1092-08-178 **David M. Clark*** (clarkd@newpaltz.edu). *Algebraic Terms through Simulated Evolution.*

We report on recent successful applications of evolutionary computation to the problem of finding terms to represent arbitrary term operations on a given finite groupoid. Evolution requires that small changes in a term result in small changes in the associated term operation. We will present two readily testable conditions under which a finite groupoid is guaranteed to have this continuity property: a relational condition and an asymptotic condition. We will show evidence that most finite groupoids satisfy both of these conditions, and will then display some very large discriminator terms that were found by evolution and are demonstrably not constructible by previously known methods. (Received August 08, 2013)