

Bi-State Math Colloquium

Who: Sr. Barbara E. Reynolds, SDS, Ph.D.

Where: Thursday, March 7, 4:00 pm

When: Ottensman 126, UW-Platteville

The Arbelos, the Salinon and the Parbolos

Archimedes gave us a number of interesting problems in his *Liber Assumptorum* (or *Book of Lemmas*), among which are several problems involving the *arbelos* (or “shoemaker’s knife”) and the *salinon* (or “salt cellar”). Part of the fascination with these figures is that they are apparently very simple, being bounded by semicircular arcs, and yet provide a rich source of problems. A recent article by Jonathan Sondow introduces the *parbelos*, a figure analogous to the arbelos which is bounded instead by parabolas. Using the Geometer’s Sketchpad, we will construct examples of these figures, and explore some of their properties.

Sr. Barbara Reynolds is a mathematician, a Salvatorian Sister, and a teacher. She did graduate studies in mathematics at Saint Louis University, completing her PhD in June 1979. She entered the Sisters of the Divine Savior and began teaching at Cardinal Stritch College (now Cardinal Stritch University) in August 1979. As a mathematics teacher, she has been involved in projects that focused on the teaching of calculus and on using cooperative learning effectively in teaching undergraduate mathematics. She has served as editor and coauthor of several books. Most recently, she and Bill Fenton completed *College Geometry Using The Geometer’s Sketchpad* (Wiley, 2012). As a Salvatorian Sister she has had opportunities to teach arithmetic for pre-nursing students in South Dakota, high school English literature in Mississippi, and conversational English in Tanzania, East Africa. Most summers find her spending time with the Clavius Group, an international group of research and teaching mathematicians (and their families). It was while she was with the Clavius Group in 2000 that she first became intrigued by the arbelos.