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Sarah-Marie Belcastro* (smbelcas@toroidalsnark.net), Department of Mathematics and Statistics, Smith College, Northampton, MA 01063. *Knitting Uniformly Curved Pants.*

Most sewn or knitted pants are composed of zero-curvature (flat) pieces seamed together to create negative curvature in one location. Instead of creating curvature extrinsically, why not use uniformly and constantly curved fabric to achieve intrinsic curvature (and properly fitting) pants?

There are no fabric mills which produce curved fabrics, so we must create them ourselves. The talk will begin with a review of discrete measures of curvature for polyhedral 2-manifolds, and explain how to achieve curvature in knitted fabrics. This will be followed by an explanation of how to use measurements and gauge to determine a basic knitting pattern for a pair of pants with constant negative curvature. (Received September 17, 2007)