

**ZMATH 2016e.00961**

**von Renesse, Christine; Ecke, Volker**

**Discovering the art of mathematics: using string art to investigate calculus.**

PRIMUS, Probl. Resour. Issues Math. Undergrad. Stud. 26, No. 4, 283-296 (2016).

Summary: One goal of our Discovering the Art of Mathematics project is to empower students in the liberal arts to become confident creators of art and imaginative creators of mathematics. In this paper, we describe our experience with using string art to guide liberal arts students in exploring ideas of calculus. We provide excerpts from our inquiry-based learning materials (freely available at [www.artofmathematics.org](http://www.artofmathematics.org)) and show some original student string art. Additionally, we reflect on the complexity of the definition of tangency and how to make the complexity come alive in the classroom.

*Classification:* M85 I65 D45

*Keywords:* calculus; string art; curve stitching; inquiry-based learning; mathematics for liberal arts; discovering the art of mathematics

doi:10.1080/10511970.2015.1124160