

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

1003-00-517 **Joshua Holden*** (holden@rose-hulman.edu), CM #125, Rose-Hulman Institute of Technology, 5500 Wabash Ave., Terre Haute, IN 47803, and **Lana Holden** (yarndiva@abcs.com). *The graph theory of Blackwork embroidery.*

Blackwork embroidery, also known as “Spanish stitch” or “Holbein stitch”, is a needlework technique often associated with Elizabethan England. The patterns used in Blackwork generally are strongly geometric, and are traversed in a way that can be easily described by graph theory. We will characterize these graph traversals and present some algorithms that may be of practical use to needleworkers as well as theoretical interest. (Received September 19, 2004)