1127-18-289   **Paul Gustafson*** (`pgustafs@math.tamu.edu`). *Computing quantum mapping class group representations with Haskell.* Preliminary report.

Stringnet is a Haskell library for computing mapping class group representations from the Turaev-Viro-Barrett-Westbury (TVBW) construction. Its main ingredients are (i) Kirillov's description of the TVBW representation space as a space of embedded, colored graphs modulo local moves, (ii) calculation of local moves for a set of mapping class group generators, and (iii) representation of the relevant categorical data in Haskell's type system. In this talk, I will outline *Stringnet*'s development and walk through the calculation of a braid group representation from a Tambara-Yamagami category. I will also explain how the *Stringnet* library relates to the Property F conjecture. (Received February 06, 2017)