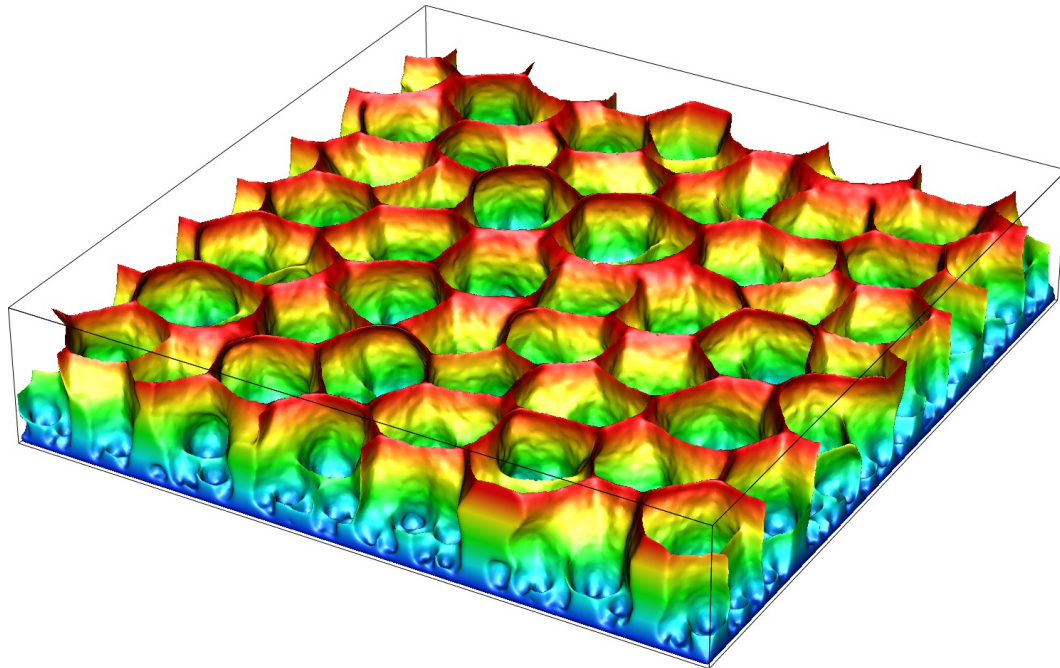


# SIMULATION OF LARGE-SCALE FRACTURE

MSC INTERNSHIP, UNIVERSITY OF LUXEMBOURG



Numerical simulation of the crack pattern generated during the thermal shock of a ceramic slab. *Bourdin et al. 2013*

## Project Description

We are looking for a MSc student to undertake an internship for a period of 3 to 6 months during the summer at the University of Luxembourg.

The student will extend an existing FEniCS-based code for the simulation of fracture propagation to a problem of industrial relevance in microchip manufacturing.

### Key skills to be developed:

- Derivation of weak form PDEs.
- Variational fracture mechanics.
- FEniCS and Python.
- High Performance Computing.
- PETSc.
- Visualisation.

## Supervision and Location

The intern will work under the Chair of Prof. Stéphane Bordas in the Research Unit of Engineering Science at the University of Luxembourg. The primary scientific contacts for the project will be Dr. Jack S. Hale at the University of Luxembourg and Dr. Corrado Maurini at Université Pierre-et-Marie-Curie.

## Accommodation

Accommodation at a subsidised rate can be provided by the University of Luxembourg.

## Contact

Applicants should contact Jack S. Hale via email: [jack.hale@uni.lu](mailto:jack.hale@uni.lu)