

# IDENTIFICATION OF THE OPTIMAL SCALING LAW FOR THE GROUND STATE ENERGY OF UNIAXIALLY COMPRESSED THIN FILM

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## **Abstract**

In [Bella & Kohn: *Wrinkles as the result of compressive stresses in an annular thin film, to appear in CPAM*] we identified the optimal scaling law of the minimum of the elastic energy of a stretched annular thin elastic sheet. In this talk I will describe the next step towards the understanding of this problem – I will identify the optimal prefactor in the scaling law. Moreover, I show that this prefactor can be characterized as a minimum of a much simpler (scalar) variational problem.