Preface

The Modelica modeling language and technology is being warmly received by the world community in modeling and simulation. It is bringing about a revolution in this area, based on its ease of use, visual design of models with combination of lego-like predefined model building blocks, its ability to define model libraries with reusable components, its support for object-oriented modeling and simulation of complex industrial applications involving parts from several application domains, and many more useful facilities.

The Modelica Association is an open non-profit organization that promotes the use and development of the Modelica language, libraries, and tools. In order to increase the distribution and usefulness of Modelica, the Modelica Association has created a conference series especially for the Modelica end-users and developers, to bring together Modelica users, engineers, researchers, language designers, library developers, and tool vendors. This gives people an opportunity to be informed about the latest developments, to influence the future development of Modelica and its libraries, and to get in touch with people solving similar modeling problems.

In October 2000, the first event in this series took place in Lund, Sweden. This was a great success, with more than 80 participants, and many high-quality papers. The next event, the second international Modelica conference at DLR in Oberpfaffenhofen, Germany, March 18-19 2002, was an even greater success with approximately 120 participants and an increased number of submitted and presented papers.

This volume contains the papers presented at the 3rd international Modelica conference at Linköping University, Linköping, Sweden, November 3-4, 2003. A number of high-quality papers were received. The program committee had the difficult task of planning the conference since not all papers could be accommodated during the limited conference time of two days. Thirty-six papers were selected for regular presentations, and six papers were selected for poster presentations.

More information about the Modelica language, the Modelica Association, this and future events can be found at the web page http://www.modelica.org, including all papers from this proceedings and earlier proceedings in the Modelica conference series.

The Modelica'2003 conference was arranged by the Modelica Association in cooperation with PELAB - the Programming Environment Laboratory, Department of Computer and Information Science, Linköping University, Sweden.

Linköping, October 10, 2003

Peter Fritzson

Program Committee

- Peter Fritzson, PELAB, Department of Computer and Information Science, Linköping University, Sweden (Chairman of the committee).
- Bernhard Bachmann, Fachhochschule Bielefeld, Bielefeld, Germany.
- Hilding Elmqvist, Dynasim AB, Sweden.
- Martin Otter, Institute of Robotics and Mechatronics at DLR Research Center, Oberpfaffenhofen, Germany.
- Michael Tiller, Ford Motor Company, Dearborn, USA.
- Hubertus Tummescheit, UTRC, Hartford, USA, and PELAB, Department of Computer and Information Science, Linköping University, Sweden.

Local Organization

- Vadim Engelson (Chairman of local organization).
- Bodil Mattsson-Kihlström.
- Peter Fritzson.