# Special Issue on Order-sorted Rewriting
# Foreword of the Guest Editor

Equational logic is ubiquitous in computer science. It is the basis for algebraic specification, rewriting, unification, and equational programming. These techniques evolved in a many-sorted setting, where different sorts are disjoint. Joseph Goguen observed that an order-sorted equational logic modelling sort inclusion would yield a more expressive and natural specification language. In the 1980s, Goguen and Meseguer initiated and sponsored an international collaboration on the development of an executable specification language OBJ based on order-sorted equational logic, prompting foundational work on order-sorted rewriting and unification. Order-sorted rewrite systems can be seen as a special class of conditional rewrite systems. As it turns out, the expressiveness of order-sorted logic results in considerable complications as it comes to confluence, critical pair analysis and completion of order-sorted rewrite systems.

The four papers of this special issue are concerned with three different approaches to order-sorted rewriting and completion. They represent the state of the art of the area and show its wealth and depth.

I would like to thank the authors and the referees of the papers for their considerable efforts that have led to this special issue.

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