Naihuan Jing* (jing@ncsu.edu), Dept of Mathematics, N. C. State University, Raleigh, NC 27695-8205, and Jian Zhang, School of Mathematical Sciences, South China Univ. of Technology, Guangzhou, Guangdong 510640, Peoples Rep of China. Quantum determinants and quantum Pfaffians.

We use quantum exterior algebras to give a new and elementary formulation of quantum Pfaffians and generalized quantum Pfaffians based on quantum Pluecker relations. In this approach, the quantum Pfaffians are for any square matrix satisfying a simple quadratic relation. In particular, we prove the fundamental identity expressing any quantum determinant as a quantum Pfaffian. (Received January 14, 2015)