

Course on Scientific Computing in Electrical Engineering



Organized by EU projects



www.comson.org



www.chameleon-rf.org



www.lmn.pub.ro/est3

Local organization:

Politehnica University of Bucharest – Centrul de Inginerie Electrica Asistata de Calculator (UPB-CIEAC)

September 17-22, 2006

This course provides an intensive presentation of the state-of-the-art methods for scientific computing in electrical engineering. The courses will cover information on the following topics: **Computational Electromagnetics, Circuit Simulation and Design, Coupled Problems, Mathematical and Computational Methods.**

Agenda of the Course

Sunday 17 September

13:00 -- 14:00 – Registration for the Course

14:00 – 18:00 – Prof Ioan Lager – Delft University – Scientific Output: drawing a publication and preparing a presentation.

18:00 – 19:00 A.C. Antoulas – “Approximation of large-scale dynamical systems: An overview and some new results”, USA (Session O0 of SCEE 2006)

19:00 – Cocktail

Monday 18 September

9:00 – 12:55 – Computational Electromagnetics (Session O1 of SCEE 06)

14:30 – 17:30 – Circuit Simulation (Session O2 of SCEE 06)

17:30 – 18:30 – Posters P1 (all topics)

Tuesday 19 September

9:00 – 12:55 – Coupled Problems (Session O3 of SCEE 06)

14:30 – 17:30 – Mathematical and Computational Methods (Session O4 of SCEE 06)

17:30 – 18:30 – Posters P2 (all topics)

Wednesday 20 September

9:00 – 12:15 – Computational Electromagnetics (Session O5 of SCEE 06)

12:30-22:00 – Excursion + Dinner

Thursday 21 September

9:00 – 12:55 – Circuit Simulation (Session O6 of SCEE 06)

14:30 – 17:30 – Coupled Problems (Session O7 of SCEE 06)

17:30 – 18:30 – Posters P3 (all topics)

Friday 22 September

9:00 – 12:15 – Mathematical and Computational Methods (Session O8 of SCEE 06)

Invited Speakers at the COMSON course/ SCEE 2006 Conference

Electromagnetics

Dr. Francois Henrotte

Francois.Henrotte@iem.rwth-aachen.de

[http://www.iem.rwth-](http://www.iem.rwth-aachen.de/index.pl/francois_henrotte#1100)

[aachen.de/index.pl/francois_henrotte#1100](http://www.iem.rwth-aachen.de/index.pl/francois_henrotte#1100)

RWTH - Aachen University - Institut fur
Elektrische Maschinen - Germany

*The energy viewpoint in computational
electromagnetics*

Dr. Irina Munteanu

irina.munteanu@cst.com

<http://www.cst.com>

CST - Germany

*RF & Microwave Simulation with the Finite
Integration Technique - From component to
system design*

Circuit Simulation

Prof. Athanasios C. Antoulas
aca@rice.edu
<http://www.ece.rice.edu/~aca/>
Rice University - Electrical and Computer Engineering Dpt.
ECE, Houston, Texas - **USA**
Approximation of large-scale dynamical systems: An overview and some new results

Dr. Janne Roos
janne@aplac.hut.fi
<http://www.aplac.hut.fi/~janne/>
Helsinki University of Technology, Circuit Theory Lab -
APLAC - **Finland**
Overview of Circuit-Simulation Activities at TKK CTL

Prof. Luis Miguel Silveira
lms@inesc-id.pt
<http://algos.inesc-id.pt/~lms/>
Technical University of Lisbon (IST), School of
Engineering, Department of Electrical and Computer
Engineering, **INESC-ID**, Lisbon - **Portugal**
Outstanding Challenges in Model Order Reduction

Coupled Problems

Dr. Herbert De Gersem
degersem@temf.tu-darmstadt.de
http://temf34.temf.e-technik.tu-darmstadt.de/ENGLISH/Mitarbeiter/Herbert_De_Gersem/Herbert_De_Gersem.html
Technical University Darmstadt,
Computational Electromagnetics Lab. -
TEMF - Germany
Transient field-circuit coupled models with switching elements for the simulation of electric energy transducers

Dr. Andrea Marmiroli
andrea.marmiroli@st.com
<http://www.st.com>
STMicroelectronics, - Italy
Technology and Device modelling in micro and nanoelectronics: current and future challenges

Generic Mathematical and Computational Methods

Prof. Barbara Wohlmuth
wohlmuth@mathematik.uni-stuttgart.de
<http://www.ians.uni-stuttgart.de/nmh/wohlmuth/wohlmuth.shtml>
Stuttgart University - Institut für Angewandte
Analysis und Numerische Simulation IANS -
Germany
Advances in Mathematical and Computational Methods Applied in Electrical Engineering

Prof. Piet Hemker
P.W.Hemker@cw.nl
<http://homepages.cwi.nl/~pieth/>
Centre for Mathematics and Computer
Science - CWI, Dpt. Modelling, Analysis and
Simulation, Amsterdam, **Univ. of Amsterdam**,
Dpt. of Mathematics, - **The Netherlands**
Space mapping and defect correction for efficient optimization

Registration

Registration for this course can be done in the same way as for SCEE 2006 conference. Go to www.scee06.org and click on Registration. Registration should take place before September, 1st, 2006.

Fee

The fee for this course is 300 Euro. It includes all the activities in the agenda (conference attendance, book of abstracts, cocktail, excursion, dinner). The payment can be done via the SCEE 2006 conference website. Go to www.scee06.org and click on Fees. Additional costs for course participants (teaching material used on Sunday) will be supported by sponsors and EU projects. However, course attendees are not eligible for student discounts.

After you have paid, please send an explicit email to lmn@lmn.pub.ro

Additional information on EU projects: www.comson.org, www.chameleon-rf.org, www.lmn.pub.ro/est3.

Other notes

For the course participants, we can offer special accommodation at low rates (30 EURO/night, 3 star hostels). If you want to apply for this, just send an email to us, specifying the duration of your stay.