

ADMOS 2017

Minisymposium on

Goal-oriented Error Estimation and Applications

Organized by

Serge Prudhomme

Department of Mathematics and Industrial Engineering

Ecole Polytechnique de Montréal

Advances in Computational Science and Engineering have led scientists to consider simulations that involve the solution of increasingly complex multiphysics and multiscale problems. It has thus become crucial to rely on error estimation tools to assess the accuracy of the predictions, more particularly with respect to quantities of interest, and to design suitable adaptive strategies.

The objective of the mini-symposium will be to present fundamental contributions to goal-oriented error estimation and adaptive methods and discuss recent advances and challenges towards the application of these methods to:

- nonlinear problems;
- time-dependent problems;
- multiphysics, multiscale, and coupled problems;
- error estimation for adaptive reduced-order modeling;
- mesh refinement strategies;
- stability, convergence, and optimality analysis of adaptive methods;
- error estimation in a probabilistic setting;
- modeling error estimation and adaptive modeling; etc.

Those interested in these topics are welcome to contribute with an abstract to the mini-symposium.