Speaker: Tyler Gaona, Duquesne University  
Title: Applications of Gaussian curvature to image denoising

Abstract: A digital image can be viewed as a surface in $\mathbb{R}^3$, so it is natural to consider geometric properties of the image. Gaussian curvature is one such property. This talk will consist of an informal discussion of Gaussian curvature and two different ways it can be applied to the process of removing noise from an image. The only background necessary for this talk is some familiarity with multivariate calculus.

Speaker: Donovan Ramsey, Duquesne University
Title: Edge guided curvature based denoising

Abstract: Recent studies suggest that various denoising methods can be improved upon by denoising the curvature information of the noisy image instead of processing the image directly. We have observed that while the object boundaries within an image always benefit from this approach, smooth regions do not always enjoy the same benefits. In this research we are currently exploring mechanisms within this framework for treating smooth areas and edge regions differently to generate an optimal reconstruction across the entire image.

Date: Wednesday, September 28th
Time & Place: 2:00 pm, COLH 446

All are welcome! Refreshments will be served!