Michigan Math Club Thursday at 4pm in the Nesbitt Room

Free Pizza and Pop

You Can't Gift Wrap A Basketball

David Speyer

Abstract for 24 March 2016



It's easy to wrap paper around a cube or a cylinder. And paper can be twisted into lots of other shapes as well -- a Mobius strip, a helix, a cone... But paper cannot be made into a sphere without tearing, and there are many other curved forms it cannot take on. We'll talk about what distinguishes the first list of shapes from the second, using only basic calculus and linear algebra. We'll also talk about some other practical consequences of this result, beyond the field of gift wrapping.