

Einladung zum Würzburger Mathematischen Kolloquium

Julius-Maximilians-Universität Würzburg • Fakultät für Mathematik und Informatik

Prof. Dr. Harald Garcke

Universität Regensburg

The Mathematics of Snow Crystal Growth

Mittwoch, den 7. Mai 2014 • 16:15 Uhr

Raum SE 40, Mathematik Ost, Emil-Fischer-Str. 40, Campus Hubland-Nord

Inhaltsangabe

The beauty and variety of snow crystals continues to fascinate layman and scientists alike. In my talk I will first give a short review of the history of snow crystal research starting with the pioneering work of Johannes Kepler. Then a mathematical model for snow crystal growth, leading to a free boundary problem for a parabolic partial differential equation, is derived. I will briefly discuss how this free boundary problem can be formulated as a gradient flow and how this viewpoint leads to existence of weak solutions. Finally, I will introduce a new numerical method for snow crystal growth which allows it for the first time to compute many snow crystal forms that appear in nature with the help of a model which is based on basic physical laws.



www.mathematik.uni-wuerzburg.de/kolloquium.html

Zu diesem Vortrag laden wir Sie herzlich ein.
Im Anschluss an die Vorträge Kaffee und Tee im Foyer vor dem SE 40.

Die Dozentinnen und Dozenten der Mathematik

