## Mono-Monostatic Bodies and Where to Find Them

## Undergraduate Math Club CORNELL UNIVERSITY

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**SPEAKER** Misha Molodyk

## ABSTRACT

The roly-poly or wobbly man is a common toy that has only one stable and one unstable equilibrium position. Everyday experience suggests that such objects (often called mono-monostatic bodies) must have a non-uniform mass density or be concave. However, in 2006, Gábor Domokos and Péter Várkonyi published an example of a convex homogeneous mono-monostatic body, now known as the gömböc. I will talk about the problem of existence of 2D and 3D mono-monostatic bodies, present the original construction of the gömböc, and discuss some of its properties. As a bonus, there will be an opportunity to play with a real gömböc after the talk.

## NOV 6 at 4:45pm Malott 532 \* Refreshments