Meeting: 1004, Bowling Green, Kentucky, SS 10A, Special Session on Hopf Algebras and Related Topics

1004-20-219 **Jacob Towber*** (`jtowber@uic.edu`), 3925B Church St, 60203 Skokie, IL, Andorra. *How to compute the Faddeev-Reshetikhin-Takhtajan Quantum Enveloping Algebra.*

Given a Yang-Baxter operator $R : V \otimes V \to V \otimes V$ over a groundfield K, there is a well-known construction due to Fadeev-Reshtikhin-Takhtajan of an associated bi-algebra ,and a somewhat less well-known construction of an associated Hopf algebra. The latter has only hitherto been explicitly computed (obtaining generator-and-relations presentation, and quantum analog of the PBW basis) in very special cases, and these computations all involve an essential connection between the FRT construction, and the concept of a braiding product. The purpose of the talk, is to sketch this connection. (Received January 25, 2005)