1116-VU-302 **Kathryn Bryant*** (kbryant01@brynmawr.edu), kbryant01@brynmawr.edu. *Determining Sliceness in 5-Stranded Pretzel Knots: The Single-Pair Case.*

Within any infinite family of knots, a compelling question to ask is which members of the family hold certain knot theoretic properties and which do not. One such property of interest is that of being *smoothly slice*, which means that the knot bounds a smoothly embedded disk in the 4-ball. This talk will focus on the problem of determining the slice knots within the family of 5-stranded pretzel knots, specifically of those with exactly one pair $(k, -k)$ of canceling twist parameters. The result builds on work of Lisca with 2-bridge knots, and on work of Greene and Jabuka with 3-stranded pretzel knots. The conditions for sliceness used to get results for 2-bridge knots and 3-stranded pretzel knots are necessary but *insufficient* for 5-stranded pretzel knots with one or two pairs of canceling twist parameters. Thus, a new technique is implemented to obtain results in the single-pair case. This is joint work with Paul Melvin. (Received September 21, 2015)