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AKIHIRO FUKAE (NAGASAKI UNIV) Katsuhiko Amano (Nagasaki Univ.) MASANORI SHINOHARA\* (NAGASAKI UNIV.)\*

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[2. Intelligent Control of PMSM Drives Using Type-2 Fuzzy](#)": 33

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Teruhiko Kohama\* (Fukuoka University)\* Satoshi Tsuji (Fukuoka University) Taku Yamabe (Fukuoka University)

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Mato Miskovic\* (HEP Hydro-power Dubrovnik)\* Marija Mirosevic (University of Dubrovnik) Ivan Miskovic (Brodarski Institut)

[8. Power Efficiency Improvement of the Composite Resonant DC-DC Converter](#)": 63

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Osamu Nakagoe (Nagasaki University) Yuta Furukawa (Nagasaki University) Shuji Tanabe\* (Nagasaki University)\*

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[5. Fine-tuning GA for PV-PEMFC Hybrid System Optimization](#)"P IC

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[6. Medium Frequency High Power Transformers, State of the Art and Challenges](#)": 89

Edris Agheb\* (NTNU University)\* Hans Hoidalén (NTNU University)

[7. Examination of maximization of the photovoltaics electric power use by power distribution system control](#)": 95

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(East Japan Railway Company)

[8. Comparative study for using Chlorophyll extracted from green leaves for solar cell fabrication after treatment with other materials](#)": 9:

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[9. Hybrid Wind-Diesel Energy System with Hydrogen Production](#)"P IC

Mamadou Lamine Doumbia\* (University of Quebec)\* Kodjo Agbossou (University of Quebec) Karim Belmokhtar (University of Quebec)

[10. Analysis of Local Smoothing Effect on the PV on Tokyo Station](#)"": 4

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[11. A New Digital Soft-Start Method for Current Mode DC-DC Converter](#)"": : 8

Fujio Kurokawa (Nagasaki University) Suguru Sagara\* (Nagasaki University)\*

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[2. Performance Verification of New Active Islanding Detection Methods for PV System by Simulation](#)"": : 9

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[3. Overview of High Power Wind Turbine Generators](#)"": 25

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[4. Synthesis and Catalytic Performance of Y<sub>2</sub>Ce<sub>2-x</sub>RuxO<sub>7</sub>\(x=0~0.4\) on Autothermal Ethanol Steam Reforming Reaction](#)"": 2;

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Lecture Session

Note: Printed abstracts of this session will be distributed at the conference.

**Nov. 12, (Mon.) 16:25-18:05**

Lecture Session: Energy Storage and Conversion Devices and Related Materials

Organizer: Prof. Isamu Moriguchi (Nagasaki University, Japan)

1. Research and Development of Cathode Catalysts for PEFCs""P IC

Hiroyuki Uchida and Masahiro Watanabe (University of Yamanashi)

2. Crystal Chemistry of phosphate and silicate-based positive electrodes of Li Batteries""P IC

Christian Masquelier (Universite de Picardie)

3. Energy Storage Batteries and their System Application: Prospects and Issues""P IC

Masahiko Hiratani Motoo Futami (Shin-Kobe Electric Machinery), Mitsuhiro Kishimi (Hitachi Maxell Energy), Kenji Takeda (Hitachi Research Laboratory)

4. The Nagasaki University Priority Research on Materials Science for Next- Generation Energy""P IC

Isamu Moriguchi (Nagasaki University)





Invited Special Sessions

**Nov. 13, (Tue.) 8:20-10:00**

ISS-1: New Trends in Solar Energy

Organizer: Prof. Jaeho Choi (Chungbuk National University, Korea) and Prof. Yasuyuki Nishida (Chiba Institute of Technology, Japan)

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[2. Control for Grid-Connected and Stand-Alone Operations of Three-Phase Grid-Connected Inverter](#)"; 72

Thanh-Vu Tran, Tae-Won Chun, Hong-Hee Lee, Heung-Geun Kim, Eui-Cheol Nho

[3. Evaluating the Impact of BESSs in the Jeju Island Power System](#)"; 77

Kyung-Min Jin, Eel-Hwan Kim (Jeju National University)

4. Wind Power Development in Japan

Yoshinori Ueda (Mitsubishi Heavy Industry)

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ISS-2: New Trend of High Performance Power Conversion Technologies

Organizer: Prof. Yasuyuki Nishida (Chiba Institute of Technology, Japan)

[1. The Stability Modeling of Ripple-Based Constant On-Time Control Schemes Used in the Converters Operating in DCM](#)"; 7;

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[2. Comparative Evaluation of Multi-Loop Control Schemes for a High-Bandwidth AC Power Source with a Two-Stage LC Output Filter](#)"; 89

Patricio Cortes, David O. Boillat, Hans Ertl, Johann W. Kolar (ETH)

[3. Modeling and Experimental Analysis of a Coupling Inductor Employed in a High Performance AC Power Source](#)"; 99

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[5. Switching Measurement of Soft Switching DC-DC Boost Converter using Lossless Snubber and Coupling Inductor"" ; :](#)

Noriyuki KIMURA\* (Osaka Institute of Technology)\* Kenta Isozumi (Osaka Institute of Technology) Toshimitsu Morizane (Osaka Institute of Technology) Hideki Omori (Osaka Institute of Technology)

**Nov. 13, (Tue.) 14:00-16:05**

ISS-3: DC Power Technologies for Renewable Energy

Organizer: Dr. Keiichi Hirose (NTT Facilities, Inc., Japan)

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Ruichen Zhao, Sheng-Yang Yu, Alexis Kwasinski (The University of Texas at Austin)

[2. Applying the DC Distribution System Constructed Commercial Buildings""3232](#)

Keon-Woo Park, Jae-Bong Kim, Dong-Zoon Lee (KD Power)

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Co-organizer: Zlatko Maljković (University of Zagreb, Croatia)

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Miguel Sanz-Bobi\* (Comillas Pontifical University)\* Fernando de Cuadra (Comillas Pontifical University) Carlos Batlle (Comillas Pontifical University)

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[3. Methodology for Definition of Requirements for Small Hydropower Plants Development](#)""332:

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Mario Vrazic\* (University of Zagreb, FER )\* Marinko Kovacic (University of Zagreb, Faculty of Electrical Engineering and Computing)  
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Co-organizer: Zlatko Maljković (University of Zagreb, Croatia)

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Selin OZCIRA\* (Yildiz Technical University)\* Nur BEKIROGLU (Yildiz Technical University) Ibrahim SENOL (Yildiz Technical University)

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[1. Detail Operating Characteristics of Bi-directional LLC Resonant Converter](#)""3364

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[2. PWM Strategy of Single-Phase to Three-Phase Matrix Converters for Minimizing Output Voltage Harmonics under Reducing Number of Switching](#)""336:

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[3. Dynamic Analysis Modeling for Reliability Increase of IPM-type BLDCM and Energy Saving under Dynamic Eccentricity—Stator Inter-turn Fault Coupling](#)""3376

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[4. Power management unit for dc feeder in house \(dc smart house\)](#)""3382

Noriyuki KIMURA\* (Osaka Institute of Technology)\* Toshimitsu MORIZANE (Osaka Institute of Technology) Hideki OMORI (Osaka Institute of Technology)

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Sangsoo Park\* (Osaka University)\* Yushi Miura (Osaka University) Toshifumi Ise (Osaka University)

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SS-4: New Trends in Solar Energy

Organizers: V. Fernão Pires (EST Setubal/IPS, Portugal), Duarte M. Sousa (IST/UTL, Portugal), and J. F. Martins (FCT/UNL, Portugal)

[1. Dye-sensitized solar cells using an anion-conducting polymer as a material of solid-state electrolyte](#)""3393

Yuki Ota\* (Nagasaki University)\* Takeo Hyodo (Nagasaki University) Yasuhiro Shimizu (Nagasaki University) Hiroyuki Yanagi (Tokuyama Corporation)

[2. Optimal Tilt Angle for PV Modules Considering the Uncertainty of Temperature and Solar Radiation](#)""3398

Ying-Pin Chang\* (Nan Kai University of Technolo)\* Lieh-Dai Yang (Department of Industrial Engineering & Management, Nan Kai University of Technol)

[3. Computational Application to Study the Performance of an Electric Vehicle with Photovoltaic Panels](#)""33: 4

Antonio Roque\* (IST and CIEEE/TU Lisbon)\* Catarina Dinis (Instituto Superior Tecnico/TU Lisbon) Duarte M. Sousa (IST/UTL) V. Fernao Pires (ESTSetubal/IPS)

[4. Photovoltaic Electric Vehicle Chargers as a Support for Reactive Power Compensation](#)""33: 9

V. Fernao Pires\* (ESTSetubal/IPS)\* Antonio Roque (IST and CIEEE/TU Lisbon) Duarte M. Sousa (IST/UTL) Gil Marques (IST/UTL)

### **Additional Papers:**

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[Soft and Resonant Switching Power Electronics for a Small Urban Electric Vehicle](#) ""3423

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