Thursday 22nd June

8:30 - 9:00 — **Official Opening**

Speakers

Local Organizing Committee Chair: *Dániel Veres*

Honorary Chairs: *János Józsa, Georges Zissis, Larry Good*

Room: Ravel

9:00 - 11:00 — **Plenary Session**

Invited Speakers
Room: Ravel

Aliki Van Heek	Future nuclear power concepts for the near and long term: technology, economics and deployment
Emanuele Bianco	Next generation wind and solar power: from cost to value
Gergely György Balázs	Innovation in aviation, research and development of electric and hybrid drive systems for aircrafts

11:00 - 11:30 — **Coffee Break**

11:30 - 13:30 — **Oral Session**

S1.1.

High voltage technologies
Davide Fabiani, István Kiss
Bolero

Session Presenters

Mahmoud Mohamed	Partial Discharge Inception Voltage Measurements of Ester Dielectric Fluid for Insulation Diagnosis
Jaroslav Hornak	Complex Analysis of Novel Insulation Material for Rotating Machines Based on Polymer/MgO
Alexander Ramonat	Investigations on the contact- and long-term behaviour of connections with cylindrical aluminium conductors for high-current devices
Gergely Márk Csányi	Investigation of dielectric properties of mixed PILC and XLPE cable insulation by the extended voltage response method
Julian Heger	Thermal dimensioning of an explosion protected RCBO by the Thermal Network Method
Rhein Alexander	Reliability-based improvement of life-cycle maintenance and replacement strategies in transmission systems using ant colony optimization
Timon Viola	Applicability of DLR sensors in High Voltage systems

S1.2.

Electrical machines and drives
Péter Magyar, Tamás Ruzsányi
Cordoba

Session Presenters

Balázs Farkas	Multi-level inverter co-simulation based on the Zynq 7000 platform
Efren Fernandez	Comparative Analysis of Control Techniques in Drive Systems for Electric Motorcycle
David Kiss	Model driven development in Power Electronics
Andrej Bolf	Synchronization Device for the Model of Distribution Grid 22 kV
Saeid Moosavi	A Short-Circuit Fault Detection Method using specific order of harmonic for Cascaded H-Bridge Multilevel Inverter

PANEL

Panel discussion
Aliki Van Heek, Szabolcs Czifrus, Zoltán Hózer, András Cserháti
Ravel

Panel discussion on the recent trends and challenges in the field of nuclear energy

Aliki Van Heek *(International Atomic Energy Agency)*
Szabolcs Czifrus *(BUTE, Institute of Nuclear Techniques)*
Zoltán Hózer *(Hungarian Academy of Science Centre for Energy Research)*
Moderator: **András Cserháti** *(Hungarian Nuclear Society)*

13:30 - 15:00 — **Lunch**

15:00 - 17:00 — **Dialogue Session**

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Dialogue session
Ábel Imre Cseh, Gergely György Balázs, Larry Good
Ravel + Bolero

Session Presenters

Valeri Saikovski	The use of renewable energy in the construction and renovation of buildings: Factors affecting the payback period of photovoltaic (PV) systems and the comparison of results of specific systems installed in Estonia, Brazil and Germany
Ágnes Halász	Energy consumption of office ICT devices in nanogrid
Feres Hamrouni	The Paris Agreement - aspects, consequences, solutions
Hyung-Joo Lee	Renewable Integration Algorithm to Compensate PV Power Using Battery Energy Storage System
Andrej Bolf	The comparison of tuning algorithms used in Petersen coil model
Gergely Márk Csányi	Investigation of Polarization Processes on Thin PVC Film Insulations by the Comparison of Frequency Domain Spectroscopy and Extended Voltage Response Measurements
Onthong Vilayphonh	Reliability Centered Maintenance for Electrical Distribution System of Phontong Substation in Vientiane Capital
Mohammed Ali Khan	Modeling Energy Efficient Building Sustaining Upon On-Grid Solar PV System
Christian Kühnel	Investigations on the long-term behavior and switching function of fuse-elements for NH-fuse-links (gG) at higher thermal stress
Anna Mihók	The Role of Passive Elements in Renewal of Buildings
Dániel Veres	Spectral Analysis and UHF Detection of Partial Discharges
Jaroslav Hornak	Defects of Electrical Insulation Systems with Focus on FEM Modeling
Sahar Jamshidi	Internet of Things (IoT) applied for monitoring and controlling energy supply and consumption of a typical house using pv in Budapest
Kristóf Pakai	Energy efficiency of city structures
Bálint Schön	Developing performance of waste water source heat pump systems by heat transport investigation
Rudolf Kerekes	Demand-side management in Renewable Energy Park
Aksacksy Philavong	Development of Wide Area Protection for Electrical Distribution System In Vientiane Capital
Saeid Moosavi	Fault detection in power supply of series hybrid electric vehicles (SHEV) using ANFIS
Dorián Irinyi	Analysis of Failure Prediction Methods

Friday 23rd June

8:30 - 10:30 — **Oral Session**

S2.1.

Nuclear techniques
Aliki van Heek
Cordoba

Session Presenters

Hyunjae Joo	Discussion on Integration of Welding Coordinator in Welding Quality System of KEPIC (Korea Electric Power Industry Code)
Gergely Imre Orosz	Investigation of corner subchannel of ceramic assembly of ALLEGRO reactor
Ábel Imre Cseh	Weight function calculation of an SPN detector
Gábor Sárdy	Investigations for Edge Region of a Fuel Assembly
Zsófia Tóth	Calculating the cross section of non 1/v nuclei in cold neutron beam measurements
Jongeun Lee	Preliminary Study for the Development of a Weld Integrity Verification Method
Dorottya Jakab	The revision of the current radioactive fallout measurements at the KFKI campus in Budapest, Hungary

S2.2.

Energy management
Albin Zsebik, Larry Good
Bolero

Session Presenters

Sergio Ricardo da Motta Pires	Study on the Feasibility of Waste-Based Biogas for Electricity Generation in the Irish Grid for a High Renewables Penetration Scenario
Dwi Rahayu	A Proper Mix of Nuclear Power and Renewables to Fulfill Ecological Requirements of Acceptable CO2 Emission 2030 in Indonesia
Valeri Saikovski	Predicting the results of the application of innovations in the construction of electrical systems in buildings with the help of a simple model, using both economic and technical parameters
Khamphouvin Sombounkhan	Generation Planning for Improving Reliability of Power System in North and Central 1 Region of Laos PDR
Zsófia Kovács	The spreading potential of electric powered vehicles in Hungary
Michal Klasa	Feasibility analysis for construction of heat accumulator in CHP with combined cycle
Mihály Katona	Well-to-wheel energy consumption and CO2 emission of electric and internal combustion engine vehicles

S2.3.

Power systems #1
József Ladányi
Ravel

Session Presenters

Vahid Helac	Modeling and the Impact on Power Quality of Hybrid Solar – Wind Power Plants
Vinicius Caseiro De Oliveira	Wideband Modeling of a Single-Phase Transformer Considering Correction for Current Sensor and Cable Effects
Nam Kyu Kim	SOC Management Algorithm of Battery Energy Storage System for PV Ramp Rate Control
Tao Zhou	A Novel Algorithm for Fast Static Security Analysis during Power Grid Interaction
Beom Ryeol	Optimal Power Exchange of Multi-Microgrids with Hierarchical Coordination
Matej Žnidarec	Influence of Distributed Generation from Renewable Energy Sources on Distribution Network Hosting Capacity
Istvan Vokony	Effect of inertia deficit on power system stability – synthetic inertia concepts analysis

10:30 - 11:00 — **Coffee Break**

11:00 - 13:00 — **Oral Session**

S3.1.

Power Systems #2
József Ladányi
Cordoba

Session Presenters

Laszlo Pinter	Demand Response on the Electricity Market
Pavol Belany	The design of consumption management with utilization of smart measurement
Kasim Zor	A State-of-the-Art Review of Artificial Intelligence Techniques for Short-Term Electric Load Forecasting
István Táczi	Composition of inertial response emulation mechanisms for power system frequency stability analysis
Goran Zdunic	INFLUENCE OF ELECTRICAL GRID ARRANGEMENT ON PUBLIC LIGHTING SYSTEM DESIGN FOR RURAL AREAS IN CROATIAN PART OF PANNONIAN REGION
David Majambere	A Module and LabVIEW-based Mho Offset Directional Distance Relay Development for Education

S3.2.

Renewable technologies
László Varga, Gergő Holló
Bolero

Session Presenters

Tamara Panova	Review of the Photovoltaic Systems Integration and Prospects in the Macedonian Electricity System
Juliana Montoya Cardona	Role of LNG in an Optimized Hybrid Energy Network
Attila Sándor Kazsoki	Mathematical approximation of the production of a photovoltaic system
Isara Buaphan	Development of Expert System for Fault Diagnosis of an 8-MW Bulb Turbine Downstream Irrigation Hydro Power Plant
João Galvão	Energetic System with Biomass and How to Mitigate Associated Problems
Adrienn Katona	Supercritical fluids in energy storage and consumption
Bálint Sinkovics	Feasibility-based investigation of wind turbines power prediction

AEES

AEE Seminar
Larry Good, Albin Zsebik
Ravel

AEE Seminar

Larry Good, Director of International Development, AEE: *Information about the Certified Energy Auditor training*
Albin Zsebik, Assistant Director of International Member Development for Eastern and Central Europe: *The role of the energy auditing in the ISO 50 001 Energy Management Systems*
Zoltán Czinege, President of the AEE Hungary Chapter: *Energy saving opportunities in air handling*

13:00 - 14:30 — **Lunch**

14:30 - 16:30 — **Oral Session**

S4.1.

Energy security, markets and policies
Károly Gerse
Ravel

Session Presenters

Irina Stamo	Energy storage as a key element in the puzzle called security of energy supply (in the case of Germany).
Mohammad Tolou Askari	Modelling the Medium Term Deregulated Power Market Based on the Cournot Game Theory
Liliana Nowakowska	Dynamic discrete model for electricity price forecasting
Mehrdad Tahmasebi	Electricity demand uncertainty modeling using enhanced path-based scenario generation method
Tamás Pintér	Regulatory influence analysis on EOM (Energy Only Market) in consideration of electric power generation mix
Bo Wang	Renewable Energy Investment Decision Indices Based on "Element-Performance-Economic Benefits" Causality Under Global Energy Interconnection
Olga Gerasimchuk	Russia's gas pivot to Asia: a short-sighted policy or a long-term strategy?
Krisztián Putti	Economic analysis of the Hinkley Point C nuclear power plant based on the available data

S4.2.

Case studies
Davide Fabiani
Cordoba

Session Presenters

Pavel Sovicka	Development of an advanced locomotive simulator
Rakibul Islam Chowdhury	Feasibility Study of Hybrid Floating Power Plant Concept at Bay of Bengal
Cherifa Boucetta	Smart driven by Estimation of energy Consumption for Electric Vehicle in urban road traffic
Imre Pácsonyi	Load Flow simulations on mitigating ice accretion or high voltage power line conductors
Adriana Romero Levente Rácz	A Review of Sulfur-hexafluoride Reduction by Dielectric Coatings and Alternative Gases

CAREER

Young Professional Career Development Workshop
Anikó Karl, Károly Veszprémi, Péter Magyar
Bolero

Young Professional Career Development Workshop

Károly Veszprémi (BUTE, Vice Rector)
Anikó Karl (MAVIR, HR Leader)
Péter Magyar (IEEE IAS, Chapters and Membership Development Chair)