

Meeting: 1001, Evanston, Illinois, SS 24A, Special Session on Hopf Algebras at the Crossroads of Algebra, Category Theory, and Topology

1001-16-188 **Mitsuhiro Takeuchi***, Institute of Mathematics, University of Tsukuba, 305-8571 Tsukuba, Ibaraki, Japan. *Representations of the Hopf algebra $U(n)$* . Preliminary report.

We introduce a pointed Hopf algebra $U(n)$ motivated by the Hopf algebra $E(n)$ introduced by M. Beattie, S. Dascareanu and L. Grunenfelder and studied by F. Panaite, F. Van Oystaeyen and S. Caenepeel. We study representations of $U(n)$. We determine all its finite dimensional irreducible representations and their dimensions explicitly. We prove some tensor product decomposition result. The story goes somewhat similar to representation theory of quantum enveloping algebras at $q = -1$. (Received August 25, 2004)