

11th CONFERENCE – SEMINAR
**INTERNATIONAL SCHOOL ON NONSINUSOIDAL
CURRENTS AND COMPENSATION**

ISNCC 2013

20-21 June 2013
Zielona Góra, Poland

PROGRAM

University of Zielona Góra
Institute of Electrical Engineering
Institute of Electrical Metrology

www.ISNCC2013.iee.uz.zgora.pl

Conference Venue

The event will be held at the DANA Hotel & Spa in Zielona Góra, al. Wojska Polskiego 79. The hotel is located amidst green forests, about 10 minutes drive from the center of Zielona Góra.

Conference Registration

The conference registration desk will be opened on Thursday, 20 June 2013, **8:00 AM – 6:00 PM** and Friday, 21 June 2013, **8:00 AM – 4:00 PM**.

Conference participants who have registered can pick up their materials, badges and other items from the registration desk which will be located on the ground floor of the DANA Hotel & Spa.

All conference participants are issued with a personal badge showing their name and affiliation. Please observe that for security reasons the badge must be worn at all times during the conference and the social events. Access may be denied to participants not wearing their badge.

Hotel Information

Accommodation is not included in the registration fee.

Please note that conference participants must book their hotel rooms themselves. We recommend the Dana Hotel & Spa the conference will be held there. The conference venue is about 10 minutes drive from the center of Zielona Góra. In the city center there are several hotels of which can easily get to the conference venue.

Meals

Meals (snacks in the coffee breaks, dinners, supper), for all conference participants, will be served in the restaurant located in the ground floor of the Dana Hotel & Spa. Breakfast is not included in the registration fee.

Welcome Party

A welcome party will be held on Thursday, June 20, from 7:00 PM in the DANA Hotel & Spa at bowling alley. We have planned a buffet supper with nice food and good beer. All participants and their companion are welcome to attend. The welcome party is included in the registration fee.

Gala Dinner

Our gala dinner will take place in Friday, June 21, in the Restaurant of the DANA Hotel & Spa. We start at 7:00 PM. We hope to see you all at that time, we have planned an enjoyable evening with nice food and good wine. The gala dinner are included in the registration fee.

SPA Center

All conference participants can use the swimming pool, sauna zone, salt cave and cardio room in the Hotel Spa Center for free. A SPA center in the hotel will be available for all conference participants from 11.00 AM to 22.00 PM.

Oral Presentations

Oral presentation should not last longer than 10 minutes. After presentation 5 minutes for questions and answers has been scheduled.

Show up at least 10 minutes before the session starts and meet the session chairman so you have the possibility to inspect the lecture hall and its facilities (computers and digital projectors). At the session speak simple as possible and stick to the time limit so questions can be raised.

During the presentation a laptop, with installed MS Power Point 2007 and Acrobat Reader, and a projector will be available for each speaker. If you are not sure that your presentation will be reproduced properly, find in your tool an option which allows you to make your presentation portable.

Tutorial T1:

Meta-theory of the power theory of electrical circuits and the present state of its development

Author: L.S. Czarnecki, Louisiana State University, USA

Tutorial T2:

Apparent Power and Compensation Current Calculation for Shunt Active Power Filters: Theoretical and Practical Aspects

Author: A. Bitoleanu, University of Craiova, Romania

Tutorial T3:

Comparison of Applicability of Power Theories to Switching Compensator Control

Author: H. Ginn, University of South Caroline, USA

Tutorial T4:

Cooperative Control of Smart Micro-Grids Based on Conservative Power Commands

Author: P. Tenti, Padova University, Italy

Tutorial T5:

Challenges and Opportunities in using Phasor Measurement Units in Distribution Grids

Author: A. Monti, F. Ponti, Inst. for Automation of Complex Power Systems, E.ON Energy Research Center, RWTH Aachen University, Germany

Tutorial T6:

High Frequency Disturbances in Power Systems with Switch Mode Compensators

Author: Z. Fedyczak, A. Kempinski, R. Smoleński, Zielona Gora University,
Poland

Thursday, 20th June 2013

9:00 AM – 9:30 AM	Welcome Addresses	Location: Room Agata
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Welcome address from the ISNCC 2010 chairpersons

Prof. L.S. Czarnecki, Louisiana State University

Dr hab. Inż. Grzegorz Benysek, prof. UZ

The conference opening ceremony.

9:30 AM – 11:30 AM	Tutorial 1 and 2	Location: Room Agata
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Chairman: G. Benysek, Zielona Gora University, Poland

Author: L.S. Czarnecki, Louisiana State University, USA

Meta-theory of the power theory of electrical circuits and the present state of its development

Author: A. Bitoleanu, University of Craiova, Romania

Apparent Power and Compensation Current Calculation for Shunt Active Power Filters: Theoretical and Practical Aspects

11:30 AM – 12:00 PM	Coffee Break
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12:00 PM – 2:00 PM	Tutorial 3 and 4	Location: Room Agata
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Chairman: L.S. Czarnecki, Louisiana State University, USA

Author: H. Ginn, University of South Caroline, USA

Comparison of Applicability of Power Theories to Switching Compensator Control

Author: P. Tenti, Padova University, Italy

Cooperative Control of Smart Micro-Grids Based on Conservative Power Commands

2:00 PM – 3:00 PM	Dinner	Location: Restaurant
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3:00 PM – 4:00 PM	Lecture Session S1	Location: Room Agata
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Chairman: A. Bitoleanu, University of Craiova, Romania

ID 06 Leszek S. Czarnecki, Paul M. Haley
Louisiana State University, USA

Reactive compensation in three-phase four-wire systems at sinusoidal voltages and currents

ID 10 Mihaela Popescu, A. Bitoleanu, V. Suru;
University of Craiova, Romania

Currents' Physical Components theory implementation in shunt active power filtering for unbalanced loads;

ID 14 Leszek S. Czarnecki, Tracy N. Toups,
Louisiana State University, USA

Working and reflected active powers of harmonics generating single-phase loads

ID 13 Constantin Vlad Suru, Alexandra Pătrascu, Mihăiță Lincă;
University of Craiova, Romania

Conservative Power Theory Implementation in Shunt Active Power Filtering

4:00 PM – 4:30 PM	Coffee Break
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4:30 PM – 6:00 PM	Lecture Session S2	Location: Room Agata
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Chairman: H. Ginn, University of South Caroline, USA

ID 04 Matevž Bokal, Igor Papič
Reinhausen 2e, Slovenia; University of Ljubljana, Slovenia

Implementation of Power System Quantities Calculation in Non-Sinusoidal Conditions

- ID 07 Kahraman Yumak, Omer Usta
Istanbul Technical University, Turkey
A discussion on the power quantities of IEEE Std. 1459-2010
- ID 02 B. Rahmani, M. Tavakoli
K. N. Toosi University of Technology, Iran
Application of the CPC to three-phase Four-wire Systems under Non-ideal Waveforms by the AUPQS
- ID 17 P.M. Nicolae
University of Craiova, Romania
About Terminology and Theories for Powers in Distorting and/or Non-Symmetrical Regimes
- ID 18 W.A. Souza, E.V. Liberado, L.C.P. da Silva, H.K.M. Paredes,
F.P. Marafão
University of Campinas, Brazil
University Estadual Paulista, Brazil
Load Analyser using Conservative Power Theory
- ID 01 S. Czapp, J. Guzinski
Gdansk University of Technology, Poland
The Effect of the Motor Filters on Earth Fault Current Waveform in Circuits with Variable Speed Drives

7:00 PM – 11:00 PM	Welcome Party	Location: Bowling alley
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Friday, 21st June 2013

9:00 AM – 11:00 AM	Tutorial 5 and 6	Location: Room Agata
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Chairman: L.S. Czarnecki, Louisiana State University, USA

Author: A. Monti, F. Ponti, Inst. for Automation of Complex Power Systems,
E.ON Energy Research Center, RWTH Aachen University, Germany

Challenges and Opportunities in using Phasor Measurement Units in Distribution Grids

Authors: Z. Fedyczak, A. Kempski, R. Smoleński, Zielona Gora University,
Poland

High Frequency Disturbances in Power Systems with Switch Mode Compensators

11:00 AM – 11:30 AM	Coffee Break
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11:30 AM – 12:30 PM	Lecture Sesion S4	Location: Room Agata
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Chairman: H. Ginn, University of South Caroline, USA

ID 22 Emil Michta
University of Zielona Góra, Poland
Communication Structures and Data Processing in AMI Systems

ID 09 Igor Korotyeyev
University of Zielona Góra, Poland
Process Analysis in PWM Inverters Based on Two Dimensional Laplace Transform

ID 19 E. V. Liberado, W. A. Souza, J. A. Pomilio, H. K. M. Paredes,
F. P. Marafão
University of Campinas, Brazil
UNESP - Univ Estadual Paulista, Brazil

Design of Static VAr Compensator using a General Reactive Energy Definition

- ID 20 Leszek Furmankiewicz
University of Zielona Góra, Poland
Improvement the efficiency of frequency errors correction of current transformer within the range of non-linear operation

12:30 PM – 1:00 PM	Coffee Break
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1:00 PM – 2:00 PM	Lecture Session S5	Location: Room Agata
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Chairman: Z. Fedyczak, Zielona Gora University, Poland

- ID 15 K.L. Lian, M. Syai'in, C. L. Liu, T. D. Huang, T. H. Chen,
Y. R. Chang, Y. D. Lee, Y. H. Ho
National Taiwan University of Science and Technology, Taiwan
The Institute of Nuclear Energy Research, Taiwan
Robust Microgrid Power Flow using Particle Swarm Optimization
- ID 05 G.P. Kornilov, T.R. Khramshin, A.A. Nikolaev; R.R. Khramshin,
D.S. Krubtsov
Magnitogorsk State Technical University, Russia
Study of Evaluation Voltage Harmonic Distortion on Active Rectifiers
- ID 08 L.I. Kovernikova
Energy Systems Institute SB RAS, Irkutsk, Russia
Some results of research into harmonics in the high voltage networks with distributed nonlinear loads
- ID 16 P.M. Nicolae, I.D. Nicolae, D.L. Popa, M.S. Nicolae
University of Craiova, Romania
Active Compensation for a Driving System with Chopper and DC Motor

2:00 PM – 3:00 PM	Dinner	Location: Restaurant
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3:00 PM – 4:00 PM	Lecture Session S6	Location: Room Agata
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Chairman: A. Bitoleanu, University of Craiova, Romania

- ID 03 Paweł Szcześniak, Zbigniew Fedyczak, Jacek Kaniewski
University of Zielona Góra, Poland
Dynamic Model of a Space Vector Modulated Buck-Boost Matrix-Reactance Frequency Converter
- ID 12 Jacek Kaniewski, Zbigniew Fedyczak, Paweł Szczeniak
University of Zielona Góra, Poland
Modelling and basic properties of three-phase hybrid transformer with unsynchronized active load
- ID 21 Krzysztof Sozański
University of Zielona Góra, Poland
Selective Harmonics Compensator
- ID 11 Michał Gwóźdź
Poznań University of Technology, Poland
The Power Electronics Active Filter Based on a Multi-channel Inverter

4:00 PM – 5:00 PM	Scientific Committee Meeting
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5:00 PM – 7:00 PM	Free time
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7:00 PM – 11:00 PM	Gala dinner	Location: Restaurant
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20.06.2013			21.06.2013			
8.00 AM	Registration		8.00 AM			
8.30 AM			8.30 AM			
9.00 AM			9.00 AM	SI	Tutorial 5	
9.30 AM			9.30 AM			
10.00 AM		SI	Tutorial 1	10.00 AM	SI	Tutorial 6
10.30 AM			Tutorial 2	10.30 AM		
11.00 AM				11.00 AM	Coffee break	
11.30 AM			Coffee break	11.30 AM	SI	Session 3
12.00 PM		SI	Tutorial 3	12.00 PM		
12.30 PM					12.30 PM	Coffee break
1.00 PM		SI	Tutorial 4	1.00 PM	SI	Session 4
1.30 PM				1.30 PM		
2.00 PM			Dinner	2.00 PM	Dinner	
2.30 PM				2.30 PM		
3.00 PM		SI	Session 1	3.00 PM	SI	Session 5
3.30 PM				3.30 PM		
4.00 PM			Coffee break	4.00 PM	Scientific Committee Meeting	
4.30 PM		SI	Session 2	4.30 PM		
5.00 PM					5.00 PM	Free time
5.30 PM			5.30 PM			
6.00 PM			6.00 PM			
6.30 PM			6.30 PM			
7.00 PM		Welcome party	7.00 PM	Gala Dinner		

SI – Room Agata

Map of the Zielona Gora

