

---

**RUSTUM CHOKSI**, Simon Fraser University

*The Periodic Isoperimetric and Cahn–Hilliard Problems and Nonlocal Perturbations*

I will discuss two classical problems in analysis and geometry posed on  $n$ -dimensional flat torus. I will focus on some interesting questions which remain open. I will then discuss a nonlocal isoperimetric problem with an emphasis on the calculation and application of its first and second variations.

This talk is based on joint work with Peter Sternberg (Indiana University).