



## Joint Conference

3<sup>rd</sup> INDS'11 & 16<sup>th</sup> ISTET'11

THIRD INTERNATIONAL WORKSHOP ON NONLINEAR DYNAMICS  
AND SYNCHRONIZATION -- INDS'11

&

SIXTEENTH INTERNATIONAL SYMPOSIUM ON THEORETICAL  
ELECTRICAL ENGINEERING -- ISTET'11

JULY 25 - 27, 2011  
UNIVERSITY OF KLAGENFURT  
(KLAGENFURT; AUSTRIA)



ALPEN-ADRIA  
UNIVERSITÄT  
KLAGENFURT | WIEN GRAZ



URL: <http://inds11.uni-klu.ac.at> or <http://istet11.uni-klu.ac.at>

The joint organization of „ISTET'11“ and „INDS'11“ has been motivated by the good match and the complementarity observed in their scopes. Indeed, both workshops are coping with either certain types of nonlinear dynamical systems or related issues and methods. It is well known that most electrical engineering systems (focus of ISTET) are in their essence nonlinear dynamical systems. Specifically, „INDS'11“ considers the development of new concepts and methods for understanding, predicting and controlling the complex dynamics of systems, events and phenomena.

### INDS'11

The Workshop on Nonlinear Dynamics and Synchronization (INDS'11) is a two to three -days international workshop bringing together international researchers, developers and practitioners from different horizons to discuss the latest advances in nonlinear dynamics and synchronization. INDS serves as a forum to present current and future works as well as to exchange research ideas pertaining to various aspects in this field of nonlinear dynamic systems and synchronization. INDS does generally feature contributed as well as invited papers, invited sessions and also include poster and demo sessions.

#### Theoretical and Practical issues in Nonlinear Dynamics and Synchronization

Analytical and numerical approaches – Coupled oscillatory systems – Systems modeling – Systems identification – Systems Control – Bifurcations – Stability analysis – Chaos control – Cryptography and security – etc.

#### Cellular Neural Networks and Neuro-Computing

Quantum computing – Neuron dynamics and optimization – Application to image and signal processing – Application to solving nonlinear ODEs and PDEs – Hardware implementation – etc.

#### Computational Intelligence

Self-organization – Self-healing – Pattern recognition & classification – Cybernetics – Robotics – Fuzzy logic – Evolutionary computing – Hardware implementation – etc.

#### Applications (Examples)

Technology – Industrial systems – Transportation – Control systems – Economical & Social systems – Biological systems – Image processing – Supply chains and logistics systems – Robotics – Biological systems – etc.

### ISTET'11

The Sixteen International Symposium on Theoretical Electrical Engineering (ISTET'11) is a two to three-days international workshop which is devoted to research and education in all areas of theoretical electrical engineering and its applications in electromagnetics, electrical circuits, signal processing and control of electromagnetic systems, among others. ISTET'11 will feature contributed as well as invited papers, invited sessions and will include poster and demo sessions. A selected (non-exhaustive) list of relevant topics is the following:

#### Electromagnetic Fields

Fundamental aspects of field theory – Analytical and numerical approaches – Computational electromagnetics – Optimization in electromagnetics – Techniques for low and high frequency problems – etc.

#### Networks and System Theory

Fundamental aspects of networks and system theory – Advances in non-linear networks – New concepts for circuit analysis – Combined lumped and distributed parameter systems – etc.

#### Signal Processing and Identification

Advanced methods for signal processing – Non-linear dynamics and signal processing – Classical and non-classical aspects in identification – Neural networks – Biomedical signal processing – etc.

#### Control Theory

#### Applications (Examples)

Nonlinear control – Electromagnetic compatibility – Non-destructive testing – Inverse problems – Bioelectromagnetics – Nanomaterials for applications in electromagnetics and electrical systems – Fields and circuits for mobile communications – Control systems – Electrical drives and power systems – Nano- and Quantum-Engineering – etc.

**Submission of papers** (Email: [inds-istet-2011@uni-klu.ac.at](mailto:inds-istet-2011@uni-klu.ac.at)): Researchers are invited to submit an **extended abstract** (min. 2 –4 pages) before **28.02.2011**. After review and acceptance of the extended abstracts authors will be invited to submit a 6-10 pages camera ready full paper version. Camera-ready papers will be included in the workshop proceedings, which will be published by "Shaker Verlag" (Germany) and distributed to the participants at the workshop. Furthermore, all accepted papers will be published with the *IEEE Conference publications Program in the IEEE Xplore Digital Library*.

**Special- Session proposals:** *Proposals for special sessions containing 4-6 papers are very welcome.*

**Post-Conference publications:** The best contributions based upon quality, novelty and relevance, will be invited to submit an extended paper (10-14 pages). After undergoing a thorough review process selected papers will be published in a **JOURNAL SPECIAL ISSUE hopefully in an IEEE Journal or in another one**. Furthermore, either extended versions of accepted papers or fully new contributions are invited for publication, after review, in a **BOOK to be published by SPRINGER; a tentative title of the book is: RECENT ADVANCES IN NONLINEAR DYNAMICS AND THEORETICAL ELECTRICAL ENGINEERING**.

**Keynote Speakers:** A. Fettweis (Germany), L. O. Chua (USA, tbc), Martin Hasler (Switzerland), Kęstutis Pyragas (Lithuania, tbc), T. Kapitaniak (Poland), Ruedi Stoop (Switzerland, tbc), Gerd Heinz (GFAL, Berlin –Germany), Tamas Vicsek (Hungary, tbc), and 2 more to come.

**General Chair:** K. Kyamakya (Austria)

**Program Co- Chairs:** G. Chen (Hong Kong), W. A. Halang (Germany), W. Mathis (Germany),  
H. Unger (Germany), M. Kaltenbacher (Austria), M. Horn (Austria), M. Huemer (Austria)

**Organization Chairs:** Z. Li (Germany), J.C. Chedjou (Austria).

**Local Organizing Committee:** A. Korenjak (Austria), P. Grausberg (Austria), C. Juritsch (Austria),  
A. Fasih (Austria), C. Schwarzmüller (Austria), F. Machot (Austria).

## International Scientific/Technical Program Committee

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H. Uhlmann (Germany)  
R. Weigel (Germany)  
S. Wincenciak (Poland)

### Important - Dates (Schedule)

- **28 February 2011** - Deadline for the 2-4 pages extended abstracts submissions
- **3 March 2011** - Deadline for acceptance special session proposals
- **15 April 2011** - Notification of acceptance (including type of presentation: oral or poster)
- **30 April 2011** - Deadline for submission of camera ready paper versions
- **25 May 2011** – Early Registration (deadline for early-bird fee)
- **25 - 27 July 2011** – Conference dates

#### Previous ISTET Conferences

2009 Lübeck, Germany  
2007 Szczecin, Poland  
2005 Lviv, Ukraine  
2003 Warsaw, Poland  
2001 Linz, Austria  
1999 Magdeburg, Germany  
1997 Palermo, Italy  
1995 Thessaloniki, Greece  
1993 Szczecin, Poland  
1991 Cottbus, Germany  
1989 Budapest, Hungary  
1987 Ilmenau, Germany  
1985 Moscow, Russia  
1983 Ilmenau, Germany  
1981 Bratislava, Slovakia

#### Previous INDS Conferences

2008 Klagenfurt, Austria  
2009 Klagenfurt, Austria

#### Partial view of the University of Klagenfurt



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