

1046-54-1626      **sarah-marie belcastro\*** ([smbelcas@toroidalsnark.net](mailto:smbelcas@toroidalsnark.net)). *Braid words in generalized helix stripe patterns.*

When multiple strands of yarn are used in knitting (as, for example, when knitting with more than one color), a knitter twists a pair of strands when switching from using one to using another. The yarn strands between the knitting and the balls of yarn get tangled as the knitting proceeds. In turn, this produces a braid in the strands. This talk will consider the special case of the braid words generated by generalized helix stripe patterns. The basic technique produces spiralling stripes of row-height one. (Standard striping produces cylindrical or line-segment stripes.) We will first explain how to generalize helix striping to thicker stripes and different numbers of colors. We will then determine which braid words are generated using generalized helix stripe patterns. (This has practical applications in terms of detangling yarn while knitting.) (Received September 16, 2008)