

IWED2019 Program**30 January 2019**

15:00	MPEI University Visit for International Participants
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DAY 1 (31 January 2019)

9:00	Registration		
	Opening Session		
9:30	Opening Ceremony	Alecksey Anuchin	MPEI, Russia
9:45	Increasing the Energy Efficiency of Medium Voltage Drives	Joahim Holtz	University of Wuppertal, Germany
10:30	Electrical Machines for Electrical vehicles – Conceptual Design	Istvan Vajda	Óbuda University, Budapest, Hungary
11:10	Superconducting Electric Machines Review: Benefits and Challenges	Vladislav Kalitka	SuperOx, Moscow, Russia
11:50	Energy-efficient variable-speed motors: problems and their solutions	Vladimir Dmitrievskiy	Ural Federal University, EMACH LLC, Ekaterinburg, Russia
12:20	Additive Manufacturing of Electrical Machines	Ants Kallaste	Tallinn University of Technology, Tallin, Estonia
13:00	Lunch & Poster session		
	High-Torque Motor for a Gearless Electromechanical Actuator	Flur Ismagilov, Viacheslav Vavilov and Ildus Sayakhov	Ufa State Aviation Technical University, Russia
	Model-oriented Programming Technique In The Development of Electric Drive Control System	Igor Polyuschenkov	Smolensk Branch of MPEI
	Equivalent Magnetic Circuit for Switched Reluctance Motor with Strong Mutually Coupling between Phases	Nikolay Grebennikov, Temur Talakhadze and Alexander Kashuba	Rostov State Transport University, Russia
	Fault-tolerant Brushless External-Rotor Motor for Fuel Pumps	Aybulat Miniyarov, Fljur Ismagilov, Vyacheslav Vavilov, Danis Farrahov and Vladimir Bekuzin	Ufa Aviation Technical University, Russia
	Optimal Double-Halfbridge Pulse Width Modulation by Current-Dispersion Criterion	Igor Belousov, Veniamin Samoseiko and Alexander Saushev	Admiral Makarov State University of Maritime and Inland Shipping, Russia
	Analysis of the Effects on the Pitching, Rolling and Yawing Rate of a V-tail Configured Quadcopter	Christopher McClanahan, Robert Bolam, Yuriy Vagapov and Alecksey Anuchin	Glyndwr University, MPEI

Power Installation of an Unmanned Air Vehicle Based on a Hydrogen Fuel Cell	Ivan Vasyukov, Nikita Faddeev, Andrew Kramarov, Andrew Gummel, Vladimir Puzin and Alexander Batyukov	<i>Platov South-Russian State Polytechnic University (NPI), Russia</i>
Starter-Generator System for Gas Turbine Engine Based on AC-AC Converter	Maksim Zharkov, Vadim Sidorov and Sergey Kharitonov	<i>Novosibirsk State Technical University, Russia</i>
Model for Torque Estimation of Pump System with Horizontal Pipe Network	Levon Gevorkov, Václav Šmídl, Martin Sirovy, Anton Rassolkin, Ants Kallaste and Toomas Vaimann	<i>University of West Bohemia, Tallinn University of Technology</i>
Five-Phase Open-End Winding System Adjusted by Specialized Scheme of Space-Vector Modulation	Valentin Oleschuk and Vladimir Ermuratskii	<i>Institute of Power Engineering, Moldova</i>
IsoAgLibSE Study and Implementation of the Manure Spreader Machine Control System	Enkhbat Batbayar, Kim Sion, Munkhtamir Oyumaa, Sodbileg Tsogt-Ochir, Enkhbaatar Tumenjargal and Woonchul Ham	<i>Chobuk National University, S.Korea</i>
Efficiency Improvement of a Class E2 Converter for Low Power Inductive Links	Akram Bati, Patrick Luk, Samer Aldhaher, Chan See, Raed Abd-Alhameed and Peter Excell	<i>University of Bolton, Cranfield University, Imperial College, University of Bradford, Wrexham Glyndwr University</i>
Real-Time Optimal Trajectory Planning for Precision Tracking Systems with Dynamic Constraints	Sergey Lovlin, Artur Abdullin, Madina Tsvetkova and Aleksandr Mamatov	<i>ITMO University, Russia</i>
Non-adiabatic heating effects of a variable speed electric drive	Lev Rassudov	<i>MPEI</i>
Simulation of the Linearized Closed-Loop Torque Control for Switched Reluctance Motor	Alexander Krasovsky, Elena Vostorgina and Sergey Kuznetsov	<i>BMSTU(Bauman), Moscow Industrial Metallurgical Holding, Russia</i>
Control Challenges of 3D Printed Switched Reluctance Motor	Anton Rassolkin , Ants Kallaste, Toomas Vaimann and Hans Tiismus	<i>Tallinn University of Technology, Tallin, Estonia</i>
Winding Function Based Analytical Model of Squirrel Cage Induction Motor for Fault Diagnostics	Bilal Asad, Toomas Vaimann , Ants Kallaste, Anton Rassolkin and Anouar Belahcen	<i>Tallinn University of Technology, Aalto University</i>
Evaluation of Configurations of Modular Motor for Power-Assist Wheelchair	Ilya A. Galkin and Andrejs Podgornovs	<i>Riga Technical Universit, Latvia</i>
IE5 Energy-Efficiency Class Magnet-free Synchronous Reluctance Motor with Fractional Slot Winding	V.A. Dmitrievskii, V.A. Prakht, V.M. Kazakbaev	<i>EMACH LLC, Ural Federal University, Russia</i>
Energy-Efficient Synchronous Reluctance Motor with Ferrite Magnets	V.A. Dmitrievskii, V.A. Prakht, V.M. Kazakbaev	<i>EMACH LLC, Ural Federal University, Russia</i>
Gearless multi-pole electrical machine with magnets on the stator	V.A. Dmitrievskii, V.A. Prakht , V.M. Kazakbaev	<i>EMACH LLC, Ural Federal University, Russia</i>
High-speed flux reversal motor	V.A. Dmitrievskii, V.A. Prakht , V.M. Kazakbaev	<i>EMACH LLC, Ural Federal University, Russia</i>
Gearless Flux Reversal Motor with cores made of soft magnetic composite material	V.A. Dmitrievskii, V.A. Prakht , V.M. Kazakbaev, D. Golovanov	<i>EMACH LLC, Ural Federal University, University of Nottingham</i>
14:30	Oral Session (10+5 min)	
Measurement of Heat Loss in Power Drive Systems	Yury Sergiyevsky , Yulia Prudnikova and Alexander Romanov.	<i>MPEI</i>
A Survey on the Efficiency Improve of Electrical Machines	Lorand Szabo	<i>TU of Cluj, Romania</i>

	Constant vs. Variable Efficiency of Electric Drive in Train Run Simulations	Aleksander Jakubowski and Leszek Jarzebowicz	<i>Gdansk University of Technology, Poland</i>
	Efficiency Map Comparison of Induction and Synchronous Reluctance Motors	Anton Rassõlkin , Hamidreza Heidari, Jaime Pando Acedo, Ants Kallaste, Toomas Vaimann and Enrique Romero-Cadaval	<i>Tallinn University of Technology, Tallin, Estonia</i>
	Energy-saving Regulators for Asynchronous Electric Drive Vector Control Systems: Design Procedure and Adaptive Control	Andrey Popov	<i>Southern Federal University, Russia</i>
	Three-Loop Control System of Energy Storage Device in the Frequency-Controlled Electric Drive	Vladimir Polyakov, Iurii Plotnikov and Nikita Postnikov	<i>Ural Federal Universit, Russia</i>
	Investigation of an Electrically Excited Vernier Machine with a Concentrated Winding intended for Traction Applications	Dominik Thyroff and Ingo Hahn	<i>University of Erlangen-Nuremberg, Germany</i>
	High-Efficiency Transformer-Rectifier Unit: Design and Experimental Studies	Flyur Ismagilov, Viacheslav Vavilov and Denis Gusakov	<i>Ufa State Aviation Technical University, Russia</i>
	Position Control of Servo Drive System Based on Interval Type-2 Fuzzy Logic Algorithm	Galina Demidova and Dmitry Lukichev	<i>ITMO University, Russia</i>
	Robust Speed Controllers with Autotuning for Electrically Driven Equipment	Andrei Aksjonov, Aleksandr Serbin, Valery Vodovozov and Zoja Raud	<i>Tallinn University of Technology, Estonia</i>
	Power Balancing Control of Six-Phase System Based on Diode-Clamped Inverters with Synchronous PWM	Valentin Oleschuk and Vladimir Ermuratskii	<i>Institute of Power Engineering, Moldova</i>
	Микроконтроллеры для управления электродвигателями	Смерек Ю.А., Львов Ю.В., Степаненко Р.В.	<i>НИИЭТ, Воронеж</i>
18:00	Gala Dinner		

DAY 2 (01 February 2019)

9:30	Tutorial Session		
9:30	Increasing the Energy Efficiency of Medium Voltage Drives	Johim Holtz	<i>University of Wuppertal, Germany</i>
10:30	Trends in Modern Power Electronics	Ilia Dobkin	<i>Symmetron, Russia</i>
11:00	Requirements to the graduates from the electrical industry of Russia	Alexander Prudnikov	<i>ABB Russia</i>
11:30	IEEE IES Membership Benefits and Young Professional & Students Activity	Marek Jasinski, Dmitri Vinnikov	<i>IEEE Industrial Electronics Society</i>
12:00	Lunch		
13:00	Young Professionals Oral Session (10+5 min)		
	Design of an Electric Generator for an Aircraft with a Hybrid Power System	Anton Varyukhin, Flyur Ismagilov, Viacheslav Vavilov, Valentina Ayguzina and Mikhail Gordin	<i>Ufa State Aviation Technical University, Central Institute of Aviation Motor, Russia</i>

	Investigations on the Concept of Short-Circuited Rotor Windings for the Improvement of the Self-Sensing Capability of Electrical Machines	Christoph Hittinger and Ingo Hahn	<i>Institute of Electrical Drives and Machines, University of Erlangen-Nurember, Germany</i>
	Detection of Stator Inter-turn Short Circuit in Three-phase Induction Motor Using Current Coordinate Transformation	Evgeniy Solodkiy , Saveliy Salnikov and Dmitry Dadenkov	<i>Perm National Research Polytechnic University, Russia</i>
	Increasing the Energy Efficiency of Rail Vehicles Equipped with a Multi-Motor Electrical Traction Drive	Alexander Zarifyan, Alexander Zarifyan, Nikolay Grebennikov, Temur Talakhadze , Natalya Romanchenko and Alexander Shapshal	<i>Rostov State Transport University, Russia</i>
	Research of Switching Capacity Increase of the Composite Transistor Switch with Distributed Reactive Components	Elena Dukhnich and Igor Voronin	<i>MPEI</i>
	A Sensorless and Adaptive Control Strategy for a Wind Turbine Based on the Surface-Mounted Permanent Magnet Synchronous Generator and PWM-CSC	Ning Xing , Jing Xia, Wenping Cao, Zhengyu Lin and Shady Gadoue	<i>Aston University, Goldwind Science & Creation Windpower Equipment Co. Ltd, UK</i>
	Application of AC Voltage Regulators for Asynchronous Motors Connection to the Power Supply	Michail I. Petrov , Dmitry I. Panfilov and Michail Astashev	<i>MPEI</i>
	Modeling, Algorithm Control and Simulation of Variable-Speed Doubly-Fed Induction Generator in Grid Connected Operation	Nguyen Nam	<i>MPEI</i>
15:00	Coffee Break		
15:30	Young Professionals Oral Session (10+5 min)		
	On the Implementation of Frequency Response Estimation Method of Servo Drive Systems	Alexander Bitko , Mikhail Tiapkin, Elizaveta Samygina and Aleksandr Balkovoi	<i>MPEI</i>
	Extended Algorithm of Electrical Parameters Identification via Frequency Response Analysis	Elizaveta Samygina , Mikhail Tiapkin, Lev Rassudov and Aleksandr Balkovoi	<i>MPEI</i>
	Application of Genetic Algorithms For Identification of Parameters of The Synchronous Motor With Permanent Magnets Under Information Noise Conditions	Aleksandr Avdeev and Oleg Osipov	<i>MPEI</i>
	Optimal Design of Speed Controller in PMSM Based on Grasshopper Optimization Algorithm	Dong Chen and Yuhong Zhao	<i>University of South China, China</i>
	The Increase of the Robot's Productivity by choosing the Optimal Motion Speed	Nikolay Fedortsov , Stanislav Chernikov and Yuriy Safonov	<i>ABB, Schneider Electric, MPEI</i>
	Electric Transport Braking Energy Storage System Sizing by Considering Aging-Related Degradation During Lifetime	Girts Stana and Viesturs Brazis	<i>Riga Technical University, Latvia</i>
	Dynamic Response of FOC Induction Motors using MTPA Considering Voltage Constraints	Alexander Popov, Viktoriya Popova , Fernando Briz and Igor Gulyaev	<i>Ogarev Mordovia State University, University of Oviedo</i>
17:30	Closing&Award Ceremony		
18:00	Young Professionals Bowling Party		