

1125-51-2484      **Kathryn Leonard\*** ([kleonard.ci@gmail.com](mailto:kleonard.ci@gmail.com)), 1 University Dr, Camarillo, CA 93012. *Modeling Shapes of Objects with Undergraduates.*

Mathematical modeling of shapes of 2D objects is crucial for building artificial vision systems that mimic human capability. The topic offers a wide range of interesting problems for research-level mathematicians and undergraduate students alike. We present a few research-level questions and describe some related undergraduate-level projects ranging from theoretical to experimental to applied. We also share a time-tested philosophy for identifying suitable initial projects for new undergraduate researchers. (Received September 20, 2016)