1035-68-686 Robert W McGrail and Mona B Merling* (mm386@bard.edu), 30 Campus Rd, Annandale, NY 12504, and Japheth Wood. Toward Quandle Dichotomy. Preliminary report.

Feder and Vardi (1993) discovered a strong correspondence between finite algebras and computational complexity through the constraint satisfaction problem (CSP). It allows a classification of algebras according to their complexity within **NP**. We focus on quandles, algebras that arise via knot theory. In particular, we demonstrate that all finite quandles that are not locally connected are **NP-complete**. Furthermore, we will present recent progress on the classification of locally connected quandles. (Received September 13, 2007)