

## **1. An introduction to computations in crystallographic textures**

Topics covered:

1. Parameterizations of orientations
2. Geometry of the orientation space
3. Statistics in the orientation space
4. Impact of symmetries
5. Standard (mis) orientation distributions
6. Example application: effective elastic properties of polycrystals

Course based on: A.Morawiec, Orientations and rotations, Springer 2004.

Description:

The field of crystallographic textures is an area of materials science concerned with orientations of crystallites in polycrystalline materials, distributions of orientations, orientation differences and their impact on materials properties. The field relies heavily on computations.

The main objective of the course is to convey essential notions, concepts and computational methods of analysis of crystallographic textures.