

Abstract

Oberwolfach Workshop:

Uncertainty Quantification

Dates:

10 - 16 March 2019 (Code: 1911)

Organizers:

Oliver Ernst, Chemnitz

Fabio Nobile, Lausanne

Claudia Schillings, Mannheim

Tim Sullivan, Berlin

Uncertainty quantification is concerned with including and characterising uncertainties in mathematical models. Major steps comprise proper description of system uncertainties, analysis and efficient quantification of uncertainties in predictions and design problems, and statistical inference on uncertain parameters starting from available measurements. Research in this area addresses fundamental mathematical and statistical challenges, but has also wide applicability in areas such as engineering, environmental, physical and biological applications.

The workshop will focus on mathematical challenges at the interface of applied mathematics, probability and statistics, numerical analysis, scientific computing and application domains. The aim of the workshop is to bring together experts from those disciplines in order to enhance the interaction, to exchange ideas and to develop new, powerful methods for uncertainty quantification.