

Preface

This book presents an account of the Scientific Computing in Electrical Engineering conference, SCEE 2010, which took place in Toulouse, September 2010. The SCEE series of conferences covers many aspects of mathematics applied to electrical engineering, including electronics, electrical networks and electromagnetics. It started as a national meeting in 1997 in Germany and the first two meetings were organised under the auspices of the Deutscher Mathematiker Vereinigung. The title SCEE appeared for the first time in 2000 and since then the conference has been held every other year and in different European countries.

The organisation of the 8th conference was provided by the Toulouse branch of Onera, the French aerospace laboratory, and the ENSEEIHT, situated in the heart of Toulouse, was kind enough to make one of its lecture halls available. This 8th edition of the SCEE conference was further sponsored by

ABB,	Switzerland	http://www.abb.com
AWR,	Finland	http://web.awr.com
MunEDA,	Germany	http://www.muneda.com
CST,	Germany	http://www.cst.com

Their financial and material support is gratefully acknowledged.

The scientific programme of the conference was organised by the programme committee, which consisted of:

Dr. Andreas Blaszczyk (ABB Corporate Research, Switzerland)
Prof. Gabriela Ciuprina (Polytechnica University of Bucharest, Romania)
Dr. Georg Denk (Infineon, Germany)
Prof. Michael Günther (University of Wuppertal, Germany)
Dr. Jan ter Maten (NXP Semiconductors, The Netherlands)
Ir. Bastiaan Michielsen (Onera, France)
Prof. Ursula van Rienen (University of Rostock, Germany)
Prof. Vittorio Romano (University of Catania, Italy)
Dr. Janne Roos (Helsinki University of Technology, Finland)
Prof. Wil Schilders (TU/e & NXP Semiconductors, The Netherlands)
Prof. Thomas Weiland (TU Darmstadt & CST, Germany)

The programme committee attended to the reviewing of the proposed contributions. This resulted in 41 plenary talks and 34 poster presentations. The programme committee was also responsible for inviting specialist speakers to introduce the sessions. We were happy to have the following invited talks (in order of their appearance at the conference):

- Guillaume Sylvand (EADS IW, France),
“From quasi-static to high frequencies: An overview of numerical simulation at EADS”
- Tim Davis (University of Florida, USA),
“Sparse matrix methods for circuit simulation problems”
- Heidi Thornquist (Sandia National Laboratories, USA),
“Advances in Parallel Transistor-Level Circuit Simulation”
- Maurizio Repetto (Politecnico Torino, Italy),
“Tonti diagrams and algebraic methods for the solution of coupled problems”
- Patrick Dular (Université de Liège, Belgium),
“Magnetic model refinement via coupling of finite element subproblems”
- Naoufel Ben Abdallah (Université Paul Sabatier), who was our invited speaker for the device modelling session, passed away in the summer of 2010, just two months before the conference. His time slot in the conference programme was left unfilled
- Jörg Ostrowski (ABB, Switzerland),
“Transient Full Maxwell Computation of Slow Processes”
- Helmut Gräß (TU München, Germany),
“From Sizing over Design Centering and Pareto Optimization to Tolerance Pareto Optimization of Electronic Circuits”
- Joost Rommes (NXP, The Netherlands),
“Challenges in model order reduction for industrial problems”

All authors of papers accepted for presentation at the conference were also invited, in a second round, to propose a contribution for publication in this post-conference book. The programme committee organised the final reviewing and you will find the 47 selected papers in the main part of this book.

As editors of this book and members of the local organising committee, we would like to thank all the authors who contributed to the conference and, later, to this book for their good work. We thank the reviewers for having gone twice through all the proposed contributions and for all their constructive remarks. We also thank Onera and the ENSEEIHT for having made this work possible and the staff of Springer Verlag for their patience in getting this book to the press.

Toulouse, France

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