David E. Radford* (radford@uic.edu). On the algebra of a class of finite-dimensional objects which accounts for some invariants of 1-1 tangles, knots, and links. Preliminary report.

There are generalizations of quasitriangular and coquasitriangular Hopf algebras, namely quantum algebras and coalgebras and their specializations, which produce regular isotopy invariants of 1-1 tangles, knots, and links, classical or virtual. We investigate the class of these objects from the point of view of duality, their representations, and various constructions, including products. The nature of the invariants arising from constructions is explored. (Received September 17, 2011)