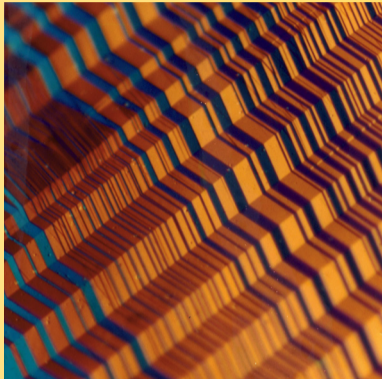


courtesy of Chun-hwa Chu



Mathematics for Complex Materials

Organizers: Xavier Lamy, Luc Nguyen, Angkana Rüland, Arghir Zarnescu

The world of materials is undergoing a revolution as the number of materials, their sophistication and applications are witnessing an unprecedented boom. A particularly important class of materials which are driving this process and which pose key mathematical challenges are the so-called “complex materials”. These materials have extraordinary features and capabilities that have been intensively exploited technologically including many of the most impressive technological applications of our modern living.

The program aims to contribute to the long-term development of the mathematical tools relevant to the study of complex materials, starting from existing known mathematical models. A key objective will be to identify the physically relevant analytical challenges and problems that are common to a large class of complex materials and provide basic steps for addressing them.

Workshops

Workshop: Current challenges in complex materials: modelling and analysis
(January 9 – 13)

"SPP meets TP" Workshop: Variational methods for complex phenomena in solids
(February 21 – 24)

School: Recent trends in the mathematics of complex materials
(March 20 – 24)

Workshop: Topological and geometrical aspects in complex materials
(March 27 – 31)

Those planning to
participate include:

John Ball
Valeria Banica
Maria-Carme Calderer
Giacomo Canevari
Xian Chen
Elisa Davoli
Giovanni Di Fratta

Georg Dolzmann
Irene Fonseca
Adriana Garroni
Maria Stella Gelli
Radu Ignat
Richard James
Robert Jerrard

Dorothee Knees
Marta Lewicka
Fanghua Lin
Alexander Mielke
Petru Mironescu
Maria Giovanna Mora
Felix Otto

Celia Reina
Etienne Sandier
Lucia Scardia
Anja Schlömerkemper
Bernd Schmidt
Valeriy Slastikov
Barbara Zwicknagl



Call for participation: The Hausdorff Research Institute offers visiting positions for the whole period of the trimester program (for senior scientists, postdocs and PhD students). The deadline for applications is **June 30, 2022**

Please send applications (including CV and, for postdocs and PhD students, a letter of recommendation) using our online application form at <https://www.him.uni-bonn.de/index.php?id=4796>. In addition numerous fellowships for shorter periods are available.