

21st International Symposium on Power Electronics - Ee2021
Virtual (Online)
Final Program / Finalni Program

Updated: Oct. 25, 2021

Wednesday, 27 Oct. 2021.

PRE-CONFERENCE EVENTS	
09:00 - 09:35h	REGISTRATION / TESTING
09:50 - 10:00h	OPENING - Tutorials MS Teams platform
10:00 - 13:00h	TT-1: Tutorial 1 MS Teams platform Chair: Mladen Vučković, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia Huai Wang and Shuai Zhao Aalborg University, Aalborg, Denmark "AI-Assisted Condition and Health Monitoring in Power Electronics"
13:00h - 14:00h	LUNCH BREAK
14:00 - 17:00h	TT-2: Tutorial 2 MS Teams platform Chair: Barbara Vujkov, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia Miroslav Vasić, Luis Gomez Navajas, Javier Galindos Vicente Universidad Politecnica de Madrid Center for Industrial Electronics, Madrid, Spain "Design Challenges for high-performance GaN based converters in multi-MHz applications"
17:30h - 18:30h	Testing session: Paper Video Presentations Upload and Testing

CONFERENCE						
Time	Paper Id	Session	Paper title / Authors:family name	Authors: name	Affiliation	State

Thursday, 28 Oct. 2021.

09:00 - 09:30h		REGISTRATION / TESTING & UPLOAD	
09:45h	PLENARY Session	OPENING CEREMONY	MS Teams platform
	Chair:	Prof. Vladimir Katić, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia	
	Co-chair:	Dr. Dragan Kovačević, University of Belgrade, Belgrade, Electrical Engineering Institute "Nikola Tesla", Serbia	
	Co-chair:	Academician Prof. Slobodan Vukosavić, University of Belgrade/Serbian Academy of Sciences and Arts, Belgrade, Serbia	
		Opening speach, Prof. Vladimir Katić Welcom speach, Dr. Dragan Kovačević Welcom speach, Academician Prof. Slobodan Vukosavić Novi Sad - European Capital of Culture 2021 - short video Ee 2019 - short video About Ee 2021 - Prof. Vladimir Katić Official opening of the 21st Int. Symp. on Power Electronics, Dean of the Faculty of Technical Sciences, Novi Sad, Serbia	
10:00h	PLENARY Session - KN1	KEY-NOTE PAPERS	MS Teams platform
	Chair:	Prof. Vladimir Katić, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia	
	Co-chair:	Prof. Petar Grbović, University of Innsbruck, Innsbruck Power Elect.Lab. (i-PEL), Innsbruck, Austria	
10:00h	KN1.1	Power Semiconductor Devices - Development Trend and Application Challenges will Silicon be replaced by WB-Technologies?	
		Lorenz Leo	ECPE/Infineon and the German Academy of Science, Nuremberg Germany
10:30h	KN1.2	Energy Access – challenges and opportunities for the power electronics community	
		Popović Jelena	University of Twente, Twente Netherlands
11:00h	KN1.3	Highly efficient and robust direct modular multilevel converters for grid-connected applications	
		Vukosavić Slobodan	University of Belgrade/Serbian Academy of Sciences and Arts, Belgrade Serbia
11:30 - 11:45h	REFRESHMENT BREAK		

11:45h PLENARY Session - IL1		INVITED LECTURES	MS Teams platform
		Chair: Prof. Vanja Amrozić, University of Ljubljana, Slovenia	
		Co-chair: Asist.Prof. Aleksandar Stanisavljević, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia	
11:45h	IL1.1	Self-Designing Blocks: Turn your simulation software into a Pre-Design Tool	
		Meynard Thierry	Université de Toulouse, Laboratoire LAPLACE, Toulouse France
12:10h	IL1.2	PHIL – Power Hardware in the Loop for the real-time power emulation of electrical machines	
		Lidozzi Alessandro	Roma Tre University, Rome Italy
12:35h	IL1.3	On the True Value of Wide Bandgap Power Devices for Low and High Power Applications	
		Deboy Gerald	Infineon Technologies Austria AG, Villach Austria
13:00h - 14:00h		LUNCH BREAK	
14:00h SESSION -T1.1		Modern Devices in Power Electronics	MS Teams platform
		Chair: Dr. Žarko Janda, Electrical Engineering Institute “Nikola Tesla”, University of Belgrade, Belgrade, Serbia	
		Co-chair: Assoc.Prof. Stevan Grabić, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia	
14:00h	02634	T1.1-1	Minimization of Commutation Losses in LLC Resonant Converter with GaN HEMTs and Si based MOSFETs
		Lukić Emilija	University of Belgrade, School of Electrical Engineering, Belgrade Serbia
		Čakarević Jelena	University of Belgrade, School of Electrical Engineering, Belgrade Serbia
		Milić Aleksandar	University of Belgrade, School of Electrical Engineering, Belgrade Serbia
14:15h	06634	T1.1-2	Analysis and Modeling of Temperature Dependence of I-V behavior in Silicon Carbide MOSFETs
		Bavi Danial	Macquarie University, Sydney Australia
		Brooks Britt	Wolfspeed, Durham (NC) United States
		Khandelwal Sourabh	Macquarie University, Sydney Australia
14:30h	02234	T1.1-3	SiC MOSFET Junction Temperature Estimation based on Output Characteristics Integrated on Gate-driver
		Mocevic Slavko	Virginia Tech (VT), Center for Power Electronics Systems, Blacksburg United States
		Mitrovic Vladimir	Virginia Tech (VT), Center for Power Electronics Systems, Blacksburg United States
		Wang Jun	University of Nebraska–Lincoln, Lincoln United States
		Burgos Rolando	Virginia Tech (VT), Center for Power Electronics Systems, Blacksburg United States
		Boroyevich Dushan	Virginia Tech (VT), Center for Power Electronics Systems, Blacksburg United States
14:45h	00734	T1.1-4	Test Bench Setup for characterization of GaN HEMT
		Galindos Javier	Universidad Politécnica de Madrid, Centro de Electrónica Ind., Madrid Spain
		Serrano Diego	Universidad Politécnica de Madrid, Centro de Electrónica Ind., Madrid Spain
		Vasic Miroslav	Universidad Politécnica de Madrid, Centro de Electrónica Ind., Madrid Spain
15:00h	03434	T1.1-5	GaN And Superjunction MOSFET Transistor Switching In A Resonant Switched-Capacitor Converter
		Folmer Szymon	AGH University of Science and Technology, Krakow Poland
		Stala Robert	AGH University of Science and Technology, Krakow Poland
15:15h	00634	T1.1-6	Analytical PFC Boost Inductor Power Loss Calculation Method in CCM
		Szczerba Piotr	Fideltronik Poland R&D Centre, Krakow Poland
		Raczko Waldemar	Fideltronik Poland R&D Centre, Krakow Poland
		Ligenza Slawomir	Fideltronik Poland R&D Centre, Krakow Poland
		Worek Cezary	AGH University of Science and Technology, Krakow Poland
15:30h	01434	T1.1-7	Analytical Design Optimization of PFC Boost Inductor in CCM
		Szczerba Piotr	Fideltronik Poland R&D Centre, Krakow Poland
		Raczko Waldemar	Fideltronik Poland R&D Centre, Krakow Poland
		Ligenza Slawomir	Fideltronik Poland R&D Centre, Krakow Poland
		Worek Cezary	AGH University of Science and Technology, Krakow Poland
15:45h	03734	T1.1-8	Modeling and simulation of power thyristors in power supply for induction heating with respect to their failure rates and reliability
		Dankov Dobroslav	Technical University of Gabrovo , Gabrovo Bulgaria
		Prodanov Prodan	Technical University of Gabrovo , Gabrovo Bulgaria

14:00h SESSION T4.1		Control of Modern Converters	MS Teams platform		
		Chair:	Prof. Seddik Bacha, Grenoble-Alpes University, G2Elab, Grenoble, France		
		Co-chair:	Prof. Vladimir Katić, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia		
14:00h	03634	T4.1-1	Minimum Deviation Controller for Indirect Energy Transfer Converters		
			Josipovic	Ksenija	University of Toronto, Toronto
			Prodic	Aleksandar	University of Toronto, Toronto
			Lu	Liangji	University of Toronto, Toronto
			Roberts	Gianluca	University of Toronto, Toronto
			Calabrese	Giacomo	Texas Instruments, Freising
			Neveu	Florian	Texas Instruments, Freising
14:15h	01734	T4.1-2	Control Algorithms for Matrix Converters With Low Mathematical Complexity		
			Igney	Jens	University of Erlangen-Nuremberg, Inst. of Elec.Dr. and Mach., Erlangen
			Hahn	Ingo	University of Erlangen-Nuremberg, Inst. of Elec.Dr. and Mach., Erlangen
14:30h	00934	T4.1-3	Algorithm and block diagram of an electronic system for control of energy flows in residential premises		
			Stoev	Iordan	University of Ruse "Angel Kanchev", Ruse
			Zaharieva	Snezhinka	University of Ruse "Angel Kanchev", Ruse
			Borodzhieva	Adriana	University of Ruse "Angel Kanchev", Ruse
			Petrova	Teodora	Trakia University, Stara Zagora
14:45h	01934	T4.1-4	Half-Bridge Voltage Source Inverter Control Development Using HIL System		
			Brandis	Andrej	University of Osijek, Fac. of Elec.Eng., Comp.Sc. and Infor.Tech., Osijek
			Pelin	Denis	University of Osijek, Fac. of Elec.Eng., Comp.Sc. and Infor.Tech., Osijek
			Topić	Danijel	University of Osijek, Fac. of Elec.Eng., Comp.Sc. and Infor.Tech., Osijek
			Knežević	Goran	University of Osijek, Fac. of Elec.Eng., Comp.Sc. and Infor.Tech., Osijek
15:00h	02534	T4.1-5	Influence of system delay on current controller stability and performance at grid-side inverter with LCL filter		
			Stojanović	Lazar	University of Belgrade, School of Electrical Engineering, Belgrade
			Bakić	Filip	University of Belgrade, School of Electrical Engineering, Belgrade
			Milić	Aleksandar	University of Belgrade, School of Electrical Engineering, Belgrade
15:15h	02834	T4.1-6	Analysis and DSP Implementation of Multi-sampled Three-Phase Current Controllers		
			Petric	Ivan	University of Padova, Padova
			Cvetanovic	Ruzica	University of Belgrade, School of Electrical Engineering, Belgrade
			Mattavelli	Paolo	University of Padova, Padova
			Buso	Simone	University of Padova, Padova
			Vukosavic	Slobodan	University of Belgrade, School of Electrical Engineering, Belgrade
15:30h	00834	T4.1-7	Automatic System for Saving Cooking Gas		
			Ciufudean	Calin	Stefan cel Mare University, Suceava
			Buzduga	Cornelii	Stefan cel Mare University, Suceava
16:00 - 16:15h		REFRESHMENT BREAK			




16:15h SESSION -T1.2		DC/DC Converters	MS Teams platform			
Chair:		Prof. Branko Blanuša, University of Banja Luka, Faculty of Electrical Engineering, Banja Luka, Bosnia and Herzegovina				
Co-chair:		Dr. Vladimir Vukić, Electrical Engineering Institute "Nikola Tesla", University of Belgrade, Belgrade, Serbia				
16:15h	02734	T1.2-1	Analysis, Modeling, and Simulation of the Multiple Output Flyback Converter used in Various Motor Drive Applications			
			Tahmaz	Oguz	AVL Research & Engineering TR, Istanbul	Turkey
			Yildiz	Ali Bekir	Kocaeli University, Kocaeli	Turkey
16:30h	00234	T1.2-2	Active-Clamped Flyback DC-DC Converter in Three-Phase Application			
			Vračar	Darko	BRUSA Elektronik (München) GmbH, Munich	Germany
			Pavlovský	Martin	BRUSA Elektronik (München) GmbH, Munich	Germany
			Pejović	Predrag	University of Belgrade, School of Electrical Engineering, Belgrade	Serbia
16:45h	04534	T1.2-3	Analysis, Modeling and Simulation of Two Stage Buck-Boost Converter with Switched-Capacitor			
			Birtek	Gizem	Kocaeli University, Kocaeli	Turkey
			Yildiz	Ali Bekir	Kocaeli University, Kocaeli	Turkey
17:00h	05334	T1.2-4	A New Tapped Inductor Quadratic DC-DC Converter			
			Ionici	Cristian-Valentin	Politehnica University Timisoara, Timisoara	Romania
			Lascu	Dan	Politehnica University Timisoara, Timisoara	Romania
17:15h	01534	T1.2-5	Generalised Fourier Series Model for Dual Active Bridge DC/DC Converter based on Triple Phase Shift Modulation Method			
			Rahman	M. I.	University of Aberdeen, Aberdeen	United Kingdom
			Jovcic	Dragan	University of Aberdeen, Aberdeen	United Kingdom
			Ahmed	K. H.	University of Aberdeen, Aberdeen	United Kingdom
17:30h	05534	T1.2-6	A Buck Converter Suitable in Low Step-Down Applications			
			Botila	Delia-Anca	Politehnica University Timisoara, Timisoara	Romania
			Lascu	Dan	Politehnica University Timisoara, Timisoara	Romania
			Pop-Calimanu	Ioana-Monica	Politehnica University Timisoara, Timisoara	Romania
17:45h	06034	T1.2-7	Comparative Analysis of Input-Series-Output-Series Parital Power Rated DC to DC Converters			
			Lopušina	Igor	University of Innsbruck, Innsbruck Power Elect.Lab. (i-PEL), Innsbruck	Austria
			Grbović	Petar	University of Innsbruck, Innsbruck Power Elect.Lab. (i-PEL), Innsbruck	Austria
18:00h	06934	T1.2-8	The Transient Regime of a DC Relay Supplied a Charged Condenser			
			Toader	Dumitru	Politehnica University Timisoara, Dep. Fund. of Phys.for Eng., Timisoara	Romania
			Blaj	Constantin	Politehnica University Timisoara, Dep. Fund. of Phys.for Eng., Timisoara	Romania
			Greconici	Marian	Politehnica University Timisoara, Dep. Fund. of Phys.for Eng., Timisoara	Romania
			Solea	Claudiu	Politehnica University Timisoara, Dep. Fund. of Phys.for Eng., Timisoara	Romania
			Vesa	Daniela	Politehnica University Timisoara, Dep. Fund. of Phys.for Eng., Timisoara	Romania
			Maghet	Adrian	Politehnica University Timisoara, Dep. Fund. of Phys.for Eng., Timisoara	Romania

16:15h		SESSION T7.1	Renewable Energy Sources and Grids	MS Teams platform		
		Chair:	Assoc.Prof. Čedomir Zeljković, University of Banja Luka, Faculty of Electrical Engineering, Banja Luka, Bosnia and Herzegovina			
		Co-chair:	Assist.Prof. Ivan Todorović, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia			
16:15h	01634	T7.1-1	Multi-Level, Partial Power Processing and WBG Devices - Future of 1500-V Photovoltaic Systems			
			Stevanovic	Branislav	Universidad Politécnica de Madrid, Centro de Electrónica Ind., Madrid	Spain
			Alou	Pedro	Universidad Politécnica de Madrid, Centro de Electrónica Ind., Madrid	Spain
			Vasic	Miroslav	Universidad Politécnica de Madrid, Centro de Electrónica Ind., Madrid	Spain
16:30h	03034	T7.1-2	Probabilistic load flow calculation using Halton quasi-random numbers in modern power systems with wind and solar generation			
			Mišurović	Filip	University of Montenegro, Faculty of Electrical Engineering, Podgorica	Montenegro
			Mujović	Saša	University of Montenegro, Faculty of Electrical Engineering, Podgorica	Montenegro
16:45h	03834	T7.1-3	Siting and Sizing of Renewable Energy Sources: A Case Study on Montenegro			
			Šćekić	Lazar	University of Montenegro, Faculty of Electrical Engineering, Podgorica	Montenegro
			Kontić	Mičo	Crnogorski elektroprenosni sistem, National dispat. center, Podgorica	Montenegro
			Srdanović	Neda	Crnogorski elektroprenosni sistem, National dispat. center, Podgorica	Montenegro
17:00h	04934	T7.1-4	An Improved Direct Voltage Component Extraction Method for Grid Connected Converters			
			Cvetanovic	Ruzica	University of Belgrade, School of Electrical Engineering, Belgrade	Serbia
			Janda	Zarko	University of Belgrade, Electrical Eng. Institute Nikola Tesla, Belgrade	Serbia
17:15h	05434	T7.1-5	GIS for Public Lighting Installations			
			Špica	Sanja	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Čeliković	Milan	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Popov	Srđan	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
18:15h	Social Activities (Virtual Welcome Party)					

Friday, 29 Oct. 2021.

08:00 - 08:45h		REGISTRATION / TESTING & UPLOAD			
09:00h SESSION -T2.1		Automotive and Industrial Drives		MS Teams platform	
Chair:		Prof. Darko Marčetić, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia			
Co-chair:		Prof. Petar Matić, University of Banja Luka, Faculty of Electrical Engineering, Banja Luka, Bosnia and Herzegovina			
09:00h	05934	T2.1-1	Analysis of power distribution systems based on low-voltage DC/DC power supplies for automated guided vehicles (AGV)		
			Hanschek	Andreas J.	University of Innsbruck, Innsbruck Power Elect.Lab. (i-PEL), Innsbruck Austria
			Bouvier	Yann E.	University of Innsbruck, Innsbruck Power Elect.Lab. (i-PEL), Innsbruck Austria
			Jesacher	Erwin	University of Innsbruck, Innsbruck Power Elect.Lab. (i-PEL), Innsbruck Austria
			Grbović	Petar J.	University of Innsbruck, Innsbruck Power Elect.Lab. (i-PEL), Innsbruck Austria
09:15h	02334	T2.1-2	Analysis of Non-Regenerative Resistive Dynamic Braking Behavior of PMSM		
			Ekim	Melih Nafi	Akim Metal A.Ş., Istanbul Turkey
			Unal	Alpay Oguz	Akim Metal A.Ş., Istanbul Turkey
			Yildiz	Ali Bekir	Kocaeli University, Kocaeli Turkey
09:30h	02934	T2.1-3	Matlab/Simulink Based Energy Consumption Prediction of Electric Vehicles		
			Janković	Filip	University of Montenegro, Faculty of Electrical Engineering, Podgorica Montenegro
			Šćekić	Lazar	University of Montenegro, Faculty of Electrical Engineering, Podgorica Montenegro
			Mujović	Saša	University of Montenegro, Faculty of Electrical Engineering, Podgorica Montenegro
09:45h	07934	T2.1-4	Modelling of three-phase interleaved DC-DC converter for hybrid energy storage application in electric vehicles		
			Vukajlović	Nikola	University of Novi Sad, Faculty of Technical Sciences, Novi Sad Serbia
			Popadić	Bane	University of Novi Sad, Faculty of Technical Sciences, Novi Sad Serbia
			Milicević	Dragan	University of Novi Sad, Faculty of Technical Sciences, Novi Sad Serbia
			Dumnic	Boris	University of Novi Sad, Faculty of Technical Sciences, Novi Sad Serbia
			Mitrović	Zoran	University of Novi Sad, Faculty of Technical Sciences, Novi Sad Serbia
10:00h	02034	T2.1-5	Extended SVM for direct matrix converter based drive operating under unbalanced grid conditions		
			Stanić	Luka	University of Belgrade, School of Electrical Engineering, Belgrade Serbia
			Ristić	Leposava	University of Belgrade, School of Electrical Engineering, Belgrade Serbia
			Bebić	Milan	University of Belgrade, School of Electrical Engineering, Belgrade Serbia
			Rivera	Marco	University of Talca, Department of Electrical Engineering, Talca Chile
10:15h	04734	T2.1-6	Revitalization and Modernization of Dragline Excavators with Limited Budget		
			Bebić	Milan	University of Belgrade, School of Electrical Engineering, Belgrade Serbia
			Rašić	Neša	University of Belgrade, School of Electrical Engineering, Belgrade Serbia
			Vojvodić	Nikola	University of Belgrade, School of Electrical Engineering, Belgrade Serbia
			Jeftenić	Borislav	EMP Inženjering 2016, Belgrade Serbia

09:00h		SESSION -T6.1	POWER QUALITY	MS Teams platform		
		Chair:	Assist.Prof. Martin Čalasan, University of Montenegro, Faculty of Electrical Engineering, Podgorica, Montenegro			
		Co-chair:	Assis.Prof. Aleksandar Stanisavljević, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia			
09:00h	02134	T6.1-1	Calculation and Spectral Analysis of DC-Link Current for three phase PWM inverter			
			Sun	Jianxia	Beijing Institute of Technology, Beijing	China
			Lin	Cheng	Beijing Institute of Technology, Beijing	China
09:15h	06334	T6.1-2	Voltage Sags Duration Probability Distribution Function			
			Katić	Vladimir	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Milićević	Srđan	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Stanisavljević	Aleksandar	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
09:30h	01834	T6.1-3	Comparison of Sinusoidal PWM Techniques in Terms of Harmonic Analysis in Three and Five Level Diode Clamped Inverter			
			Badak	Ufuk	Kocaeli University, Kocaeli	Turkey
			Yildiz	Ali Bekir	Kocaeli University, Kocaeli	Turkey
09:45h	07034	T6.1-4	Application of the PV systems for non-linear load current compensation			
			Trifunjagić	Viktor	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Katić	Vladimir	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Stanisavljević	Aleksandar	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
10:00h	07434	T6.1-5	Training an LSTM Voltage Sags Classifier on a Synthetic Dataset			
			Turović	Radovan	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Dragan	Dinu	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Stanisavljević	Aleksandar	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Gojić	Gorana	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Petrović	Veljko	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Katić	Vladimir	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
			Gajić	Dušan	University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia
10:30 - 10:45h		REFRESHMENT BREAK				
10:45h		PLENARY Session - KN2	KEY-NOTE PAPERS	MS Teams platform		
		Chair:	Prof. Miroslav Vasić, Universidad Politécnica de Madrid, Centro de Electrónica Ind., Madrid, Spain			
		Co-chair:	Assoc.Prof. Dušan Gajić, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia			
10:45h		KN2.1	"Transformers" for Artificial Intelligence			
			Kisačanin	Branislav	Nvidia Corp., Santa Clara, USA/Centre for AI, Novi Sad	USA / Serbia
11:15h		KN2.2	AI Applications for Power Electronics – Challenges and Opportunities			
			Wang	Huai	Aalborg University, Aalborg	Denmark


14:00h		INDUSTRY SESS. - IS-1	Special Session - Industry Session	MS Teams platform		
		Chair:	Prof. Slobodan Mirčevski, "St. Kyril and Methodij" University, FEIT, Skopje, North Macedonia			
		Co-chair:	Barbara Vujkov, , University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia			
14:00h	IS-1.1	Typhoon HIL Presentation: Next-generation model-based tools for innovative teaching and research.				
			Santo Jelic	Debora Dimitrije	Typhoon Hil, Inc., Novi Sad Typhoon Hil, Inc., Novi Sad	Serbia Serbia
		Typhoon HIL				
14:45h	IS-1.2	Brose Presentation				
			Vujkov	Kristina	Brose d.o.o., Pančevo	Serbia
		Excellence In Mechatronics				
15:30h	IS-1.3	The Renewable Energy Sources for smart sustainable health Centers, University Education and other public buildings (RESCUE), Interreg-IPA CBC Croatia-Serbia project				
			Dumnić Šljivac Stojkov Varda Lukić	Boris Damir Marinko Nikolina Radisav	University of Novi Sad, Faculty of Technical Sciences, Novi Sad University of Osijek, Fac. of Elec.Eng., Comp.Sc. and Infor.Tech., Osijek University of Slavonski Brod, Slavonski Brod Clinical Hospital Center, Osijek Clinical Center of Vojvodina, Novi Sad	Serbia Croatia Croatia Croatia Serbia
		REFRESHMENT BREAK				
16:00h	SESSION -T3.1	Electric Machines		MS Teams platform		
		Chair:	Dr. Đorđe Stojić, Electrical Engineering Institute "Nikola Tesla", University of Belgrade, Belgrade, Serbia			
		Co-chair:	Assist.Prof. Dejan Jerkan, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia			
16:00h	01134	T3.1-1	Non-linear Observer Based Stator Inter-turn Short-circuit Fault Detection in 3- Φ Induction Motor			
			Duvvuri S M	SSSR Sarathbabu Padmaja	Shri Vishnu Engineering College for Women, Bhimavaram Shri Vishnu Engineering College for Women, Bhimavaram	India India
16:15h	05234	T3.1-2	FCS-MPC of a DMC-fed Induction Machine with Unity Input Power Factor Using Rotating Vectors			
			Mekhilef Benachour Dali Berkouk	Aymen Abdelmounaim Ali Ali El Madjid	Ecole Nationale Polytechnique, Algeria Ecole Supérieure des Sciences Appliquées d'Alger, Algeria Centre de Développement des Energies Renouvelables, Algeria Ecole Nationale Polytechnique, Algeria	Algeria Algeria Algeria Algeria
16:30h	02434	T3.1-3	Design Procedure for High-Frequency Transformer in LLC Resonant Topology			
			Obradović Plavšić Milić	Katarina Jovana Aleksandar	University of Belgrade, School of Electrical Engineering, Belgrade University of Belgrade, School of Electrical Engineering, Belgrade University of Belgrade, School of Electrical Engineering, Belgrade	Serbia Serbia Serbia
16:45h	03934	T3.1-4	Influence of phase coupling on the performance of 8/6 SRM			
			Mihic Brkovic Terzic Koprivica	Dragan Bogdan Mladen Zarko	University of Belgrade, School of Electrical Engineering, Belgrade University of Belgrade, School of Electrical Engineering, Belgrade University of Belgrade, School of Electrical Engineering, Belgrade University of Belgrade, School of Electrical Engineering, Belgrade	Serbia Serbia Serbia Serbia
17:00h	06134	T3.1-5	Inductance Identification of the Surface Permanent Magnet Synchronous Machines with sinusoidal voltage test signals			
			Vučković Dumnić Vasić Vujkov Popović	Mladen Boris Veran Barbara Vladimir	University of Novi Sad, Faculty of Technical Sciences, Novi Sad University of Novi Sad, Faculty of Technical Sciences, Novi Sad University of Novi Sad, Faculty of Technical Sciences, Novi Sad University of Novi Sad, Faculty of Technical Sciences, Novi Sad University of Novi Sad, Faculty of Technical Sciences, Novi Sad	Serbia Serbia Serbia Serbia Serbia
17:15h	01234	T3.1-6	Minimization of an Electromagnetic Torque Ripple of a Five-Phase IM Operated under One-Phase Fault			
			Zaskalicky	Pavel	Technical University of Košice, Kosice	Slovakia

16:00h SESSION T4.2		Control and Measurement in Power Electronics		MS Teams platform	
Chair:		Assoc.Prof. Milutin Petronijević, University of Niš, Faculty of Electronic Engineering, Niš, Serbia			
Co-chair:		Assoc.Prof. Milan Bebić, University of Belgrade, School of Electrical Engineering, Belgrade, Serbia			
16:00h	00334	T4.2-1	Predictive Control of an Induction Machine Fed by a Voltage Source Inverter		
			Rivera	Marco	University of Talca, Department of Electrical Engineering, Talca
			Riveros	José	Universidad Nacional de Asunción, Asuncion
			Wheeler	Patrick	The University of Nottingham, Nottingham
			Ristic	Leposava	University of Belgrade, School of Electrical Engineering, Belgrade
			Mirzaeva	Galina	The University of Newcastle, Newcastle
			Zanchetta	Pericle	The University of Nottingham, Nottingham
16:15h	00434	T4.2-2	The Selection of Cost Functions in Model Predictive Control Applications		
			Rivera	Marco	University of Talca, Department of Electrical Engineering, Talca
			Rojas	Diego	University of Talca, Department of Electrical Engineering, Talca
			Wheeler	Patrick	The University of Nottingham, Nottingham
16:30h	07534	T4.2-3	Improvement of PMSM Control Using Reinforcement Learning Deep Deterministic Policy Gradient Agent		
			Nicola	Marcel	National Institute for Research, ICMET Craiova, Craiova
			Nicola	Claudiu-Ionel	National Institute for Research, ICMET Craiova, Craiova
16:45h	07734	T4.2-4	Tuning of PI Speed Controller for PMSM Control System Using Computational Intelligence		
			Nicola	Marcel	National Institute for Research, ICMET Craiova, Craiova
			Nicola	Claudiu-Ionel	National Institute for Research, ICMET Craiova, Craiova
17:00h	04034	T4.2-5	Approaches to Reducing of the Active Power Measurement Error for a Method Based on Averaging of Instantaneous Power		
			Serov	Andrey	National Research University, Moscow Power Eng. Institute, Moscow
17:15h	00134	T4.2-6	Method of Reducing of the Complex Spectrum Measurement Error In Case of Applying of the Quadrature Demodulation Technique		
			Serov	Andrey	National Research University, Moscow Power Eng. Institute, Moscow
			Serov	Nikolay	National Research University, Moscow Power Eng. Institute, Moscow
			Shatokhin	Alexander	National Research University, Moscow Power Eng. Institute, Moscow
17:30h	05634	T4.2-7	Analysis of the influence of non-simultaneous sampling on the measurement of three-phase instantaneous power		
			Vojvodić	Nikola	University of Belgrade, School of Electrical Engineering, Belgrade
			Bebić	Milan	University of Belgrade, School of Electrical Engineering, Belgrade

18:00h PLENARY Session		Awards Session (Media sponsor - Journal Energies)		MS Teams platform	
Chair:		Prof. Vladimir Katić, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia			
Co-chair:		Academician Prof. Slobodan Vukosavić, University of Belgrade/Serbian Academy of Sciences and Arts, Belgrade, Serbia			

- Best Paper Award (300\$, sponsored by Energies)
- Best Student Paper Awards
- (free registration fee at Ee2023, sponsored by Power Electronics Society of Serbia)
- National Best Paper Award - for Serbian authors only
- (sponsored by Power Electronics Society of Serbia and Institute Nikola Tesla)
- Special Issue of Energies: "Smart Power Electronics – Selected papers from the 21st International Symposium on Power Electronics (Ee 2021)":
- Announcement of the selected papers.





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Smart Power Electronics—Selected Papers from the 21st International Symposium on Power Electronics (Ee2021)

Guest Editors
Prof. Dr. Jelena Popovic, Prof. Dr. Huai Wang, Prof. Dr. Slobodan N. Vukosavic, Prof. Dr. Vladimir Katic

Deadline
15 December 2021

Special Issue

Invitation to submit

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Saturday, 30 Oct. 2021.

08:00 - 08:30h					REGISTRATION / TESTING & UPLOAD
10:00h	PLENARY Session - KN3		KEY-NOTE PAPERS	MS Teams platform	
	Chair:	Prof. Dražen Dujčić, PEL, Swiss Federal Institute of Technology – EPFL, Lausanne, Switzerland			
	Co-chair:	Prof. Vladimir Katić, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia			
10:00h	KN3.1	Managing Power Complexity for Extreme Performance: Circuit, Architecture, and Magnetics			
		Chen	Minjie	Princeton University, Princeton	United States
10:30h	KN3.2	Component Data - The Key to Unleash the Potential of Design Automation for Power Electronics			
		Hermanns	Kevin	PE-Systems GmbH, Darmstadt	Germany
11:00 - 11:15h					REFRESHMENT BREAK
11:15h	SESSION -T1.3		POWER CONVERTERS AND DEVICES	MS Teams platform	
	Chair:	Prof. Denis Pelin, University of Osijek, Faculty of Electrical Engineering, Computer Sciences and Information Technologies, Osijek, Croatia			
	Co-chair:	Assist.Prof. Vladimir Popović, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia			
11:15h	07834	T1.3-1	Analysis and Design of Partial-Power Rated Single-Phase Diode Boost Rectifier		
		Grbovic	Petar	University of Innsbruck, Innsbruck Power Electr. Lab. (i-PEL), Innsbruck	Austria
		Miletic	Zoran	Austrian Institute of Technology (AIT), Vienna	Austria
		Lopusina	Igor	University of Innsbruck, Innsbruck Power Electr. Lab. (i-PEL), Innsbruck	Austria
11:30h	04634	T1.3-2	Design of a SiC Mosfet 6-Phase Boost Rectifier		
		Di Nezio	Giulia	Roma Tre University, Roma	Italy
		di Benedetto	Marco	Roma Tre University, Roma	Italy
		Lidozzi	Alessandro	Roma Tre University, Roma	Italy
		Solero	Luca	Roma Tre University, Roma	Italy
11:45h	05134	T1.3-3	Braking energy recovery by Modular Multilevel Converters in MVDC Railway Electrification Systems		
		Strobl	Simon	EPFL, Power Electronics Laboratory, Lausanne	Switzerland
		Milovanovic	Stefan	EPFL, Power Electronics Laboratory, Lausanne	Switzerland
		Ladoux	Philippe	University of Toulouse, Laboratory LAPLACE, Toulouse	France
		Dujic	Drazen	EPFL, Power Electronics Laboratory, Lausanne	Switzerland
12:00h	06734	T1.3-4	Increasing Current Loop Performance Using Variable Accuracy Feedback for GaN Inverters		
		Anuchin	Alecksey	National Research University, Moscow Power Eng. Institute, Moscow	Russian Federation
		Gulyaeva	Maria	National Research University, Moscow Power Eng. Institute, Moscow	Russian Federation
		Zharkov	Alexandr	National Research University, Moscow Power Eng. Institute, Moscow	Russian Federation
		Lashkevich	Maxim	National Research University, Moscow Power Eng. Institute, Moscow	Russian Federation
		Hao	Chen	China University of Mining & Technology, Xuzhou	China
		Dianov	Anton	National Research University, Moscow Power Eng. Institute, Moscow	Russian Federation
12:15h	05834	T1.3-5	New Three-Level Soft Turn-off T-type NPC Inverter		
		Penczek	Adam	AGH University of Science and Technology, Krakow	Poland
		Mondzik	Andrzej	AGH University of Science and Technology, Krakow	Poland
		Piróg	Stanisław	AGH University of Science and Technology, Krakow	Poland
		Twaróg	Mateusz	AGH University of Science and Technology, Krakow	Poland
		Stala	Robert	AGH University of Science and Technology, Krakow	Poland
12:30h	07134	T1.3-6	1:1 Resonant Switched Capacitor with Capacitive-based Isolation		
		Serrano	Diego	Universidad Politécnica de Madrid, Centro de Electrónica Ind., Madrid	Spain
		Vasić	Miroslav	Universidad Politécnica de Madrid, Centro de Electrónica Ind., Madrid	Spain
12:45h	CLOSING			MS Teams platform	

XXI Savetovanje Energetska elektronika - Ee 2021
Virtualna konferencija (on-line)
Preliminarni Program / Preliminary Program

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Postavljeno: 25.10.2021.

Sreda, 27 Okt. 2021.

DOGAĐAJI PRE POČETKA KONFERENCIJE

09:00 - 09:35h	Registracija Tutorijali / Testiranje
09:50 - 10:00h	OTVARANJE - Tutorijali
10:00 - 13:00h	Tutorijal 1
14:00 - 17:00h	Tutorijal 2
17:30 - 18:30h	Testiranje on line sistema

KONFERENCIJA

Četvrtak, 28 Okt. 2021.

09:00 - 09:30h **REGISTRACIJA / TESTIRANJE**

09:45h **PLENARY Session** **OTVARANJE** **MS Teams platforma**

Chair: Prof. Vladimir Katić, University of Novi Sad, Faculty of Technical Sciences, Novi Sad, Serbia
Co-chair: Dr. Dragan Kovačević, University of Belgrade, Belgrade, Electrical Engineering Institute "Nikola Tesla", Serbia
Co-chair: Academician Prof. Slobodan Vukosavić, University of Belgrade/Serbian Academy of Sciences and Arts, Belgrade, Serbia

DALJE PO PROGRAMU ZA 21th INTERNATIONAL SYMPOSIUM on POWER ELECTRONICS

13:00h - 14:00h **RUČAK**

DALJE PO PROGRAMU ZA 21th INTERNATIONAL SYMPOSIUM on POWER ELECTRONICS

18:45h - 20:30h **DRUŠTVENE AKTIVNOSTI (VIRTUELNA ZABAVA DOBRODOŠLICE)**

Petak, 29 Okt. 2021.

08:00 - 08:45h **REGISTRACIJA / TESTIRANJE**

DALJE PO PROGRAMU ZA 21th INTERNATIONAL SYMPOSIUM on POWER ELECTRONICS

13:00h - 14:00h **RUČAK**

DALJE PO PROGRAMU ZA 21th INTERNATIONAL SYMPOSIUM on POWER ELECTRONICS

18:00h **DODELA NAGRADA (MEDIJSKI SPONZOR - JOURNAL ENERGIES; Društvo za Ee)**

18:30h **DRUŠTVENE AKTIVNOSTI (VIRTUELNA ZABAVA)**

Subota, 30 Okt. 2021.**08:00 - 08:30h REGISTRACIJA / TESTIRANJE**

	Id rada	Tema	Naslov rada i Autori	Država
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08:45h **SESIJA - S1** **ENERGETSKA ELEKTRONIKA, POGONI I OBNOVLJIVI IZVORI** **MS Teams platforma**

Predsed.: Goce Arsov, Univerzitet Sv. Kiril i Metodij, Skoplje, Severna Makedonija

Ko-Predsed.: Zoltan Čorba, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad, Srbija

08:45h 00135 **S1-1** **ENERGETSKA ELEKTRONIKA – SIMPOZIJUM U GODINAMA JUBILEJA**

Katić Vladimir Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Nikolić Dragomir Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Čorba Zoltan Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Stanisavljević Aleksandar Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Gerić Ljubinka Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Galić Jadranka Društvo za energetska elektroniku, Novi Sad Srbija

09:00h 00235 **S1-2** **IMPLEMENTACIJA FN ELEKTRANA U ZDRAVSTVENE I OBRAZOVNE CENTRE KROZ REGIONALNU SARADNJU HRVATSKA - SRBIJA**

Čorba Zoltan Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Dumnić Boris Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Popadić Bane Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Milićević Dragan Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Žnidarec Matej Sveučilište J.J.Strossmayera, FERIT, Osijek, Hrvatska Hrvatska

Stojkov Marinko Sveučilište u Sl. Brodu, Strojarski fakultet, Slavonski Brod, Hrvatska Hrvatska

09:15h 00335 **S1-3** **PRIKAZ RADA U LABORATORIJU ZA MIKROELEKTRONIKU FAKULTETA TEHNIČKIH NAUKA**

Damnjanović Mirjana Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Kisić Milica Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

09:30h 00435 **S1-4** **LABORATORIJU ZA OPTOELEKTRONIKU – LABORATORIJSKE VEŽBE I ISKUSTVA**

Jovanović Miloš Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Stefanov Aleksandar Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Vasiljević Toskić Marko Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Panzalović Stefan Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Bajić Jovan Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

09:45h 00535 **S1-5** **ENERGETSKA ELEKTRONIKA - PREGLED KNJIGA, ČASOPISA I NAUČNIH SKUPOVA**

Katić Vladimir Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad Srbija

Mirčevski Slobodan Univerzitet „Sv. Kiril i Metodij“, FEIT, Skopje Severna Makedonija

DALJE PO PROGRAMU ZA 21th INTERNATIONAL SYMPOSIUM on POWER ELECTRONICS**12:45h ZATVARANJE SKUPA**

13:00 - 13:30h **GODIŠNJA SKUPŠTINA DRUŠTVA ZA ENERGETSKU ELEKTRONIKU** **MS Teams platforma**

Prof. Katić Vladimir

Predsednik Društva za energetska elektroniku, Novi Sad