

Seminar Announcement

Graduiertenseminar

10. 10. 2016 at 11 am c.t.

Seminarraum SE 40 (Mathematik Ost)

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Variational models for epitaxially strained crystalline films

We consider the deposition of a thin crystalline film on a thick rigid crystalline substrate in the case that the lattice parameters of the film and the substrate are not compatible. Depending on the volume of the film, the shape of the film typically changes from a flat layer at small volumes to the formation of isolated islands at large volumes. Such "quantum dots" have proven useful for various applications in optical and optoelectronic devices. In this talk, I will discuss variational models introduced in the physical literature to describe such phenomena, and describe recent mathematical progress as well as open questions.