

## **IEEE** CPE - POWERENG 2020

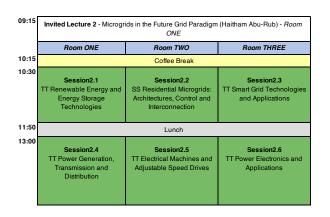
14th International Conference on Compatibility, Power Electronics and Power Engineering

## IEEE CPE- POWERENG 2020 (Program Overview)

Thursday, 9 July

All times are in WEST (Western European Summer Time, UTC+1), which is the time zone of the Conference Venue (Portugal)

		Wednesday, 8 July	
09:00		Opening ceremony	
09:15		dular Power Converters Oper s (Leopoldo Garcia Franquelo	
	Room ONE	Room TWO	Room THREE
10:15		Coffee Break	
10:30	Session1.1 TT Power Electronics and Applications	Session1.2 TT Power Generation, Transmission and Distribution	Session1.3 TT Smart Grid Technologies and Applications
11:50	Lunch		
13:00	Session1.4 TT Electrical Machines and Adjustable Speed Drives	Session1.5 SS Charging Technologies and Battery Storage Systems for Electric Vehicles and SS Electric Vehicles and Smart Grids	Session1.6 TT Eletric Mobility
14:20		Break	
14:40	Session1.7 TT Renewable Energy and Energy Storage Technologies	Session1.8 SS Residential Microgrids: Architectures, Control and Interconnection with Main Grid	



09:15		Distribution Networks - Future Manuel Matos) - <i>Room ONE</i>	Role and Planning Issues
	Room ONE	Room TWO	Room THREE
10:15		Coffee Break	
10:30	Session3.1 TT Power Electronics and Applications	Session3.2 TT Smart Grid Technologies and Applications	Session3.3 SS Residential Microgrids: Architectures, Control and Interconnection with Main Grid
11:50	Lunch		
13:00	Session3.4 TT Electrical Machines and Adjustable Speed Drives	Session3.5 SS Charging Technologies and Battery Storage Systems for Electric Vehicles and SS Electric Vehicles and Smart Grids	Session3.6 TT Power Electronics and Applications
14:20		Closing ceremony	

Friday, 10 July

### IEEE CPE- POWERENG 2020 (Program)

	Wednesday, 8 July	
8.00 - 9.15	Dynamic commonly	
815-1015	Invest Ledure 1	
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ession 1.1 TTPo Nati Defai Bayta	Amara Biodynaidea and Applications Amara Bio	
1030-1050	Cumpact electrothermal model of an inpulse transformer for SPICS Visyata (Cheo), Koyvaté Ghosi	
10.60-11.10	Nitwance of parameters of curvent treading power LEDs on their electric, optical and thermal properties Kraynard Golmon, Praemyniau Pas	
1110-1130	A nelysis of the STATCOB/Balancer Holustress in Kalkery Applications Antonio Madrio, vifus Hazais, Canto Ramos	
1130-1150	BC Capacitate Testing Capacities (In Miching Converting Ally Stemas, Varja Artikostic, Anosal Pilour, Pears Zejen	
ession 1.2 TTPo hair Jobo Marlins	ser Generativa, Transmission and Ethilbudon rec'onne.	
1030-1050	mpacto el adonated natural vestilados in the temperature and humidally el a distribution transformer noon Maastan Connis, Luis Fennis, Antonis Colintos, Anbais	
18.60-11.10	Rifectors of Bindean Salahite and Pollution on Voltage Bins Buscion for Cap and Prin Status Interdations Charles Mathema, Rische Busch, Riccardo Luke	
1110-1130	Minasi banda and thongo Custola Ulaing DC Lain in a Yao-dange PV Inventor Laind danca Anano Ang Liaowen Anala	
1130-1150	unan sang namun, na namun, na namun Analyka Shin Effect In Singh Wan Kanance by Palas Kananet Methoda Jang Palas di Laura Shano, Nadari Wan Sing, Engan Pannes-Calasan, Rabar Anna	
han Jole Calalie	ar förs Techniques and Applications. PREP	
1030-1050	Winkes Notabing System of Kongy Faunators for Cossumers Willoud Access to the Low Vallage Line Mrona Dataleanu, Alexandu Mitoleanu, Gheorghe - Sugar Skotleni, Minala Linca	
10.60-11.10	A Mah-Dajactive Madertor Hame Einergy Management System Self-Acted along using the Epolan-Constraint Method Monamma: Javadi, Monamed Loff, Genado J. Chalos, Adoesannan Antral, Ni Eanaert Hochad, Mathew Gough, Joba Casalo	
1110-1130	A Hybrid Probabilistic Algorithm for Computationally Efficient Extinuition of Power Generation in AC Optimal Power Flow Minamed Linf, Stades Floy, General J. Oktion, Minammad Javadi, Bérgio F. Samou, Jabo P. S. Cantalo	
1130-1150	Canannau based Sale Cannet Sharing Castroller for DC Micropid Bhasad Illan, Soundij De, Sancey Anad, Sourye Regen Siltea	
ession 1.4 TT En alte: Verja Andres	coloui Machines and Adjuntale Speed Drives M., Driverský vr. Ljudgen	
1300-1320	Kinang Kitolong Assessment of Variable Speed Pump Delve in Industrial Cooling System Henris Lauriz, Commo Dozaiz, Rassa Filer	
13 20-13:40	Cangadrasin d'Lasses in Short Flux-Parts Trapologies for Switched Resclances Machines Parto Laters, Sinvisco Rotari, Annanco Jaco Pres	
13.40-14.00	These counces, encounce reader, counces and reas. Takagé departe Arang Yang PKD counces and reas Read matchines and allor Pahan, Markan Antanas, Paula U, Yanao Bito	
1400-1420	Rudhes Piele Overste Control for Piel-Operational Ball-Phase Induction Balar Drives Long Piu Drivas, Rosa Anna Matamanue, Luip Pegari, Renat Rozo	
ession 1.5 SS Ct	L arging fechnologies and Rattery Storage Systems for Electric Vehicles and Sil Electric Vehicles and Sinseri Golds 	
1300-1320	. Nervesky of Miles Millians (and all all all all Markenson Connector Manada and Sch MDDMY and Sch Mill Davison for V Dangers Amana Lauransi Manan, Yao Manaya Manayati	
13 20-13:40	Nabast Control of Interny Reparsogastar George Storage System Voltag Khartsoon Theorem Yoola Scalutelika, Canigle Passool, Testaa Gartovaa, Prado Saltovao, Omaand Roodzenina.	
13.60-14.00	Haal Tinos Inplementation of Frequency Reparation Management Strategy of Hybrid Source for Lightweight FCEV Applications Starts Benchata	
1400-1420	A Novel Topology of Natlievel Bidevictural and Systemetrical Spith Pf Conventer Vice Montein, Ana Rodrijves, Cata Chievin, Tago Sixon, Dettin Polosa, Luis Machato, Jaso Attenso	
1420-1440	Ingent Analysis of Level 2 DY Chargers on Residential Power Datibilitation Golds Joseph Xittour, Michanned Ginzmu Kalo, Bassan Mousea, Rich Antin, Chad Anni	
naar Joke Luis Af	Irs Wally was, Dolwerly of Moha	
1300-1320	Sacation Analysis of Biochic Wolcia Changing Bastions for Maximum Capacity and Converge Man Sata Rayam, Sanac Rayam	
13 20-13:40	Riccia Venicia Changing Elevenzy Factora Luis Pene, Jani Penastra, Antois Linz, Modoon Peneisa	
13.60-14.00	Parametrix analysis of a Fard Coll Hypertol Webcie Sizergy Management System Hansen Martin-Lozan, Andrés Bansal, Antonio Lozan, Cletos Ferrandoz, Marina Sanz	
1600-1620	Names and many cases, waters and an an and an and an and an an a	
Passion 1.7 TV		
	vandin Sarag vod Goorg Boorge Techniques enn 1016	
14.60-15:00	Kasonak Sauly of Batny ProBahliy In Residential Salar Panel Bysteen. A Case Study of Balgium Dard Aleu, Jolien Despațier, Naul De Caurino, Mac Mocia, Johan Dinano, Michael Daenon	
1500-1520	bad Excited Spectrosous Generator a Euklade Alternative for Wind Applications Randas Adalo Tabata, Hattum Yaani, manaky Jasaan.	
1520-1540	Ruiste Equilibrium Analysis Considering Electic Vehicle Aggregators and Wed Power Producers Without Brunge Capabilities Dear Diar Dilations, Pailo De Oliveiro de Jesus, Jose Y esta	
1840-1600	Improving pile accurby in the presence of a high penetration of HSSI through optimal planning and operation of distributed energy strange devices Roadia Passar, His Yang, Nuno Princ-La Sina, Sana Rodopee, Francisco Res, Xae Johna.	
1600-1620	Betennination of Second-Life Rathery Capacity and Land Partice for a standarium F-Bite Charging Station Powered by Hybrid Research Every System Cang-Long Nguyen, Ticore Costonio, Paolo Primani, Lonia Vigitane, Kanal AHaddad, Lyne Woodward	

## 14 80-16:00 Blutti-Agent Distributed Skill Control System: Simulation and Hardware-in-the-Loop Physical Model Salina Demidowa, Aleksey Kuzin, Dintoy Lukrow, Nikolai Polasov 1500-1520 Balancing energy consumption is limited gover grid with active front end and three phase dual active bridge egstem Konstantin Vonkey, Pystand Statelinds, Nikolai Poliakov 19 20-19 10 CS-MPC and Observer Design in the dig Syschronous Frame: An Experimental Validation. Eduardo Zatra, Simpla Vazquez, Tabias Geyer, Ficardo P. Aguitera, Leopoldo G. Franqueita, Jose I Leon 15 KD-1600 Three-Level NPC Dual-Rock Inverter Designed to Safety-Ortical Applications Amando Cardeiro, Vitor Fernano Pres, Daniel Foto 18:00-18:20 Haubilty Enhancement of Hybrid Microgrids Using Optimal H+ Fitering-based Fuzzy Control of UPC Mand 2xitughai, Roya Ahmadahangar, Geroin. B. Chaempetan, Tobias Hating, Argo Rosin

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	Thursday, & Joby
9:15 - 10:15	Indef Learn 2 Mongel & Phi Fund Gu Pandgin Jaihan Ku-Ru
Session 2.1 TT Res Cahir: Thomas Stras	newské Exergy and Exergy Storage Technologies se, All
10:30-10:50	Jahnson system for short-lerm wind power forecast error modeling Hang Li, Ziv Zhang, Buhan Zhang
10:50-11:10	Comparing the Efficiency of Casooda GaN and Dohancement GaN in Boost Converter of PV System Baset Tuans Altrağlu, Adolf Balios, Erea Duntaba, Erya Alpran, Al Eren Rocarna
11:10-11:30	Sprism reduction of optimal control problems with assantial atorage Martin Grisss, Thomas Schules
11:30-11:50	Azasazment of Energy Storage Systems for Multiple Grid Service Provincion Janum Remainishan, Sayadmentis Hashemi, Cheselen Talhoit
11:50-12:10	Faasbilly Study of Energy Storage Systems for a Word Form: A Case of Envymentuu Rugion in Kamkhatan Adama Kalalono, Yonayi Amadou, H. S. V. S. Kumar Name, Praduur Jameal, Suryamanyana Doola
Consider 5.5 474 Day	Manifel Berneder. Kubkenkene Product og felsensererelse och Hele Pola
Session 2.2 55 He Chair: Dmitri Vinniki	Siderical Workspiler. Architectures, Castral and Interconnection with Manh Grid n. NA TICK
10:30-10:50	Sprinsa LCA faire study for Stack-Boant Inverter Based on United Star (Co.A. Existande Malischin, Chekande Huane, Conde Versilov, Carlos Florenes Clemente
10:50-11:10	Raubential Laad Forncarking waing Recurrent Neural Networks Koman Shebici, Roya Ahmadiahangar, Hadi A. Ruja, Lauri Kuit, Aga Rosin
11:10-11:30	Fault-Teinrant Approach for Phatovolhick Module-Arvel Paeer Electronic Applications Dmitr Virnibev, Adds Chab, Claikanner Kocht, Mariaser Maliroweki
11:30-11:50	Facebilly lowestigation of price-responsive batteries in the micrograde cleater Roya Annasi-Nangur, Chara Asir, Sabhan Selnon, Tabian Filuding, Ago Fasiri, Dentir Vinniew, Tomilaw Chagloanic, M Ti Hamid Bahvabili, Piede Bisabjerg
Session 2.3 TT Sm Chair: Argo Rosin, T	art Grid Technologies and Applications
10:30-10:50	Incluier and Failure Quantification Herbodology is a Critical Intrastructure Naro Mindrin, Polio Pereira, Caud Salqueiro
10:50-11:10	Implementation of Finite Central State Model Predictive Control with Maltiple Distributed Generators in AC Microgrida Nanha Ponshelas, Sense Disyhan, Haithean Abu-Filah, Minstein Regulat
11:10-11:30	mwasigation of Distribution Transformer Loss of Life in Electric: Whiches Parking Lid Magnited System 5: Muhammad Bagher Sadati, Mohammad Yuzatari-Avanni, Madraza Shale-Iraha, Ganoto J. Cabico, João Catalão
11:30-11:50	An Optimal Changing of Plag-In Electric Vehicins in Unbalanced Three-Planes Distribution Network Plageb Datware, Seyed Mehd Halaimi, Anzon Nesanthami, Madress Shafe-bah, Geordo J. Cladio, Jolio Catalilo
11:50-12:10	Adaptive States of Charge Control for Discop-Controlled Industrial DC-Microgride Recol Larks, Darkan Schaeb, Alexander Sisser
Session 2.4 TT Pov Chair: Francisco Rei	ne Ganeralice, Tenneniasion and Distribution , RONGETER
12:00-12:20	ChargingGlischanging atrategy for electric webcies based on bi-level programming problem: San Francisco case shedy Nahna Bagheri Tookantou, Mouza Marzband, Jorma Nyya, Ameera A-Sumali, Xhaila Al Hosani
12:20-12:40	The importance of daily load forecasting for main electric sublation is a spot market context Faulo Santas, Swetana Chemistra, Armando Fran, Vanta Newa
12:40-14:00	Kanlysk ef Converters with Bipalar Culged for SC Microgrid Sandadr P. Listy, Clasic Duan, Natur Binnes, Juge Sensis, M. Bala Ferena
14:00-14:20	Pytinizing nodel capacity adication using risk assessment of aliensent failure rate Naro Annan, Paraciano Ciarnia, Francisco Reis
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Session 2.5 TT Elec Chair: Armando Pire	New Wachites and Adjustable Speed Onives ESTIMATED IN CONTRACT OF CONTRACT.
12:00-12:20	Nuolinar H-bitoly control for hybrid acciled synchronous generation Gamainon Rigain, Paricia, Parica Was, Massud Abaazaden, Yanja Antonzic
12:20-12:40	The Early Detection of Easter Wording Shorted Turns in Permanent Magnet Three Phase Generators by Analysis of Ita Phase Voltages Michael Earvet
12:40-14:00	Spirinise Space-Vector Modulation Schwenes for Five-Prase Precision Low-Speed Drives with Minimizing the Salatr Current Ripple Nateria Tomazon, Asikazanter Ubotter, Canis Verlagel, Pased Sczapanicevski, Ryzzard Sznelecki, Nachali Polakov
14:00-14:20	Skolity Skuly af a Minisum-Louis Strategy Controlled Douis-Vill CPGS DC System Sil Margues, Matico Incohell, Segio Cruz
14:20-14:40	Tepologie of High Te operature Machines Excisi Flager, Nauvedine Takonshei
Session 2.6 TT Pov Chair: Veor Pires, ES	Ner Ellectronice and Applications FisitzaalM4
	Modelling influences of selected factors on properties of inductors operating in the back converter

1200-1220 Modelling influence of selected factors on properties of inductors operating in the buck converter Organized Genecie, Kalina Daska

- Decrete Polynomial Resonant Current Controller for a Single-Phase VSC Connected to the Grid using an LCL Filter Carlos Ramon, Anticio Martina
- 12:20-12:40
- Improved method of power inductor design with DC current impact 12:40-14:00 Wai Keung Mo, Kasper M. Pasach, Thomas Ebel
- 14.00-14.00 Switching frequency reduction for efficiency optimization in two paralleled UPS systems Tago Oliveira, Luix Caselro, André Mendes, Sérgio Cruz, Marina Pendiglio
- 16-20-16-00 Rodular multilevel converters for battery electric vehicles: variable dc voltage control to optimise battery likeline Rodula De Straton, Luig Pagal

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11:0-11:20 Study of Disturbing Factors in Current Semantess Control Applied to NPC MLC Meansof F Sutationio, Joint Zalis 11:30-11:50 Pault Tolerant Operation of Three-Peace 3 Lavel 1-Type q25 Inventers using Stiding Mode Current Controllers Vitor Fernao Pres, Daniel Folto, Natalia Santos, Armando Costelio, Carlos Roncero-Clemente, Jose Fernando Silva

	ng, Aarborg University
10:30-10:50	Law-Cost Enbadded Wasaurensh Syntem for Power Quality Prequency Monitoring Nuno Rodrigues, Fernando Janeiro, Pedro Ramos
10:50-11:10	Nalifyort nyatona appliad la buditege' kad management Riss Pennis, Filipa Bunta, Carla Venisa
11:10-11:20	Influence ef Weather Conditions in Power Duality Events Nuno Rodrigues, Fernando Janeiro, Pedro Ramos
11:30-11:50	A Hovel Paer-to-Peer Negewatt Trading Transactive Energy Egitem for Prosumers Daviyer Spratoper, Kurne HOVS Nurna, Armas Distantiou
	schefnich Könnigelich. Kritiskeituns, Casteria and eintercastraction with Mais Grid (enest, Technical University of divenant
10:30-10:50	Saing VIGS Technology as Virtual Active Rower Filter for FlastBilly Enhancement of WIOC Systems Mand Zirlaghan, Roya Ahmad, Gewah, B. Ghumhpelan, Ago Roan, Finday Pourn

- 11:10-11:20 Roya Almadykais of Selected Time Series and Machine Learning Methods for Smart Olike based on Extodian Deciricity Consumption Forecast Roya Almadykangar, Amir Baharandi, Argo Posin, Tobias Háling, Elvaz Astor, Tarmo Koróko, Nomas Shabbir

- 12:00-12:20 Synthesis of a System for Adapting and Feeding a Consumer Without Access to the LV Network Mitsaela Popeacu, Alexandru Bioleanu, Constantin Vad Suru, Mircea Dobriceanu, Floris Alexandru Teodorescu, Andrei Marinescu

- 12:40-14:00 Naioulation of Current Total Harmonic Distortion for a Single-Phase Current Source Multilevel Inventer Maiotar Turarbek, Alex Ruderman, Boris Raznikov
- 14:00-14:20 Felix Himmeliston, Helmut Votri

- 13:20-12:00 A Power Flow Control Approach for Grid-Tied Photovoltaic System with an Integrated EV Battery Seriac Bayhan
- 12:40-14:00 Parallel-connected current source rectifiers as the input stage of the off-board EV battery charger locals Rubbrentki
- 14.00-14.20 Opportunities and Challenges of Power Electronics Systems in Future Railway Electrification Lais A.M. Barros, Mohamed Tanta, Antonio P. Martins, Joso L. Alonso, J. G. Pinto
- Session 3.6 TT Power Electronics and Applications Chair: Luigi Piegari, Politectico di Milano
- 12:03-12:20 Krid Connected Three-Plases 3k: T-Spee QS Inverter for Renewable Everyy Carlos Ronceso Clements, Glekandr Huaer, Fernit Barrer-González, Eris Geraldez-Ronnen, María Isabel Milande-Morders, Errique Ronnero-Cadival An && SRM Drive with a Multilevel Topology Based on a Cross-Switched Configuration Victor Pleas, Armando Corteiro, Daniel Foito, Armando Pleas, João Martina 12-60-14.00 Tago J. C. Soura, Luis Machado, Dellin Pedrosa, Carlos Martine, Vicr Monteiro, Joso L. Alonao Analytical Modelling and Optimization of DAB Conventers Considering the Steady-State Behavior and All Degrees of Freedom Muhammud Faisel Faz, Sandro Caligues, Roberto Peterla

IEEE CPE- POWERENG 2020 (Program)

Invited Lecture 3 9:15 - 10:15
Dectric Databation Networks - Future Role and Planning Issues
Intervent Matos Session 3.1 TT Power Electronics and Applications Chair: Fernando Sina, NESC-BUL 10:30-10:50 Kon-Inverting Magnetically Cospled Buck-Boost Bidirectional DC-DC Converter Aba Rodriguez-Lonente, Antheis Barrado, Antonio Liazao, Marina Sanz, Pablo Zamel 10.50-11.10 Jorge Semiso, Eladio Duran, Salvador Litran, María Bella Ferrera

10:30-10:50	Low-Cest Embedded Maaawament System for Power Quality Prequency Monitoring Nuro Radigues, Fernando Janvéo, Pedro Ramos	
10:50-11:10	biologicet systems applied to buldings' load management Das Powis, Filipe Banda, Carla Vinètes	
11:10-11:20	hituanse et Weather Conditions in Power Guality Events Nuro Riddigues, Panaudo Janeia, Pedo Ramos	
11:30-11:50	A Novel Paer-to-Paer Negawati Trading Transactive Energy System for Prosumere Dariyar Sysatayen, Kurna 16075 Nutra, Almaa Shistoniov	

- 10:50-11:10 Roya AhmadiAhangar, Amir Baharvandi, Argo Rosin, Tobias HSuring, Einar Astri, Tarmo Konsko, Noman Shabbir
- Power Smoothing in Smart Buildings using Rywheel Energy Storage Freddy Plaum, Tobias Häring, Roya Ahmadiahangar, Argo Rosin

## Session 3.4 TT Electrical Machines and Adjustable Speed Drives Chair: Gil Marques, INESC-IDVL

- 12:20-12:40 Robust Control of Grid-Ted Invertiers using Particle Swarm Optimization and Linear Matrix Inequalities Locas Cielo Borin, Jury Cleventon, Guitherne Koch, Casio Ruviero Dantas Doolo, Evence Matter, Vinicius Foletto Montagner

Seasion 3.5 SS Charging Technologies and Batlery Silvage Systems for Electric Vehicles and SS Electric Vehicles and Smart Grids Chair Martin Ricco, University of Batogra

1203-1220 Ara Redrizues. Cata Oliveira. Tapo Soura, Luis Machado, Jaco Alenay. Storage System with the Grid-Interface Operating as Active Power Filter Ara Redrizues. Cata Oliveira. Tapo Soura, Luis Machado, Jaco Alenay. Vito Monteiro

Clasing ceremony 14:20 - 14:25