

**ADMOS 2019**  
**El Campello, Alicante, Spain, May 27-29, 2019**

MINISYMPOSIUM ON

**Applications of Goal-Oriented Error Estimation and Adaptivity**

Organized by

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Advances in Computational Science and Engineering have allowed scientists to contemplate simulations that involve increasingly complex multiphysics and multiscale problems. However, it is also becoming important, perhaps more than ever, to assess the accuracy of the predictions and design suitable adaptive strategies by relying on a posteriori error estimation.

The topic of error estimation and adaptation, globally referred to as model verification, goes now beyond classical discretization error assessment and mesh refinement. It also encompasses adaptive modeling, whose main objective is to adaptively enrich surrogate models derived from model reduction techniques. It further involves novel topics relevant to engineering applications, including the calculation of error bounds for a large class of physical problems, the control of errors due to the modeling of uncertainty, etc.

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 and adaptive schemes for uncertainty quantification;
- Modeling error estimation and adaptive modeling; etc.

Those interested are welcome to send an email to the organizer at [serge.prudhomme@polymtl.ca](mailto:serge.prudhomme@polymtl.ca) and to contribute with an abstract to the mini-symposium.