

**Meeting:** 1003, Atlanta, Georgia, SS 21A, AMS Special Session on Mathematics and Mathematics Education in Fiber Arts

1003-20-1345      **Sharon M Frechette\*** ([sfrechet@mathcs.holycross.edu](mailto:sfrechet@mathcs.holycross.edu)), Dept. of Mathematics & Computer Science, College of the Holy Cross, One College Street, Worcester, MA 01543. *Cable patterns in Aran knitting, and braid groups*. Preliminary report.

Aran knitting has a rich history, originating in the west of Ireland centuries ago, and then developing as an industry in the early twentieth century. Traditional Aran stitches tell a story of family, work, and the landscape. Cable stitches are said to represent fisherman's ropes, and many variations of cables are commonly used. The intricate patterns among the cable's strands can be represented mathematically as braid words. We discuss this mathematical connection, through examples of the most widely used cable variations. Samples of Aran knitting will be included in the special session's Mathematical Fiber Arts Exhibit (Received October 04, 2004)