



Final Symposium Programme

	Wednesday September 6 th	Thursday September 7 th	Friday September 8 th		
9.00	Registration <i>(Lounge of the Main Building (A1) & room 136)</i>	Oral Session			
		3A <i>(room 321)</i>	3B <i>(room 241)</i>	5A <i>(room 321)</i>	5B <i>(room 241)</i>
10.45		Coffee break		Coffee break	
11.00	Opening Ceremony & General Session <i>(AULA)</i>	Oral Session		Oral Session	
11.15		4A <i>(room 321)</i>	4B <i>(room 241)</i>	6A <i>(room 321)</i>	6B <i>(room 241)</i>
12.45	Lunch				
14.15	Oral Session	Scientific Committee Meeting			
	1A <i>(room 321)</i>	1B <i>(room 241)</i>			
	Poster Session <i>(hall next to the room 107)</i>				
16.00	Coffee break		Transfer to the hotel Symposium Dinner <i>(in the country)</i>		
16.30	Oral Session				
	2A <i>(room 321)</i>	2B <i>(room 241)</i>			
18.00	Welcome Cocktail at the University				
19.45					

- Coffee breaks - refreshments (coffee, tea, drinks, cookies) will be served in the cafeteria located in Room 238.
- Lunches will be served in the University Canteen (building B10).
- Welcome Cocktail at the University, on Wednesday, September 6th, at 18:00 will take place in the coffee bar, Room 040 (basement).
- Symposium Dinner - to be held in the Blüchers' Palace in Krobielowice on Thursday, September 7th, at 18:00 till 23:00 (transportation is provided).

**ORAL SESSIONS****General Session**

Chairman: Andrzej Wiszniewski

No.	Title	Authors	Affiliation
1	Smart Grids - the Challenges of Future Power Systems	B.M. Buchholz	Siemens AG, Germany
2	Risk Management for Energy Companies	R. Weron	Hugo Steinhaus Center, Wrocław University of Technology, Poland
3	Status of Dispersed Generation in Germany	Z.A. Styczynski K. Rudion	Otto von Guericke-University, Magdeburg, Germany

Technical Sessions**1A. Energy Markets and Power System Economics**

Chairman: Rafał Weron

1	Turkish Electricity Market Reforms for Compatibility with the South East European Regional Electricity Market	C. Celik	Department of Economics, Istanbul, Turkey
2	A Draft of the Methodology Used for Assessment of Electricity Competitiveness	M. Przygodzki	Silesian University of Technology, Gliwice, Poland
3	Cooptimization of the Balancing Energy and Operating Reserves in the Competitive Electricity Market	R. Korab	Silesian University of Technology, Gliwice, Poland
4	Investment Decision Making Model of Independent Power Producer under Uncertainty on the Electricity Market	J. Sowiński	Częstochowa University of Technology, Poland
5	Point and Interval Forecasting of Wholesale Electricity Prices: Evidence from the Nord Pool Market	R. Weron A. Misiorek	Wrocław University of Technology, Poland Institute of Power Systems Automation, Poland
6	Stratified Transmission Tariff	A. Tymorek A. Wilczyński B. Namysłowska-Wilczyńska	PSE-Operator S.A., Warszawa, Poland Wrocław University of Technology, Poland

2A. System Planning and Management

Chairman: Kazimierz Wilkosz

1	Prioritization Procedure for Transmission Network Assets Revitalization	D. Bajs G. Majstrovic I. Medic	Energy Institute Hrvoje Pozar, Zagreb, Croatia University of Split, Croatia
2	A Market Based Approach to Evaluate the Efficiency of Transmission Loss Allocation	Y. Phulpin M. Hennebel S. Plumel	Ecole Supérieure d'Electricité, Gif sur Yvette Cedex, France
3	Artificial Neural Networks Aided by Fuzzy Logic in Short-Term Electric Energy Consumption Forecasting	D. Baczyński M. Parol	Warsaw University of Technology, Poland
4	Unit Commitment for Virtual Power Plants	N. Martensen J. Stenzel	Technische Universität Darmstadt, Germany
5	Impact of Energy End-Use on Optimal Allocation of Switchgear in Radial Distribution Networks	A. Helseth A.T. Holen	The Norwegian University of Science and Technology, Trondheim, Norway



6	Optimization of Structures of Open Electric Power Networks with Use of Evolutionary Algorithms	J. Brożek W. Tylek	AGH University of Science and Technology, Kraków, Poland
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3A. Fuel Cells and Distributed Generation

Chairman: Edmund Handschin

1	Technical and Economical Benefits of a Combined Photovoltaic-Fuel-Cell System	M. Rissanen J. Schlabbach L. Strupeit	ABB Corporate Research, Västerås, Sweden University of Applied Sciences, Bielefeld, Germany University of Lund, Sweden
2	Investigating the Influence of Flow Field Design on the Performance of Proton Exchange Membrane Fuel Cells	J. Haubrock G. Heideck Z.A. Styczynski	Otto von Guericke-University, Magdeburg, Germany
3	Development of Benchmarks for Low and Medium Voltage Distribution Networks with High Penetration of Dispersed Generation	K. Rudion Z.A. Styczynski N. Hatziaargyriou S. Papathanassiou K. Strunz O. Ruhle A. Orths B. Rozel	Otto von Guericke-University, Magdeburg, Germany National Technical University of Athens, Greek University of Washington, Seattle, USA Siemens AG, Erlangen, Germany Planning Department, Analysis and Methods, Fredericia, Denmark Institut National Polytechnique of Grenoble, Saint-Martin-d'Hères, France
4	Technical Requirements on Clustered Distributed Generation	M. Neubert G. Balzer	Darmstadt University of Technology, Germany
5	Some Aspects of Distributed Generation Impact on Power System Reliability	J. Paska M. Sałek T. Surma	Warsaw University of Technology, Poland
6	Learning about Fuel Cell System using 3D Technology at the Otto-von-Guericke-University	T. Smieja A.N. Angelov Z.A. Styczynski	Otto von Guericke-University, Magdeburg, Germany

4A. Power System Operation

Chairman: Andrzej Wiszniewski

1	Comparison of Congestion Management Methods Including FACTS	E. Handschin D. Hause	University of Dortmund, Germany Siemens AG, Erlangen, Germany
2	Reactive Power Valuation in Competitive Environment by the Equivalent Reactive Compensation Method	M. Hennebel S. Plumel H. Lefebvre	Supélec, Gif sur Yvette, France RTE, Versailles, France
3	Loss-of-Synchronism in a System with Increased Share of DER	A. Sauhats I. Svalova A. Svalovs	Riga Technical University, Latvia
4	Applications of Security-Constrained Optimal Power Flows	F. Capitanescu M. Glavic D. Ernst L. Wehenkel	University of Liège, Belgium
5	The Analysis of the Impact of the Electric Traction Substation on the Supply Power System of 110 kV	M. Sobierajski W. Rojewski	Wrocław University of Technology, Poland
6	Optimal Maintenance Strategy for Medium Voltage Cable Networks Based on the Load Flow and Reliability Calculation	T. Okraszewski G. Balzer C. Schorn	Darmstadt University of Technology, Germany EnBW Regional AG, Stuttgart, Germany



5A. Power System Control and FACTS			
Chairman: Jan Izykowski			
1	Multi-Objective Optimization and Online Adaptation Methods for Robust Tuning of PSS Parameters	G. K. Befekadu O. Govorun I. Erlich	University of Duisburg-Essen, Germany
2	Optimal Voltage Control in the Distribution Network Containing an Independent Generator	A. Kot	AGH University of Science and Technology, Kraków, Poland
3	Harmonic Distribution in High Voltage Networks with Multiple HVDC Devices	S. Höpfner P. Schegner P. La Seta	Technische Universität Dresden, Germany
4	The Influence of the FACTS Controllers on Work of Distance Protection	K. Szubert	Poznań University of Technology, Poland
5	Genetic Optimization Procedure for Design of Synchronous Generator Voltage and Speed Control Systems	W. Rebizant D. Bejmert	Wrocław University of Technology, Poland
6	Selected Aspects of Protection and Control in Flexible Electrical Power Transmission and Distribution Systems	B. Witek	Silesian University of Technology, Gliwice, Poland

6A. Reliability			
Chairman: István Erlich			
1	Reliability Analysis of a 110 kV Grid	T. Dietermann G. Balzer	Darmstadt University of Technology, Germany
2	A Probabilistic Approach in Assessment of Power Grid Condition	W. Lubicki S. Kałuża M. Przygodzki	EPC S.A. – Katowice, Poland Silesian University of Technology, Gliwice, Poland
3	Structural Optimization of the Existing Medium Voltage Cable Networks and Its Impact on the System Reliability	T. Okraszewski G. Balzer I. Jeromin	Darmstadt University of Technology, German
4	Increase of Reliability of Medium Voltage Power Distribution Systems	W. Bąchorek	AGH University of Science and Technology, Kraków, Poland
5	Power System Reliability in Local Subsystem	J. Bargiel W. Goc P. Sowa J. Paska	Silesian University of Technology, Gliwice, Poland Warsaw University of Technology, Poland
6	Long-Term Planning of Electric Power System Development Using Reliability Criteria – Polish Power System Case	J. Paska M. Sałek T. Surma	Warsaw University of Technology, Poland



1B. System Protection – Fault Identification, Location and Diagnosis			
Chairman: Raj K. Aggarwal			
1	Signal Processing Considerations in Travelling Waves Fault Locators	A. Elhaffar G. Murtaza Hashmi M. Lehtonen	Helsinki University of Technology, Finland
2	Sensitivity Factor-Based Fault Discrimination	H.-C. Yuan S.-I. Lim S.-J. Lee M.-S. Choi S.-H. Kang	Myongji University, Yongin, Korea
3	Fault Location on Three-Terminal Overhead Line and Underground Cable Composite Network	M.M. Saha J. Iżykowski E. Rosołowski P. Balcerek M. Fulczyk	ABB Automation Technologies, Västerås, Sweden Wrocław University of Technology, Poland ABB Corporate Research Center, Kraków, Poland
4	Differential Equation Algorithm for Locating Faults on Series-Compensated Transmission Lines	M.M. Saha E. Rosołowski J. Iżykowski	ABB Automation Technologies, Västerås, Sweden Wrocław University of Technology, Poland
5	Wavelet Analysis and Visualization of Signals Disturbances in Electric Power Systems	Z. Marcinkowski K. Musierowicz	Poznan University of Technology, Poland
6	Pad Mounted Transformers: Protection and Insulation	I. Zamora G. Buigues A. J. Mazón V. Valverde	University of Basque Country, Bilbao, Spain

2B. System Protection – Methods and Schemes			
Chairman: Murari M. Saha			
1	Optimisation of Single-Phase Autoreclosures and Classification of Unsuccessful Autoreclosures	R. Luxenburger P. Schegner	Technische Universität Dresden, Germany
2	Modified Strategy for Protection of Power Transformers	A. Wiszniewski W. Rebizant L. Schiel	Wrocław University of Technology, Poland Siemens AG, PTD EA, Berlin, Germany
3	Distance Relay Performance on a Transmission Line Using STATCOM	R.K. Aggarwal X.Y. Zhou	University of Bath, UK
4	Investigation on the Behavior of the Remanence Level of Protective Current Transformers	J. Dickert R. Luxenburger P. Schegner	Technische Universität Dresden, Germany
5	Design of a Pilot Knowledge-Based Expert System for Providing a Coordinated Setting Values for Power System Protection Devices	M. R. Ganjavi R. Krebs Z.A. Styczynski	Siemens AG, Erlangen, Germany Otto von Guericke-University, Magdeburg, Germany
6	Application of Lightning Location Systems for Fault Detection on Transmission and Distribution Lines	K.L. Chrzan P. Bodzak W. Gajda	Wrocław University of Technology, Poland Institute of Meteorology and Water Management, Warsaw, Poland



3B. Transients Phenomena Analysis			
Chairman: Tadeusz Łobos			
1	Power Quality Assessment Using Neuro-Fuzzy Approach	P. Janik T. Łobos Z. Waclawek D. Proto D. Lauria	Wrocław University of Technology, Poland Dipartimento di Ingegneria Elettrica Universita degli Studi di Napoli "Federico II", Napoli, Italy
2	On Appropriateness of Use of Frequency-Dependent Resistor at Limitation of High-Frequency Overvoltages	A. M. Gashimov T. R. Mekhtiyev N. R. Babayeva S. I. Hasanova	Azerbaijan National Academy of Sciences, Baku, Azerbaijan
3	Signal Processing Methods for Power Transients	P. Imris M. Lehtonen	Helsinki University of Technology, Finland
4	Contact Force Stabilizer for Use in Vacuum Power Switches	A. Kozłowski Z. Kowalski B. Miedziński	Mining Electrification and Automation, R & D Centre, EMAG, Katowice, Poland Wrocław University of Technology, Poland
5	Preventing the Risk of Ferroresonance Involving Voltage Transformers in MV Ungrounded Networks	W. Piasecki M. Florkowski M. Fulczyk W. Nowak	ABB Corporate Research, Kraków, Poland AGH University of Science and Technology, Kraków, Poland

4B. System Modelling, Testing and Identification			
Chairman: Bogdan Miedziński			
1	Determination of the Wave Propagation Characteristics for Partial Discharge Monitoring in Covered-Conductor Overhead Distribution Networks	G. Murtaza Hashmi M. Nordman M. Lehtonen	Helsinki University of Technology – Finland
2	Calculation of Frequency Dependent Impedance of Overhead Power Transmission Lines	P. Imris M. Lehtonen	Helsinki University of Technology – Finland
3	Simulation of Electrical Transmission Transient Processes Using MATLAB/Simulink	P. Stakhiv O. Hoholyuk	Lviv Polytechnic National University, Ukraine
4	Automated Testing Process of Protection Relays in IEC 61850 Substation Automation Systems	A. Kuc-Dzierżawska W. Piasecki Z. Korendo O. Preiss	ABB Corporate Research, Kraków, Poland ABB Schweiz AG, Baden-Dattwill, Switzerland
5	Reduced Order Model of Power Transformers for Power System Transient Studies	M. H. Nazemi G. B. Gharehpetian	Islamic Azad University, Saveh, Iran Amirkabir University of Technology, Tehran, Iran
6	Power System Topology Verification Using Artificial Neural Networks: Evaluation of the Methods	K. Wilkosz R. Lukomski	Wrocław University of Technology, Poland



5B. Power Quality			
Chairman: Waldemar Rebizant			
1	Influence of Harmonic System Voltages on the Harmonic Current Emission of Photovoltaic Inverters	J. Schlabbach A. Groß	University of Applied Sciences, Bielefeld, Germany
2	Power Electronic Solutions for Voltage Dip Mitigation at Wind Farms	H. Amaris C. Álvarez	Universidad Carlos III de Madrid, Spain
3	Selected Harmonic Calculations for the Electric Power Distribution Network Supplying the Rectifier Station for Electric Traction	J. Wasilewski M. Parol	Warsaw University of Technology, Poland
4	Time-Frequency Analysis of Non-Stationary Phenomena in Electrical Engineering	A. Bracale G. Carpinelli K. Wozniak T. Sikorski Z. Leonowicz	Universita degli Studi di Napoli "Federico II", Napoli, Italy Wrocław University of Technology, Poland
5	Comparison of Active and Hybrid Power Filters for Mitigation of Harmonic Currents	T. Krzeszowiak B. Kedra L. Asiminoaei W. Wiechowski C.L. Bak	University of Science and Technology, Kraków, Poland Aalborg University, Denmark
6	LPQIVES Training Courses in Germany and Europe - Power Quality Troubleshooting	P. Komarnicki G. Müller Z.A. Styczynski	Fraunhofer Institute for Factory Operation and Automation, Germany Otto-von-Guericke University Magdeburg, Germany

6B. Power System Monitoring and Diagnostics			
Chairman: Peter Schegner			
1	Monitoring Possibilities of Circuit Breaker with Mechanical Drive	B. Rusek G. Balzer M. Holstein M.S. Claessens	Darmstadt University of Technology, Germany ABB Switzerland Ltd., Zurich, Switzerland
2	A Transformer Top Oil Temperature Model for Use in an On-Line Monitoring and Diagnostic System	A. Elmoudi M. Lehtonen J. Palola	Helsinki University of Technology, Finland Helsinki Energy Network investments, Finland
3	Transformer Diagnostics in the Practical Field	M.N. Bandyopadhyay	Deemed University, India
4	Artificial Neural Network For MV/LV Transformers Load Estimation	W. Szpyra	AGH University of Science and Technology, Kraków, Poland
5	A Simple Low-Cost Electronic Circuit for the Measurement of Loss Angle of a Capacitor	M. Ahmad	Aligarh Muslim University, India
6	Estimation of Power Losses and Voltage Level in MV Power Distribution Networks Using an Artificial Neural Network	W. Szpyra	AGH University of Science and Technology, Kraków, Poland



POSTER SESSION – P

Chairman: Mirosław Łukowicz			
No.	Title	Authors	Affiliation
1	The Comparative Analysis of the Measurement Results of the Electromagnetic Field Distribution under Multi-Circuit High Voltage Lines	Z. Wróblewski M. Habrych	Wrocław University of Technology, Poland
2	On Stability while Simulating the Switching-Offs the Capacitive and Small Inductive Currents	T. Lazimov S. Imanov	Azerbaijan Technical University, Baku, Azerbaijan
3	Effectiveness of Earth Fault Protection Systems under Different Operating Conditions of the MV Network and Lines	J. Lorenc A. Kwapisz B. Staszak	Poznań University of Technology, Poland
4	Simulative Investigation of Ferroresonance under Open-Phase Operating Conditions of Transmission Lines	A. M. Gashimov A. R. Babayeva J. Iżykowski	Azerbaijan Technical University, Baku, Azerbaijan Wrocław University of Technology, Poland
5	Fault Location on Three-Terminal Overhead Lines Using Two-Terminal Synchronized Voltage and Current Phasors	J. Iżykowski M. Bożek R. Moląg	Wrocław University of Technology, Poland Energia-Pro, District Power Company, Wałbrzych, Poland
6	Spectral Analysis of the Earth Fault Currents Occurring During Intermittent Arc Fault	L. Marciniak I. Pavlova-Marciniak	Technical University of Częstochowa, Poland
7	Dependence of Performance the Hermetic DC Contactor on Environmental Conditions	B. Miedziński W.Z. Okraszewski	Wrocław University of Technology, Poland
8	Transmission Line Corona Effect Influence on Internal Overvoltages	M. Seheda I. Hubilit L. Sereda	Lviv Polytechnic National University, Ukraine
9	Estimation of Power Flows on Outgoing Feeders at Absence of their Telemetry	M. Uspensky I. Kyzrodev S. Kirushev	Russian Academy of Sciences, Syktyvkar, Russia Komi Regional Power System Dispatching, Syktyvkar, Russia
10	Evolutionary Optimized Neural Classifiers for Fault Detection and Classification	W. Rebizant K. Solak	Wrocław University of Technology, Poland
11	Active and Reactive Power Estimation from Instantaneous Power Signal	V.V. Terzija V.A. Stanojevic W. Rebizant	The University of Manchester, UK Elektromreža Srbije, Belgrade, Serbia & Montenegro Wrocław University of Technology, Poland
12	ANN Based HIF Detecting Algorithm for Multigrounded MV Networks	M. Michalik M. Łukowicz W. Rebizant S.-J. Lee S.-H. Kang	Wrocław University of Technology, Poland Myongji University, Yongin, Korea
13	Guidelines of Polish Energy Policy	J. Malko	Wrocław University of Technology, Poland
14	Effectiveness of Some Voltage Fluctuation Compensation Facilities	A. Lipsky	The Academic College of Judea and Samaria, Ariel, Israel
15	Conversion of AC Lines to DC Lines	I. Zamora D. M. Larruskain A. J. Mazón J. I. San Martín O. Abarrategui	University of the Basque Country – Bilbao, Spain
16	Technologies of Fuel Cells in Electric Microgeneration	I. Zamora M. Larruskain J. I. San Martín J. J. San Martín V. Aperribay	Escuela Técnica Superior de Ingeniería de Bilbao, Spain Escuela Universitaria de Ingeniería Técnica Industrial de Eibar, Spain



17	Localization of Sources of Current Harmonic in a Power System: Comparison of Methods Using the Voltage Rate	K. Wilkosz T. Pyzalski	Wrocław University of Technology, Poland
18	Modern Approach to Protection of Distributed Network with Dispersed Generation	A. Burek E. Rosołowski	Wrocław University of Technology, Poland
19	Application of DSTATCOMs for Dips Compensation in LV Grids	P. Gburczyk R. Mienski R. Pawelek I. Wasiak	Technical University of Łódź, Poland
20	Electromagnetic Transient Phenomena in Medium Voltage Network	R. Memisevic N. Berbic A. Nuhanovic N. Asceric	ACCS University of Queensland, Brisbane, Australia University of Tuzla, Bosnia-Herzegovina UMEL - Transmission Line Construction, Tuzla, Bosnia-Herzegovina