1054-16-215   **David E Radford*** (`radford@uic.edu`), University of Illinois at Chicago, Department of Mathematics, SEO 322 (m/c 249), 851 South Morgan, Chicago, IL 60607-7045, and **Louis H Kauffman** (`kauffman@uic.edu`), University of Illinois at Chicago, Department of Mathematics, SEO 322 (m/c 249), 851 South Morgan, Chicago, IL 60607-7045. *Oriented Quantum Algebras and Coalgebras, Invariants of 1-1 Tangles, Knots, and Links.* Preliminary report.

Oriented quantum algebras give rise to oriented quantum coalgebras. Both account for invariants. We develop a general theory for oriented quantum coalgebras, relate them to oriented quantum algebras, and describe how invariants arise from them.

Oriented quantum coalgebras may very well hold an advantage over oriented quantum algebras in computation of invariants. We note that the dual of a quasitriangular Hopf algebra has an oriented quantum coalgebra structure. (Received September 14, 2009)