

1058-57-155

**Nathan Geer\*** ([nathan.geer@usu.edu](mailto:nathan.geer@usu.edu)), Utah State University, Math, Logan, UT 84322-3900,  
and **Bertrand Patureau**, Université de Bretagne-Sud. *Polynomial 6j-Symbols and States Sums  
on Triangulated 3-Manifolds*.

Following V. Turaev and O. Viro, I will discuss a construction which leads to information about the topology of a 3-manifold from one of its triangulation. This construction is based on algebraic tools which are 6-parameter quantities called 6j-symbols. I will give the formulas of a new family of such 6j-symbols, coming from nilpotent representations of quantum  $\mathfrak{sl}(2)$  at a root of one. This is joint work with B. Patureau and V. Turaev. (Received February 12, 2010)