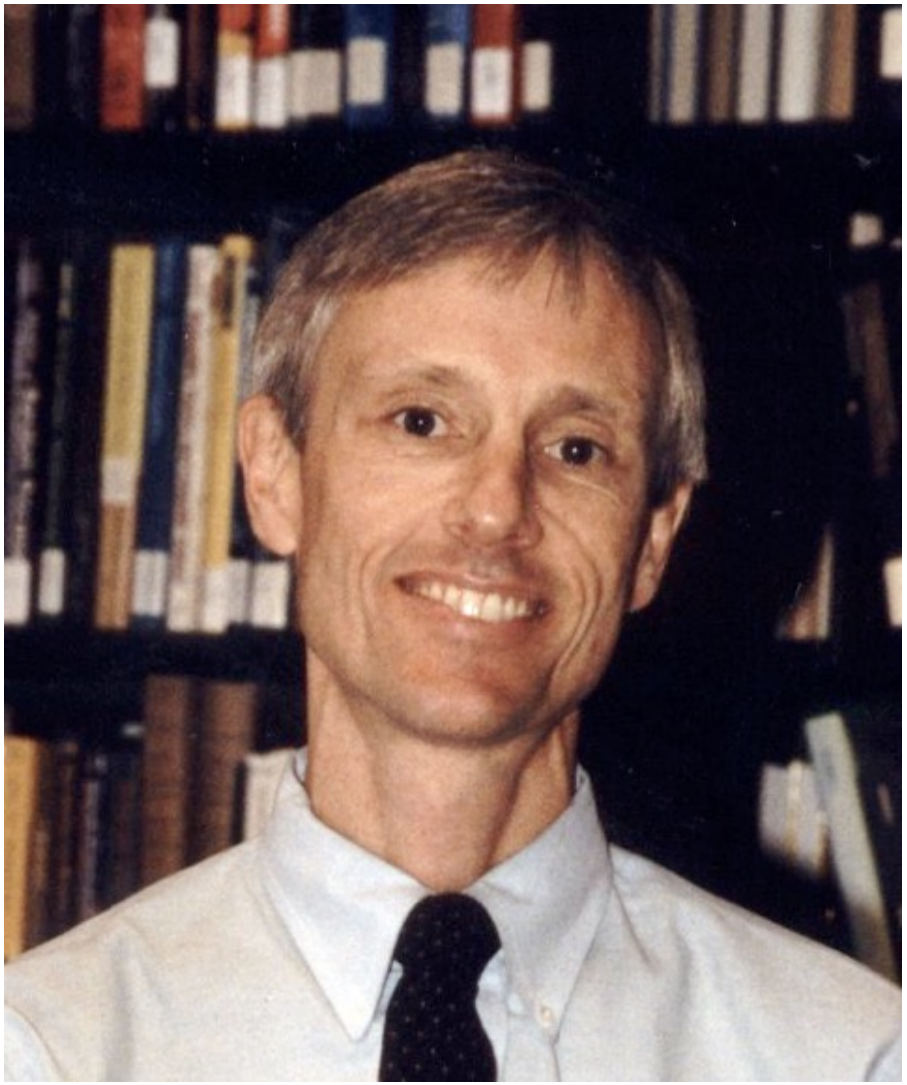
The Isoperimetric Problem with Density

Frank Morgan, Williams College

Tuesday, April 26, 2016, 7:30 PM – 8:30 PM, Dwight Performing Arts Center (DPAC)



The circle provides the least-perimeter way to enclose given area in the plane ("solves the isoperimetric problem"). How does the optimal shape change if you give the plane a weighting or density on both area and perimeter? One interesting example is a weighting proportional to r^2. There has been a huge surge of interest in weightings since their appearance in Perelman's proof of the Poincaré Conjecture. The talk will include open problems and work by undergraduates.

Please contact Sarah Mabrouk, smabrouk@framingham.edu, 508-626-4785, Mathematics Department, for additional information.
https://www.framingham.edu/faculty/smabrouk/preskenis/annual/fourteenth.htm