



14th International Conference on OPTIMIZATION OF ELECTRICAL AND ELECTRONIC EQUIPMENT

OPTIM 2014, Brasov, Romania, May 22-24, 2014

Organized and sponsored by: **Transilvania University of Brasov**

Co-organized by: University Politehnica of Timisoara, Technical University of Cluj-Napoca

Technically co-sponsored by: IEEE IAS/IES/PELS, IET, IEEE/IET Romania Sections, Romanian Academy

A biannual International Conference submitting presented papers to IEEE Xplore and ISI Thompson

Honorary Chairs:

Johann W. KOLAR,
ETH Zurich, CH

Robert D. LORENZ, Wisconsin
State University, Madison, USA

Conference Chair:

Marcian CIRSTEĂ,
Anglia Ruskin University, UK

Conference Vice-Chair:

Ion BOLDEA, University
Politehnica of Timisoara, RO

Conference Program Chair:

Carmen GERIGAN, Transilvania
University of Brasov, RO

Conference Program Vice-Chair

Mihai CERNAT, Transilvania
University of Brasov, RO

International Steering Committee

(Past Honorary Chairs)

Dushan BOROYEVICH,
Virginia Tech, USA

Rik DE DONCKER, RWTH Aachen
University, DE

Toma DORDEA, Romanian
Academy, RO

Thomas A. LIPO, Wisconsin State
University, Madison, USA

Amir MIRI, Karlsruhe Institute of
Technology, DE

Michel POLOUJADOFF, Pierre et
Marie Curie University Paris VI, FR

Dierk SCHRÖDER, Technical
University of Munich, DE

Manfred STIEBLER, Technical
University of Berlin, DE

Dan WILAMOWSKI,
Auburn University, USA

IT Co-chairs

Antonio LUQUE ESTEPA,
University of Seville, SP

Gheorghe PAMFIL, RO

Organising Committee Co-chairs

Carmen GERIGAN, Transilvania
University of Brasov, RO

Nicolae MUNTEAN, University
Politehnica of Timisoara, RO

Radu Vasile CIUPA, Technical
University of Cluj-Napoca, RO

Treasurer

Diana THIERHEIMER, Transilvania
University of Brasov, RO

For more information contact:

Carmen GERIGAN,
Organising Committee Chair,
carmen.gerigan@unitbv.ro

Mihai CERNAT,
Programme Chair,
mihacernat@yahoo.com

OPTIM Secretariat, Transilvania
University of Brasov, Bd. Eroilor 29,
500036 Braşov, Romania

Technical Tracks

T1: Power Systems and Electromagnetics. Electric Circuits and Networks, Electromagnetic Field, Electromagnetic Materials, Components and Applications, EMC/EMI, Power Systems, Transmission, High Voltage, Electrical Apparatus, Electric Arc, Plasma, Power Quality, Utility Applications, Safety and Reliability in Power Engineering. **Track chairs:** Nathan Ida (USA), Mihai Cernat (Romania/Turkey)

T2: Electrical Machines, Industrial Drives and Control. AC/DC Motor Drives, Motion and Drive Control, Sensorless Control, Electric Propulsion, Automotive Applications, Electrical Machines Design and Modelling, Thermal, Noise and Vibrations Issues, Electric Generators and their Control, Testing and Diagnostics. **Track chairs:** Dan M. Ionel (USA), Andreas Steimel (Germany), Ion Boldea (Romania)

T3: Power Electronics and Power Conversion. Power Electronics Modelling, Simulation, Design, Control, DC/DC Conversion, AC/AC Converters, Rectifiers, Inverters, PWM Systems, Converters for Electric and Hybrid Electric Vehicles, Power Electronic Devices and Systems, Semiconductors, UPS, Active and Hybrid Filtering, Power Line Conditioning, DSP and Microcontrollers for Power Electronics and Control. **Track chairs:** Ralph Kennel (Germany), Remus Teodorescu (Denmark), Dorin Neacsu (Romania)

T4: Renewable Electric Energy Conversion, Processing and Storage. Wind Energy, Photovoltaics, Hydro and Micro-hydro Power, Battery Technologies, Fuel Cells and Hydrogen Storage, other Energy Storage Technologies, Distributed Generation Systems. SmartGrids, Intelligent Environment, Building Management Systems. **Track chairs:** Marco Liserre (Denmark), Radu Bojoi (Italy), Corneliu Marinescu (Romania)

T5: Mechatronics, Industrial Automation and Control. Mechatronics, Robotics, Human-Machine Interface Technology, Computer Vision, Remote Sensing, Process Automation, Flexible Manufacturing Systems, Industrial Agents, Factory Automation, Safety and Reliability, Signal Processing, Modelling, Simulation, Neural Networks, Fuzzy Logic, Genetic Algorithms, Control of Linear and Non-linear Systems, Adaptive, Robust and Variable Structure Control. **Track chairs:** Kouhei Ohnishi (Japan), Seta Bogosyan (USA), Calin Ciufudean (Romania)

T6: Applied Electronics and System Integration. Image Processing, Audio and Video Signal Processing, Multimedia Applications, Networking Applications, Communication Systems, Measurements and Data Acquisition, Metrology, Microelectronics, Nanoelectronics, HDL or High Level Language Hardware Design, System-on-chip Design, FPGAs, Embedded Systems. **Track chairs:** Eric Monmasson, (France), Silvia Cirstea (UK), Florin Sandu (Romania)

T7: Electrical Engineering Education and Emerging Technologies. New Educational Tools, Continuous Learning, New Educational Materials and Methods, Distance Learning, Information and Communication Technologies in Laboratories, University-Industry Collaboration, Symbolic Approaches in Electronics, Novel Holistic Systems Modelling (Modelica, System-C, etc.), other Technologies. **Track chairs:** Luis Gomes (Portugal), Gheorghe Scutaru (Romania)

Special Sessions. Industry news, Others (subject to proposals received)

Track chairs: Prof. Elena Helerea (RO), Prof. Dorin Petreus (RO)

Plenary Session Speakers:

Prof. John Hung (USA) – optimal solutions for mobile robots control

Prof. Leopoldo Franquelo (Spain) – challenges of the current energy scenario

Dr. Vladimir Blasko (USA) – electrical drives

Prof. Johann Kolar (Switzerland) – power converters

Dr. James Brusey (UK) – embedded wireless systems optimisation

Prof. Bulent Ertan (Turkey) – electrical machines (closing session)

Prof. Babak Fahimi (USA) – electric motors / generators (closing session)

Submission of papers: A full paper proposal describing work not previously published or presented has to be electronically submitted in PDF file through the conference website no later than the deadline. Selection will be based upon full length 6-8 A4 pages paper proposals in IEEE double column format.

Important dates:

Special session proposals: January 10, 2014

Contributed full papers: March 3, 2014

Notification of acceptance: March 21, 2014

Final submissions due: April 10, 2014

Early registration closes: April 17, 2014

<http://www.info-optim.ro>



LOCATION

The OPTIM 2014 Conference location is Cheile Gradistei Resort, situated in Fundata, at 12 km from Bran Castle (Dracula's Castle, above image, built around 1370 by teutonic cavaliers) and at 35 km from Brasov city.

CHEILE GRADISTEI Resort, Fundata

<http://www.cheilegradistei.ro>

Phone, Fax: +40-(0)268-237.419

Mobile: +40-(0)723.315.582



Potential excursions: Poiana Brasov and Peles Castle

Poiana Brasov (12 km away from Brasov) and Peles Castle (Sinaia, 40 km away from Brasov) are two of Romania's main attractions. Both lie in Brasov's neighbourhood and are most worthy a visit.

Poiana Brasov is the favourite tourist destination in Romania. Only 12 km away from Brasov, up in the mountains lies the unique winter and summer resort: "Poiana Brasov" with about ten major ski slopes, two cable rails, and lots of Romanian style restaurants. Tennis courts, and swimming pools open in the warm season, and boat rides, mountain climbing, horse riding and many other great sports activities can be enjoyed. A public transportation service offers bus transport from near the Brasov County Library.



Peles Castle

Located in Sinaia (40 km, 1 hour drive or train trip from Brasov), Peles Castle, Romania's most famous royal castle, was built between 1875 and 1883, when it was inaugurated as the summer residence of King Carol 1st of Romania. Both at the end of the 19th century, and nowadays, Peles Castle was and is considered to be one of the most beautiful castles in Europe. Its dominating architectural style is German neo-Renaissance.



It was the first entirely electrified edifice on the continent. Its own power station was located on the banks of Peles Brook. Further, the building was equipped from the beginning with an interior elevator, vacuum cleaner, and central-heating system. The castle has 170 rooms, of which only 10 can be visited by tourists. It shelters various valuable collections of paintings, sculptures, armours, carpets, furniture, tapestries, statues, pottery, gold, silver and China dishes, stained-glasses and so on.

The visiting hours are from 9 a.m. to 5 p.m Wednesday through Sunday. On Mondays the castle is closed and on Tuesdays the hours are from 11 a.m. to 5 p.m. The admission fee is between 15 – 50 RON.

Estimated registration fees (bank transfer tax not included):

350 EUR/400 EUR for each participant (author or non author), includes attendance to all conference sessions, conference bag (conference programme, proceedings on CDROM, volume of Abstracts), invitations to the welcome reception and the banquet, 3 meals per day for 3 days, transport by bus organized from and to the Bucharest International Airport, one trip from those listed on conference website.

250 EUR/300 EUR for each companion, includes invitation to the welcome reception and the banquet, 3 meals per day for 3 days, transport by bus organized from and to the Bucharest International Airport, three trips from those listed on conference website.

