



## **Stochastic inverse problems in linear and nonlinear dynamics**

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Inverse problems are fundamental to the development and validation of numerical models of complex dynamic systems. Such problems are, for instance, encountered in engineering design and model updating of complex dynamic systems. In presence of uncertainties or variabilities in the dynamic systems, these problems should be redefined and suitable methods need to be developed for solving them. In this context, this Mini-symposium will be focused on recent advances in theoretical, numerical and experimental methods related to stochastic inverse problems in linear and nonlinear dynamics. The topics to be covered will include, but are not limited to:

- Parameter identification.
- Structural modification.
- Model updating.
- Stochastic model updating.
- Dynamic reanalysis.
- Uncertainty identification.
- Bayesian approach.
- Sensitivity analysis.
- Model reduction and metamodeling.
- Design of experiments.
- Experimental uncertainties.
- Non probabilistic approaches.
- Robust optimization and design problems (RBO, RBDO).