We can construct solutions to the Yang-Baxter equation from certain quandle algebras, and there are methods of constructing a self-distributive map in a Hopf algebra.

We hope to construct a cohomology theory that encompasses analogues of Lie Algebra cohomology and quandle cohomology. (Received February 16, 2006)