



***Detailed programme  
of presentations  
in the paper sessions***

Last update: 17/8/2020

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (A1 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
A1-101	Is reliance on synchronous machines holding us back from evolving the power grid to facilitate renewables?	D. VAUGHAN	AUSTRALIA	A1 - Session 1	Tue. Aug. 25
A1-102	The benefits of implementing Synchronous Compensators in Grids with high penetration of renewables	H BIELLMANN	FRANCE	A1 - Session 1	Tue. Aug. 25
A1-NGN 1	Generator Stability and Efficiency Enhancement in Power System with Abruptly Variable Load by use of Electrical Energy Storage System	G. NESTERENKO	RUSSIA	A1 - Session 1	Tue. Aug. 25
A1-201	Experimental Study of Vibration Sparking Erosion on Stator Bars	H. ZHU	USA	A1 - Session 1	Tue. Aug. 25
A1-202	Diagnosis and Prognosis of Wind Turbines using Machine Learning Algorithms on SCADA and Gearbox Vibration Datasets	F. FREITAS	BRAZIL	A1 - Session 1	Tue. Aug. 25
A1-203	Evaluation of the Behavior of Partial Discharges in Generator Heating and Operating Range Tests	P. VILHENA	BRAZIL	A1 - Session 1	Tue. Aug. 25
A1-204	Developments in maintenance processes increase operational availability and contribute to the operating efficiency of the hydroelectric plant of Itaipu.	M. MAURO	BRAZIL	A1 - Session 1	Tue. Aug. 25
A1-205	Partial discharge characterization of stator windings taken from a hydro generator after 50 years of service	E. EBERG	NORWAY	A1 - Session 1	Tue. Aug. 25
A1-206	Features of the design and operating modes of the asynchronous turbogenerator T3FSU-320	M. ROYTGARTS	RUSSIA	A1 - Session 2	Wed. Aug. 26
A1-207	A Study on the Resonance problems and Anti-Vibration Design of Large Vertical Motor-Pump sets	K.Y. KIM	KOREA	Not presented	0
A1-208	Motor Maintenance Management for Power Plant Operation Reliability with Work Optimization by On-Line Condition Based Monitoring	C. SUPHATTANA	THAILAND	A1 - Session 1	Tue. Aug. 25
A1-209	PD Measurement Of Rotating Machine For Condition Monitoring	SANJAY KUMAR PRASAD	INDIA	A1 - Session 1	Tue. Aug. 25
A1-210	Optimization of turbogenerator's core suspension system reconstruction methods for life time extension in the power plant conditions.	D. KUZNETSOV	RUSSIA	A1 - Session 2	Wed. Aug. 26
A1-211	A study of the drop test to detect damper faults and sensitivity analysis in order to identify the parameters that have an impact on the test results	K.L. ZAPPELLINI	FRANCE	A1 - Session 2	Wed. Aug. 26
A1-212	Potential of VLF PD measurements for diagnosis of stator insulation of large hydro generators	T. BRUEGGER	SWITZERLAND	A1 - Session 1	Tue. Aug. 25
A1-213	Evaluation of High Voltage Isolation Systems - Electrodinamic Meaning of Typically Specified Tests	J. ROCHA	SC A1	A1 - Session 2	Wed. Aug. 26
A1-301	Thermal Optimization of a Radially Air-Cooled Rotor for a Pumped Storage Hydro Power Motor Generator, applying advanced 3D Conjugate Heat Transfer Simulations	T. HILDINGER	BRAZIL	A1 - Session 2	Wed. Aug. 26
A1-302	Static Eccentricity Fault Detection Method for Electrical Rotating Machines Based on The Magnetic Field Analysis in the Air Gap by Measuring Coils	S. TVORIC	CROATIA	A1 - Session 2	Wed. Aug. 26

## CIGRE - 2020 e-session / Paper presentations

A1-303	Magnetic Balancing System for Synchronous Machines – A Full Scale Demonstration of Unbalanced Pull Mitigation	F. EVESTEDT	SWEDEN	A1 - Session 2	Wed. Aug. 26
A1-304	Technical challenges and solutions for the new Terna's standardized synchronous condensers/flywheel systems	M. REBOLINI	ITALY	A1 - Session 1	Tue. Aug. 25
A1-305	How To Choose Electric Drive According IEC 60034-1?	M. DIGALOVSKI	MACEDONIA	A1 - Session 2	Wed. Aug. 26
A1-306	Considerations on IEEE 1310-2012, Numbers of Start-Stops and Life Time of Stator Windings in Hydro-Generators	T. HILDINGER	GERMANY	A1 - Session 2	Wed. Aug. 26
A1-308	Development of Reliable Stator Coil End Design of Large Turbine Generator	S. MURAMATSU	JAPAN	A1 - Session 2	Wed. Aug. 26
A1-309	Impact of the q-axis sub-transient reactance on the rotor oscillations of a hydro generator	L. ROUCO	SPAIN	A1 - Session 2	Wed. Aug. 26
A1-310	The Design and Application of New Fast-response, Large-scaled Rotary Condensers in UHV Power Grid	Y. JIN	CHINA	A1 - Session 1	Tue. Aug. 25
A1-311	Design, Implementation and Field Application of a New Generation Flexible Excitation System for High-Power Synchronous Generators	J. ZHANG	CHINA	A1 - Session 2	Wed. Aug. 26
A1-312	Failures of Large Turbo-Generators on Prolonged Site Storage - Case Studies of Indian Power Utility	HIRDESH GUPTA	INDIA	A1 - Session 2	Wed. Aug. 26
C4-129	Design and Application of State-of-the-art Synchronous Condensers to facilitate the energy transition	K. CHAN	SWITZERLAND	A1 - Session 1	Tue. Aug. 25

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (A2 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
A2-101	Distributed Energy Resources (DERs): Impact of Reverse Power Flow on Transformer	P. UPADHYAY	USA	A2 - Session 3	Tue. Sept. 1
A2-102	Active power control with 400/130 kV transformers. Experience from two recent projects	P NORBERG	SWEDEN	A2 - Session 3	Tue. Sept. 1
A2-103	Dynamic thermal behavior of wind power transformers	T LANERYD	SWEDEN	A2 - Session 3	Tue. Sept. 1
A2-104	Solar Farm Transformer Condition Monitoring and Automated Anomaly Detection Using Micro-Synchrophasors	C V SIMMONS	UNITED KINGDOM	Not presented	0
A2-105	Smart dynamic shunt compensation - inductive and capacitive reactive power based on common transformer technology	R. FRITSCHÉ	GERMANY	Not presented	0
A2-106	Effects of TVR application on various voltage changes caused by reverse power flow, distributed power supply and renewable energy	M. KAKIHARA	JAPAN	A2 - Session 3	Tue. Sept. 1
A2-107	Enhanced cooling of dry-type transformers for wind applications	A. NOGUÉS	SPAIN	A2 - Session 3	Tue. Sept. 1
A2-108	Study on key technology and demonstration application of UHV AC controlled shunt reactor	X. WANG	CHINA	A2 - Session 3	Tue. Sept. 1
A2-109	System for on-line evaluation of power transformer dynamic thermal capability	TIM GRADNIK	SLOVENIA	A2 - Session 3	Tue. Sept. 1
A2-110	Thermal design aspects of subsea transformers	E. VIRTANEN	FINLAND	A2 - Session 3	Tue. Sept. 1
A2-111	Influence of harsh operation conditions present on offshore platforms to the design of power transformers and shunt reactors	S RAJAMANICKAM	UNITED KINGDOM	A2 - Session 3	Tue. Sept. 1
A2-201	Simulations and tests based on dielectric studies to improve the power transformers technical specifications and their performances	M RYADI	FRANCE	A2 - Session 2	Mon. Aug. 31
A2-203	Resonant overvoltages inside power transformer windings and the measures improving their ability to withstand high-frequency stresses	V. LARIN	RUSSIA	A2 - Session 2	Mon. Aug. 31
A2-204	Electric Field Analysis for Valve-side Lead-out Insulation Structure of UHVDC Converter Transformer	J. ZHENG	CHINA	A2 - Session 2	Mon. Aug. 31
A2-205	Partial Discharge Localization Algorithm for Power Transformer using UHF Signals	B. W. MIN	KOREA	Not presented	0
A2-206	Advances of Dielectric Frequency Response testing for HV OIP bushings	R. ALVAREZ	ARGENTINA	A2 - Session 2	Mon. Aug. 31
A2-207	Simulation and Measurements of Special Termination Lightning Impulse Test on Power Transformers	D. VIR	USA	Not presented	0
A2-208	Verification of Withstand Capability for Very Fast Transients of a 200 MVA, 500 kV GSU-Transformer by Modelling and Testing	A. RABEL	AUSTRIA	A2 - Session 2	Mon. Aug. 31
A2-301	Ten Years of Experience with Natural Ester in 245 kV: Shunt Reactor of Vilhena Substation	R. IGNACIO	BRAZIL	A2 - Session 2	Mon. Aug. 31

## CIGRE - 2020 e-session / Paper presentations

A2-302	Investigation on the Operating Conditions of MV/LV Transformers and Recommendations to Improve their Reliability	WAHIB CHABANE	ALGERIA	A2 - Session 1	Mon. Aug. 31
A2-303	Continuous improvement of transformer specifications at a large utility	C. RAJOTTE	CANADA	A2 - Session 1	Mon. Aug. 31
A2-304	Power Transformers using Esters next generation - ready to cope with all grid operation challenges	R. FRITSCHÉ	GERMANY	Not presented	0
A2-305	Compatibility tests between solid and liquid materials for reliable transformers	C PERRIER	FRANCE	A2 - Session 2	Mon. Aug. 31
A2-306	Reliability Evaluation of Ester Oil Filled Onload Tap Changers through Critical Tests	R V TALEGAONKAR	INDIA	A2 - Session 2	Mon. Aug. 31
A2-307	Improving the reliability of key power transformers (GSU for Nuclear Power Plants) through specifications	P HURLET	FRANCE	A2 - Session 1	Mon. Aug. 31
A2-308	GIC Magnetic and Thermal Assessment of a Large Fleet of Power Transformers - A Case Study	R. GIRGIS	USA	A2 - Session 2	Mon. Aug. 31
A2-309	Health Index and Hierarchizing Scale Methodologies for Prioritizing On-line Monitoring of Power Transformers and Reactors in the Brazilian Transmission Grid	M. ALVES	BRAZIL	A2 - Session 1	Mon. Aug. 31
A2-310	Improving transformer reliability through operation, maintenance, repair and asset management for extended life	L. QUEIROZ	BRAZIL	A2 - Session 1	Mon. Aug. 31
A2-311	Transformer management by learning from condition, failure and scrapping data collected nation-wide	J. FOROS	NORWAY	A2 - Session 1	Mon. Aug. 31
A2-312	Fleet Asset Management Opportunities Arising From Transient Monitoring of Power Transformers and Shunt Reactors	T. ZUPAN	CROATIA	A2 - Session 1	Mon. Aug. 31
A2-313	Fleet screening of HVDC transformers	E ERMAKOV	SWEDEN	A2 - Session 1	Mon. Aug. 31
A2-314	Field experience of small quasi DC bias on power transformers A first classification of low-frequency current pattern and identification of sources	D. ALBERT	AUSTRIA	A2 - Session 2	Mon. Aug. 31
A2-315	Rationalization and high precision of transformer lifetime evaluation method	S. MIYAZAKI	JAPAN	A2 - Session 1	Mon. Aug. 31
A2-316	Large Power Autotransformers filled with natural ester – Working parameters from the field and Maintenance notes	L. LOMBINI	ITALY	A2 - Session 2	Mon. Aug. 31
A2-317	Experiences in Transformer Onsite Refurbishment	R. LI	AUSTRALIA	A2 - Session 1	Mon. Aug. 31
A2-318	Application of Conditional Probability assessment to optimise Transformer Design, Operation and Maintenance practices	C. BECKETT	AUSTRALIA	A2 - Session 1	Mon. Aug. 31
A2-319	Development and Implementation of Intelligent Condition Monitoring System for Transformers and Reactors	SHALI RAJ	INDIA	A2 - Session 1	Mon. Aug. 31
A2-320	Increasing Reliability Tertiary Voltage Side of Power Transformer by Installing Relay Protection	S. LAOHANAN	THAILAND	Not presented	0
A2-321	An innovative solution to assess the Reliability of Transformers by Integrated Transformer Health Monitoring	RAJAG KOMMU	INDIA	A2 - Session 1	Mon. Aug. 31
A2-322	Advancements in Transformer Site Dryouts	E. TENYENHUIS	CANADA	A2 - Session 1	Mon. Aug. 31
A2-323	Power Transformer Life Extension Rebuilds	T. O'NEILL	SC A2	A2 - Session 1	Mon. Aug. 31

## CIGRE - 2020 e-session / Paper presentations

A2-NGN 1	Solid-state transformer for solar integration	Burak ESENBOGA	USA	A2 - Session 3	Tue. Sept. 1
A2-NGN 2	Impregnation of insulation by ester liquids	Oasis SANCIBRIAN	USA	A2 - Session 2	Mon. Aug. 31
A2-NGN 3	Impact of weather on transformer failures	Sam McCORMICK	USA	A2 - Session 1	Mon. Aug. 31
WG A2.60	Dynamic Thermal Performance of Power Transformers	Tim GRADNIK	SLOVENIA	A2 - Session 3	Tue. Sept. 1
WG A2.62	Reliability of ac transformers	Stefan TENBOHLEN	GERMANY	A2 - Session 2	Mon. Aug. 31
WG A2.63	Transformer impulse testing	Ebrahim RAHIMPOUR	GERMANY	A2 - Session 2	Mon. Aug. 31

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (A3 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
A3-101	EDISON: A New Generation DC Circuit Breaker	L. GRABER	USA	A3 - Session 1	Wed. Aug. 26
A3-102	Environmental Performance of Dead-Tank Circuit Breakers with SF6 and Alternative Gases	V. HERMOSILLO	USA	A3 - Session 2	Wed. Aug. 26
A3-103	VARC DC circuit breaker – a versatile concept for non-zero current interruption	L. ÄNGQUIST	SWEDEN	A3 - Session 1	Wed. Aug. 26
A3-104	Innovative T&D Switching Equipment and Development of its Testing Technology	R.P.P. SMEETS	NETHERLANDS	A3 - Session 1	Wed. Aug. 26
A3-105	Low loss DC circuit breakers and DC GIS equipment	M. KOSAKADA	JAPAN	A3 - Session 1	Wed. Aug. 26
A3-106	First CO2-neutral 145 kV and up to 63 kA Dead Tank Circuit Breakers based on Vacuum Switching and Clean Air Insulation Technology	S. KOSSE	GERMANY	A3 - Session 2	Wed. Aug. 26
A3-107	Fault current limiters for electrical grids 220 kV on the base of the fast-acting highvoltage explosive commutators	N. NOVIKOV	RUSSIA	A3 - Session 3	Thu. Aug. 27
A3-108	Studying the characteristics of non-traditional current and voltage converters for digital substations	A. YABLOKOV	RUSSIA	A3 - Session 1	Wed. Aug. 26
A3-109	Power plants Modernization by Smart integrated vacuum generator breaker switchgears	G. URQUIZA	SPAIN	A3 - Session 2	Wed. Aug. 26
A3-110	Development and Electrical Performance Research of a 12kV C4F7N/CO2 Ring Main Unit	R. ZHANG	CHINA	A3 - Session 2	Wed. Aug. 26
A3-111	Experience of Capacitive Current Switching of EHV and UHV AC Circuit Breaker in Power System and Test	G. LI	CHINA	A3 - Session 1	Wed. Aug. 26
A3-112	Basic aspects of switching with series-connected vacuum interrupter units in high-voltage metal-enclosed and live tank arrangements	P. G. NICOLIC	GERMANY	A3 - Session 2	Wed. Aug. 26
A3-113	Interrupting Performance Evaluation of High-Voltage Gas Circuit Breakers Using CFD Simulation and Data Analysis Technique	H. K. KIM	KOREA	A3 - Session 2	Wed. Aug. 26
A3-114	The First Development of SF6-free 170kV 50kA 60Hz GIS with Fluoronitrile (C4F7N) Mixtures	H.E. JUNG	KOREA	A3 - Session 2	Wed. Aug. 26
A3-115	Case Study – Improving Reliability of Circuit Breaker by using Controlled Switching and removing Pre Insertion Resistor (PIR)	JIVESH KHANNA	INDIA	A3 - Session 2	Wed. Aug. 26
A3-116	Innovative SF6 Free Load Break Switch with Shunt Vacuum Interruption (SVI) Technology	C. PREVE	FRANCE	A3 - Session 2	Wed. Aug. 26
A3-117	Return of experience of the SF6-free solution by the use of fluoronitrile gas mixture and progress on coverage of full range of transmission equipment	J. OZIL	FRANCE	A3 - Session 2	Wed. Aug. 26
A3-118	C5 fluoroketone based gas mixtures as current interrupting media in high voltage switchgear	P. STOLLER	SWITZERLAND	A3 - Session 2	Wed. Aug. 26
A3-119	Theoretical and Practical Behaviour of Eco-friendly SF6 Alternatives in High Voltage Switchgear	J. MANTILLA	SWITZERLAND	A3 - Session 2	Wed. Aug. 26
A3-201	CIGRE Reliability Survey on Equipment	H. ITO ON BEHALF OF CIGRE AG A3.01	SC A3	A3 - Session 3	Thu. Aug. 27

## CIGRE - 2020 e-session / Paper presentations

A3-202	Operational Experience, Field Test and EMT Simulation for EHV Shunt-Reactor Switching	G. BLANCHET	NORWAY	A3 - Session 2	Wed. Aug. 26
A3-204	In-service Diagnosis of Grading Capacitor Dielectric Deterioration	P. MOORE	UNITED KINGDOM	A3 - Session 3	Thu. Aug. 27
A3-205	Circuit Breaker De-Rating Assessment under High DC Time Constant	Z. EMIN	UNITED KINGDOM	A3 - Session 3	Thu. Aug. 27
A3-206	Actual use survey and maintenance practice of circuit breakers for frequent switching applications	J. KIDA	JAPAN	A3 - Session 3	Thu. Aug. 27
A3-207	A campaign for the ageing evaluation of station hollow core composite insulators after a number of years of service	M. MARZINOTTO	ITALY	A3 - Session 3	Thu. Aug. 27
A3-208	Overvoltages research in switching modes of cable and mixed overhead-cable lines, power transformers, shunt reactors and capacitor banks of 110-750 kV and development of a controlled switching device for the above electrical equipment	V. SMEKALOV	RUSSIA	A3 - Session 2	Wed. Aug. 26
A3-209	X-ray inspection of operating high-voltage oil-filled circuit breakers	L. DARIAN	RUSSIA	Not presented	0
A3-210	On-line monitoring of paper-oil insulated current transformers	J.M. NOGUEIRAS	SPAIN	A3 - Session 1	Wed. Aug. 26
A3-211	Influence of Contact Heating on Main Circuit Resistance Measurement and Dynamic Contact Resistance Measurement in High Voltage Circuit Breakers	T. CHENG	CHINA	A3 - Session 3	Thu. Aug. 27
A3-212	Research on Simulation Testing Method of System Level's Strong Electromagnetic Disturbance in Substations	L. CHENG	CHINA	A3 - Session 1	Wed. Aug. 26
A3-213	Operational Aged Switchgear With The Age Up To 50 Years - Investigations, Testing, Results - Considerations For The Design And Operation Of Old and New Switchgear	T. GRÄF	GERMANY	A3 - Session 3	Thu. Aug. 27
A3-214	Investigation of ferroresonance oscillations in the systems with electromagnetic potential transformers by experimental and calculation methods	A. SIVKOV	RUSSIA	A3 - Session 1	Wed. Aug. 26
A3-215	Development of 362kV 63kA 60Hz Self-Blast Breaker without additional capacitors to prevent ferro-resonance by improving the SLF performance	J. H. YOON	KOREA	A3 - Session 3	Thu. Aug. 27
A3-216	Damping Performance of VFTO using Magnetic Rings in 800kV GIS	J. W. KIM	KOREA	A3 - Session 3	Thu. Aug. 27
A3-217	Approach & Experience of IoT Based Predictive Maintenance Technologies in Power Distribution Network	HUKUM CHAND SHARMA	INDIA	A3 - Session 3	Thu. Aug. 27
A3-218	Technical-Economic Study on Spark Gaps Replacement by Surge Arresters on Pole-Mounted MV/LV Transformers	WAHIB CHABANE	ALGERIA	A3 - Session 2	Wed. Aug. 26
A3-219	Pollution and Humidity Effects on Air Insulated Switchgear (AIS) of MV/LV Substations	WAHIB CHABANE	ALGERIA	A3 - Session 2	Wed. Aug. 26
A3-221	Digital Disconnecter and smart sensors: example of integration in the condition base asset management cloud tool	T. PEGOURET	FRANCE	A3 - Session 3	Thu. Aug. 27
A3-222	External flashover of a 245kV live tank circuit breaker	D. CHUN	FRANCE	A3 - Session 3	Thu. Aug. 27



## CIGRE - 2020 e-session / Paper presentations

A3-223	Monitoring of asymmetric short circuit currents at a hydro power plant using electronic fibre optical current transformers	T. HEID	SWITZERLAND	A3 - Session 1	Wed. Aug. 26
A3-224	Accuracy study of a combined low-power instrument transformer in different climatic and pollution conditions	T. HEID	SWITZERLAND	A3 - Session 1	Wed. Aug. 26
A3-225	Development of Light Asset Models based on Data Mining	T MAUFFREY	FRANCE	A3 - Session 3	Thu. Aug. 27
A3-301	First 170 kV / 50 kA GIS with Clean Air and Vacuum Interrupter Technology as a Climate-neutral Alternative to SF6	K. KIM	KOREA	A3 - Session 2	Wed. Aug. 26

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (B1 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
B1-101	Life-Cycle Experiences for 115kV Underground Pipe-Type Transmission Circuit Cooling System	E.C. BASCOM III	USA	B1 - Session 1	Mon. Aug. 31
B1-102	Development of a New High-Voltage Dry Type Cable Terminator with Optional Integrated Partial Discharge Monitoring	R. MIDDLETON	USA	B1 - Session 1	Mon. Aug. 31
B1-103	ALEGrO – Extended type testing of the HVDC XLPE cable system and additional tests for Transient Over Voltages (TOV)	B. MAMPAEY	BELGIUM	B1 - Session 1	Mon. Aug. 31
B1-104	Mechanical characterization of smooth welded copper sheaths for high voltage submarine cables	T. KOUTI	FINLAND	B1 - Session 1	Mon. Aug. 31
B1-105	Extended Thermal Rating Calculations of 400 kV XLPE Cables for Urban Grid Applications based on long-term Experimental Data	A. AINHIRN	AUSTRIA	B1 - Session 1	Mon. Aug. 31
B1-106	Online prognostic system for cable joints for Industry 4.0	S. CHRISTOU	UNITED KINGDOM	B1 - Session 1	Mon. Aug. 31
B1-107	Development HV External Gas Pressure Cable Systems Retrofit	J. VAN ROSSUM	NETHERLANDS	B1 - Session 1	Mon. Aug. 31
B1-108	Total System Development on Innovative and Large Scaled HVDC Cable System towards Expanded Installation of Large Offshore Wind Farms	K. KOYAMA	JAPAN	B1 - Session 1	Mon. Aug. 31
B1-109	Machine Learning Based Temperature Forecast for Offshore Windfarm Export Cables	S. H. H. KAZMI	DENMARK	B1 - Session 1	Mon. Aug. 31
B1-110	Comprehensive tests of the 1200 m HTS DC cable system for Saint-Petersburg	A. KASHCHEEV	RUSSIA	B1 - Session 1	Mon. Aug. 31
B1-111	A Novel Self-healing Intelligent Power Cable Sheathing Material	L. PENG	CHINA	Not presented	0
B1-112	A Commercial Implementation of an Innovative Superconducting Cable System and Its Future Prospect in Korea	C. H. RYU	KOREA	B1 - Session 1	Mon. Aug. 31
B1-201	Application of Horizontal Directional Drilling and Other Trenchless Methods to Electric Power Cable Installations	E.C. BASCOM III	USA	B1 - Session 2	Mon. Aug. 31
B1-202	230 kV Mixed Transmission Line: Submarine, Underground and Overhead	J. LOPES	BRAZIL	B1 - Session 2	Mon. Aug. 31
B1-203	Qualifying an extruded 420 kV cable system for installation in a 4 km long blasted tunnel	K. RØNNINGEN	NORWAY	B1 - Session 2	Mon. Aug. 31
B1-204	System Analysis of Fiber Optic Cable Faults in Underground Cable Systems	R. STØLAN	NORWAY	B1 - Session 2	Mon. Aug. 31
B1-206	Cable design for deep water applications and low losses transmission links: first project experience	M. CHATZIPANOS	GREECE	B1 - Session 2	Mon. Aug. 31
B1-207	Rigorous calculation of external thermal resistance in non-uniform soils	A. I. CHRYSOCHOS	GREECE	B1 - Session 2	Mon. Aug. 31
B1-208	Evaluation of Degrees of Freedom for the Design of Metallic Screen Grounding Systems of Long HVDC Underground Cable Systems	A. WAGNER	GERMANY	B1 - Session 2	Mon. Aug. 31
B1-209	Long Horizontal Directional Drill for 220 kV Subsea Cable Installation	T. RALPH	IRELAND	B1 - Session 2	Mon. Aug. 31

## CIGRE - 2020 e-session / Paper presentations

B1-210	Statistics, experiences and learnings from failures in power cable systems during pq and type tests, tests after installation and service operation	P. VAN DER WIELEN	NETHERLANDS	B1 - Session 2	Mon. Aug. 31
B1-211	Induced voltages issues in relation with long export cables for large offshore wind farms	P CHRISTENSEN	DENMARK	B1 - Session 2	Mon. Aug. 31
B1-212	Lessons learned from joint bay implementation	A. MARTÍN	SPAIN	B1 - Session 2	Mon. Aug. 31
B1-213	Study on Recognition and Location of Partial Discharge in XLPE Cable under Damped AC Voltage	L. ZHANG	CHINA	B1 - Session 2	Mon. Aug. 31
B1-214	Qualification process of ±400 kV HVDC extruded cable system	X. GU	CHINA	B1 - Session 3	Tue. Sep. 1
B1-215	3D-FEM modelling of losses in armoured submarine power cables and comparison with measurements	S. STURM	GERMANY	B1 - Session 3	Tue. Sep. 1
B1-216	Proposal for a non-destructive protocol for the Verification of Absence of Voltage of Insulated Cable Systems	P. MIREBEAU	FRANCE	B1 - Session 3	Tue. Sep. 1
B1-217	Construction of underground conduits through structures with a depth of more than 25 meters under the canal	P. SRIWAN	THAILAND	B1 - Session 3	Tue. Sep. 1
B1-218	Development of Self-healable Insulator Applicable to High Voltage Pre-molded Joint	D. H. SHIN	KOREA	B1 - Session 3	Tue. Sep. 1
B1-219	Development of Wet Type AC 66kV TR-XLPE Insulated Cable	K.S KIM	KOREA	B1 - Session 3	Tue. Sep. 1
B1-220	A Numerical Study on DC Electric Field Distribution in HVDC MI-PPLP Cable Considering Parameters Related to Load Cycle Test	I. K. KWON	KOREA	B1 - Session 3	Tue. Sep. 1
B1-221	Design and Development of Back-to-Back Gas-to-Cable Termination for 420kV Gas Insulated Switchgear	M. MOHANA RAO	INDIA	B1 - Session 3	Tue. Sep. 1
B1-222	Power Cables insulation & establishing relationship between insulation level selection and aging	ROBIN GIRI	INDIA	B1 - Session 3	Tue. Sep. 1
B1-223	Damage on the 110 kV cable during measurements on the earthing system	JURE STRMEC	SLOVENIA	B1 - Session 3	Tue. Sep. 1
B1-301	Use of Augmented Reality (AR) for Asset Management of HV Devices and Training of Field Personnel	I. JOVANOVIC	USA	B1 - Session 4	Tue. Sep. 1
B1-302	On line monitoring of partial discharge on an underground transmission line	E. INUCENCIO	BRAZIL	B1 - Session 4	Tue. Sep. 1
B1-303	Practical experience and challenges for DTS/RTTR systems	S. STUL	BELGIUM	B1 - Session 4	Tue. Sep. 1
B1-304	Deep Water 500 kV HVDC Mass Impregnated Cable Interconnection between Montenegro and Italy	L LERVIK	NORWAY	B1 - Session 4	Tue. Sep. 1
B1-305	Dynamic Current Rating - Thermal Transient Response	E. OLSEN	NORWAY	B1 - Session 4	Tue. Sep. 1
B1-306	Reducing the likelihood of power transmission cable failures by increasing the role of quality assurance and quality control	M JEROENSE	SWEDEN	B1 - Session 4	Tue. Sep. 1
B1-307	Implementation of an integrated monitoring system for real-time assessment of HV cable links in the Terna's Italian electrical grid	L. GUIZZO	ITALY	B1 - Session 4	Tue. Sep. 1
B1-308	Failure Analysis and Asset Management of Cable Trifurcating Joints	S TEE	UNITED KINGDOM	B1 - Session 4	Tue. Sep. 1
B1-310	Enhanced Cable Security through Fibre Optic Monitoring	J. CAIRNS	AUSTRALIA	B1 - Session 4	Tue. Sep. 1

## CIGRE - 2020 e-session / Paper presentations

B1-311	Automated sheath current monitoring system for cable sheath diagnostics purposes	F. GARNACHO	SPAIN	B1 - Session 4	Tue. Sep. 1
B1-312	Non-Electrical Multi-Sensor Solution for Partial Discharge Detection in HV Cable Accessories	K. VATERRODT	GERMANY	B1 - Session 4	Tue. Sep. 1
B1-313	Construction Products Regulation: HVAC and HVDC cable classification criteria and application	G. CAPON	FRANCE	B1 - Session 4	Tue. Sep. 1
B1-314	Complete offshore cable condition monitoring and load management using distributed fibre optic sensing	E. ROCHAT	SWITZERLAND	B1 - Session 4	Tue. Sep. 1
B1-NGN 1	Determination of the pre-qualification rules for the acceptance testing of medium voltage DC cable systems	A. SANTOSH	NETHERLANDS	B1 - Session 2	Mon. Aug. 31
B1-NGN 2	Wimbledon Digital Engineering Cross Site Cable Systems	G. RICCARDI	UNITED KINGDOM	B1 - Session 3	Tue. Sep. 1

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (B2 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
B2-101	Monitoring of a New Transmission Line Design	M. FULK	USA	B2 - Session 1	Wed. Sep. 2
B2-102	A structural reliability approach to transmission line engineering – a consistent way to make use of monitoring and inspection data	A. ISTAD LEM	NORWAY	B2 - Session 1	Wed. Sep. 2
B2-103	Development of sensors for real-time monitoring of ice loads on overhead lines	B. E. NYGAARD	NORWAY	B2 - Session 1	Wed. Sep. 2
B2-104	The THOR Hammer Tester – A Step Change in the Management of Wooden Utility Poles	R EYRE-WALKER	UNITED KINGDOM	B2 - Session 1	Wed. Sep. 2
B2-105	An Approach to Determine Temperature Exceedance in Overhead Line Compression Fittings	T. KAVANAGH	IRELAND	B2 - Session 1	Wed. Sep. 2
B2-106	Utilization of environmental factor maps and corrosion rate maps for advanced maintenance of overhead transmission towers	S. OHARA	JAPAN	B2 - Session 1	Wed. Sep. 2
B2-108	Experimental Study and Mechanism Analysis of Abnormal Fever Composite Insulators in AC 500kV Overhead Line	M. LU	CHINA	B2 - Session 1	Wed. Sep. 2
B2-109	A Development of Compact Corrosion Detector to Diagnosis of Aged Overhead Conductor	Y.H. KIM	KOREA	B2 - Session 1	Wed. Sep. 2
B2-110	Indian Experience of Refurbishment of Tower Foundation located in water bodies	CHAITANYA KUNTE	INDIA	B2 - Session 1	Wed. Sep. 2
B2-111	Creation of a geographic information system of thunderstorm activity based on the existing complex of 6-110 kV grids using the devices for identifying faults in OHL	A. KUCHERIAVENKOV	RUSSIA	B2 - Session 1	Wed. Sep. 2
B2-112	Practical Procedure to Define the Maintenance Priority of Transmission Line Cables	S. ASTO	PERU	Not presented	0
B2-113	Holistic Regulatory Framework of Resilience for Electrical Facilities against Wildfire	R. SERRANO	CHILE	B2 - Session 2	Wed. Sep. 2
B2-114	Overhead powerline LiDAR inspection with unmanned aerial vehicles	A. COELHO	PORTUGAL	B2 - Session 2	Wed. Sep. 2
B2-115	Remote monitoring overhead lines using satellite images	N. PINHO DA SILVA	PORTUGAL	B2 - Session 1	Wed. Sep. 2
B2-116	Condition Assessment Study of OHTL Steel Towers in Iceland	A. B. JONASSON	ICELAND	B2 - Session 1	Wed. Sep. 2
B2-117	Artificial Intelligence (AI) Augmented Transmission Line Inspection	J. TOTH	ICELAND	B2 - Session 1	Wed. Sep. 2
B2-118	Limits of vibration amplitude measurement based conductor fatigue design	K. SCHILLAI	SWITZERLAND	B2 - Session 1	Wed. Sep. 2
B2-119	Hydrophobicity Classification of Composite Insulators Using Convolutional Neural Networks	C. C. KOKALIS	GREECE	B2 - Session 1	Wed. Sep. 2
B2-201	Flexible HTLS-High Temperature Low Sag Conductor	S. UEDA	BRAZIL	B2 - Session 3	Thu. Sep. 3
B2-202	Sensitivity Effects of High Temperature Overhead Line (OHL) Conductors to Line Rating Variables	A. ABBOUD	USA	B2 - Session 3	Thu. Sep. 3
B2-203	Mega High Strength steel core for HTLS conductor on 2nd Scheldt long span crossing of new 380 kV line in the port of Antwerp	J.F. GOFFINET	BELGIUM	B2 - Session 2	Wed. Sep. 2

## CIGRE - 2020 e-session / Paper presentations

B2-204	Electrical design and testing of composite towers for 420 kV	A. KVAMME BERSTAD	NORWAY	B2 - Session 2	Wed. Sep. 2
B2-205	Optimization of losses in new 400 kV overhead lines	K LENARCZYK	POLAND	B2 - Session 3	Thu. Sep. 3
B2-206	RTV Coated OHL Insulators in Harsh Desert Environment Optimization of Coating Thickness & Assessment of Sand Blasting Impact	ENG. AHMAD ALTHAGFI	GULF STATES	B2 - Session 2	Wed. Sep. 2
B2-208	Field experience and laboratory results on the application of RTV coating on HVDC lines	M. MARZINOTTO	ITALY	B2 - Session 2	Wed. Sep. 2
B2-209	compactLine - Experience with a Pilot installation of an innovative overhead transmission line concept for 400kV	R. SCHLOSSER	GERMANY	B2 - Session 2	Wed. Sep. 2
B2-210	Overhead Transmission Line Performance with Respect to Grounding Impedance on Alpine Terrain	S. PACK	AUSTRIA	B2 - Session 3	Thu. Sep. 3
B2-211	Design Validation of HTLS Conductor through a High Temperature Field Test	P. PORTER	IRELAND	B2 - Session 2	Wed. Sep. 2
B2-212	Conception, Construction and Realisation of an innovative OHL Design	S. STEEVENS	GERMANY	B2 - Session 2	Wed. Sep. 2
B2-213	Development and implementation of digital line-to-cable termination points for connecting 110 kV overhead and cable lines	M. ERMOSHINA	RUSSIA	B2 - Session 2	Wed. Sep. 2
B2-214	Advantage Analysis of Composite Insulated Crossarm in Uprating Voltage and Transmission Capacity of Transmission Lines	Y. LI	CHINA	B2 - Session 2	Wed. Sep. 2
B2-215	Research on Design of Compact Transmission Line Tower Based on Composite Cross-arm	P. ZHAO	CHINA	B2 - Session 2	Wed. Sep. 2
B2-216	Transient Overvoltage by pole-to-ground fault on $\pm 500$ kV 8GW HVDC Double Bi-pole System with Metallic Return Conductor in Korea	G.M. KWON	KOREA	B2 - Session 3	Thu. Sep. 3
B2-217	Experience of Live Line or Zero Shutdown Reconductoring in India	SHACHIDEVI T. K.	INDIA	B2 - Session 3	Thu. Sep. 3
B2-218	Assessment of performance of insulators through leakage current monitoring under contaminated conditions	J.M. GEORGE	FRANCE	B2 - Session 2	Wed. Sep. 2
B2-219	Development and realization of a complex transmission line management system	BALINT NEMETH	HUNGARY	B2 - Session 2	Wed. Sep. 2
B2-220	Research of steel - aluminium plastically compacted conductors for overhead lines (OHL)	V. KURYANOV	RUSSIA	B2 - Session 2	Wed. Sep. 2
B2-221	Technical Demands to Improve Today's Composite Insulator Reliability	C. BAER	SWITZERLAND	B2 - Session 2	Wed. Sep. 2
B2-222	Comparing the Corona Performance of AC and DC Overhead Lines in both Indoor and Outdoor Experiments Using novel Techniques	P. BLEULER	SWITZERLAND	B2 - Session 2	Wed. Sep. 2
B2-223	An integral approach to ensuring the integrity of the tower and conductors	NENAD GUBELJAK	SLOVENIA	B2 - Session 2	Wed. Sep. 2
B2-224	Case of Dynamic Line Rating (DLR) for Overhead Transmission in Context of Tropical Countries Like India	SMRUTI RANJAN MOHAPATRA	SC B2	B2 - Session 3	Thu. Sep. 3
B2-302	Development of an Overhead Transmission Line Portable Protective Arrester (PPA) for Live Work	A.J. PHILLIPS	USA	B2 - Session 3	Thu. Sep. 3

## CIGRE - 2020 e-session / Paper presentations

B2-303	Robotic installation of aircraft warning markers on transmission lines	L. M. DICKIE	NORWAY	B2 - Session 3	Thu. Sep. 3
B2-304	Exposure of workers to electric and magnetic field during maintenance work on double-circuit overhead power lines	MAJA GRBIC	SERBIA	B2 - Session 3	Thu. Sep. 3
B2-305	Audible Noise Management of Newly Reconductored Transmission Lines	J. RANIGA	AUSTRALIA	B2 - Session 3	Thu. Sep. 3
B2-307	Selecting Equipment for Construction of Overhead Lines Based on CO2 Emissions Calculation	F. GHELICHI	IRAN	B2 - Session 3	Thu. Sep. 3
B2-308	UAV (Unmanned Aerial Vehicle) Electromagnetic Fields (EMF) Compatibility and Tests requirements for use in OHL	C. ROZE	FRANCE	B2 - Session 3	Thu. Sep. 3
B2-309	Development of Vertical Separated Tubular Steel Pole for OHL	W. K. LEE	KOREA	B2 - Session 3	Thu. Sep. 3
B2-310	Optimal Placement of Anti--Cascading Structures in Overhead Line Design – A Probabilistic Framework	A. HALDAR	CANADA	B2 - Session 3	Thu. Sep. 3
B2-311	Peruvian Experience on Insulation Design for 500 kV Overhead Transmission Lines at Very High Altitude	A. MARAVI	PERU	B2 - Session 3	Thu. Sep. 3
B2-312	New solution for reduction of the ground potential rise around construction of high voltage overhead lines	ROBERT MARUŠA	SLOVENIA	B2 - Session 3	Thu. Sep. 3
B2-NGN 01	THE METHODOLOGY FOR OVERHEAD POWER TRANSMISSION LINES TECHNICAL STATE ASSESSMENT BASED ON MACHINE LEARNING	A.STEPANOVA	RUSSIA	B2 - Session 2	Wed. Sep. 2
B2-NGN 02	Corona Protection of HV composite Insulators with considering Weather Conditions and Pollution layer (Design / Simulation)	R.GHASEMI	IRAN	B2 - Session 2	Wed. Sep. 2

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (B3 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
B3-101	Water-Oil Separation Device for Mitigating Environmental and Safety Risks in Substations	J. QUERIDO	BRAZIL	B3 - Session 1	Wed. Sep. 2
B3-102	New 420-kV GIS Substation Design in the Norwegian Transmission System – Up-to-date Technology, Design Optimisation and Connection Interface Issues	G. BLANCHET	NORWAY	B3 - Session 1	Wed. Sep. 2
B3-103	Safety Aspects related to Electric Fields in Converter Stations	J. HERNANDEZ	SWEDEN	B3 - Session 1	Wed. Sep. 2
B3-104	TenneT's giant leap to be able to replace 140 substations within next 10 year, while in service and coming from different lay-outs	A. LATHOUWERS	NETHERLANDS	B3 - Session 1	Wed. Sep. 2
B3-105	Arc flash hazard in high voltage substations: incident energy calculation and statistical risk evaluation	A. VALANT	ITALY	B3 - Session 1	Wed. Sep. 2
B3-106	Seismic Design Optimization of Substation Equipment in Japan	S. IWASAKI	JAPAN	B3 - Session 1	Wed. Sep. 2
B3-107	First 145 kV / 40 kA gas-insulated switchgear with climate-neutral insulating gas and vacuum interrupter as an alternative to SF6 - Design, Manufacturing, Qualification and Operational Experience	M. KUSCHEL	GERMANY	B3 - Session 1	Wed. Sep. 2
B3-108	Flexible integration of phase-shifting transformers in AIS substations - Comparison of approaches	H. KÖRNER	GERMANY	B3 - Session 1	Wed. Sep. 2
B3-109	Design Changes in GIS Substations after experience from i-DE	A. RICONDO	SPAIN	B3 - Session 1	Wed. Sep. 2
B3-110	Operation Scheme of Modular Green Substation with BESS for Transmission and Distribution System	I. LIM	KOREA	B3 - Session 1	Wed. Sep. 2
B3-112	Influence of power harmonics on the non-ionizing EMF exposure values in electrical installations	L. ROCHA	PORTUGAL	B3 - Session 2	Wed. Sep. 2
B3-113	SF6 circuit breakers' monitoring system – development and implementation in Ukrainian power industry	B. STOJNI	UKRAINE	B3 - Session 2	Wed. Sep. 2
B3-114	Health and safety partnership approach to improve safety records	V. GUIGNARD	FRANCE	B3 - Session 2	Wed. Sep. 2
B3-115	Alternative to SF6: an on-site 145kV GIS pilot project from a TSO perspective	M. INVERSIN	FRANCE	B3 - Session 2	Wed. Sep. 2
B3-116	French Offshore Substation - Analysis of the HV equipment design and maintenance	V. CHATEL	FRANCE	B3 - Session 2	Wed. Sep. 2
B3-117	Impact assessment of optimization methods for the construction of high voltage air-insulated substations	M. MONTOYA	COLOMBIA	B3 - Session 2	Wed. Sep. 2
B3-118	Specification, project planning and design of the World's first 420 kV SF6-free GIS substation	N. MAHDIZADEH	SWITZERLAND	B3 - Session 2	Wed. Sep. 2
B3-119	Bus-Node Substations – Lower Lightning Overvoltages and Easier Lightning Protection (Georg Koepl, Thomas Aschwanden th.aschw@bluewin.ch)	G. KOEPL	SWITZERLAND	B3 - Session 2	Wed. Sep. 2
B3-120	HVDC gas-insulated systems for compact substation design	U. RIECHERT	SWITZERLAND	B3 - Session 2	Wed. Sep. 2
B3-121	Prototype Installation Test of HVDC GIS for Meshed Offshore Grids	M. GATZSCHE	SWITZERLAND	B3 - Session 2	Wed. Sep. 2



## CIGRE - 2020 e-session / Paper presentations

B3-201	Integration of Condition Monitoring into Substation Asset Risk Management	T. MCGRAIL	USA	B3 - Session 4	Thu. Sep. 3
B3-202	Additive Manufacturing of spare parts for Power Equipment	A. PINHEL	BRAZIL	B3 - Session 4	Thu. Sep. 3
B3-203	Refurbishment and Replacement of a 132 kV Substation Coupled to Hydroelectric Power Plant with State-of-the-art Technologies with high level of Service Continuity	G. BLANCHET	NORWAY	B3 - Session 4	Thu. Sep. 3
B3-204	Contractors as modern Master Builders: Virtual Design and Construction (VDC) as an enabler of meaningful experiences to project teams for achieving optimized substation management	A. FOSKULO	CROATIA	B3 - Session 4	Thu. Sep. 3
B3-205	Value Quantification for Digital Substations in HV Transmission Grids	L. ASGARIEH	GERMANY	B3 - Session 4	Thu. Sep. 3
B3-206	Investigation on the dynamic rating of tubular busbars in substations	K. REICH	AUSTRIA	B3 - Session 4	Thu. Sep. 3
B3-207	Evolution of skills and managing competency in high voltage substation engineering design	T. CONDON	IRELAND	B3 - Session 4	Thu. Sep. 3
B3-208	A Novel Evaluation Method for the Integrity of Grounding Grids in High Voltage Substations Based on Magnetic Field Measurements	M. MISRA	NETHERLANDS	B3 - Session 4	Thu. Sep. 3
B3-209	Repair cost planning as a reliability factor	Y. ZHILKINA	RUSSIA	B3 - Session 4	Thu. Sep. 3
B3-210	Non-intrusive diagnostic methods for AIS & GIS HV equipment	J. TOURIGUINE	FRANCE	B3 - Session 4	Thu. Sep. 3
B3-211	Optimization of Health Indices for Power Assets in Substation Using Machine Learning Method	J. R. JUNG	KOREA	B3 - Session 4	Thu. Sep. 3
B3-212	Aeolian vibration challenges at Renewable substation	NIHAR RAJ	INDIA	B3 - Session 4	Thu. Sep. 3
B3-213	Maintenance, Monitoring & Strengthening of Substation Grounding – Experience of GETCO	ASHA AGRAVATT	INDIA	B3 - Session 4	Thu. Sep. 3
B3-301	3D Design/BIM/Digital Twin for Electrical Substation - Exaggerated Expectations, Current Realities, and Future Opportunities	P. SOMBOONYANO	USA	B3 - Session 3	Thu. Sep. 3
B3-302	Data to Decisions: Future-proof Integration of Substation Intelligence	G. RAJAPPAN	USA	B3 - Session 3	Thu. Sep. 3
B3-303	A fleet of digital substations at Alliander, a blessing after an intense learning curve	M. VAN RIET	NETHERLANDS	B3 - Session 3	Thu. Sep. 3
B3-304	FITNESS: Performance Evaluation & Comparison Across Conventional, Non-Conventional, Analog & Digital Substation Measurement Chains	S W A CLARK	UNITED KINGDOM	B3 - Session 3	Thu. Sep. 3
B3-305	Intelligent IoT-connected transmission equipment in substations	D. HELBIG	GERMANY	B3 - Session 3	Thu. Sep. 3
B3-306	Implementation of Artificial Neural Networks in Design of Steel Cap Plates of Substation Support Structures	OMER BURAK YUCEL	TURKEY	B3 - Session 3	Thu. Sep. 3
B3-307	Pre-Qualification Testing of Digital Substations	B. BAUM	NETHERLANDS	B3 - Session 3	Thu. Sep. 3
B3-308	Digitalization solutions for substation planning, design, construction, operation and maintenance	M. NAKAHATA	JAPAN	B3 - Session 3	Thu. Sep. 3

## CIGRE - 2020 e-session / Paper presentations

B3-309	Innovation Practices of Substation Maintenance Operation Scheme based on VR Visualization	Y. ZHOU	CHINA	B3 - Session 3	Thu. Sep. 3
B3-310	Experience with reconstruction of industrial SVC analogue controller	M CERNAN	CZECH & SLOVAK Reps.	B3 - Session 3	Thu. Sep. 3
B3-311	Group Specification for Power Transformers Using Edge Computing Technology	T.Y. KIM	KOREA	B3 - Session 3	Thu. Sep. 3
B3-312	Green and Digital GIS Substation Substation 50 kV Middelharnis II	R TROOST	FRANCE	B3 - Session 3	Thu. Sep. 3
B3-313	Interface of large offshore windturbines into the electrical grid at 66kV voltage level	L. TREIER	SWITZERLAND	B3 - Session 2	Wed. Sep. 2
B3-NGN 01	Position on application of substation equipment using SF6 alternative technologies in Japan	K. NAKAMURA	JAPAN	B3 - Session 1	Wed. Sep. 2
B3-NGN 02	Challenges and Expectations of Transitioning to Digital Substations	D. STAFFORD	AUSTRALIA	B3 - Session 3	Thu. Sep. 3
B3-NGN 03	Return on Experience on Condition-Based Circuit Breaker Monitoring Applications	N. GADACZ	NORWAY	B3 - Session 4	Thu. Sep. 3

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (B4 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
B4-101	Brazilian Experience in Switching 800 kV LCC Converter Transformers	R. TENORIO	BRAZIL	B4 - Session 2	Mon. Aug. 31
B4-102	Principles for paralleling HVDC-LCC converters: point-to-point transmission, multi-terminal and HVDC grids	P. TOLEDO	BRAZIL	B4 - Session 2	Mon. Aug. 31
B4-103	The measurement of HVDC ground electrodes resistance	P. FREIRE	BRAZIL	B4 - Session 2	Mon. Aug. 31
B4-104	Large-capacity multi-infeed HVDC configuration – Managing simultaneously scheduled line outages to ensure power system security	P. GOMES	BRAZIL	B4 - Session 2	Mon. Aug. 31
B4-105	Simulation and Development of HVDC Control Room with Advanced HMI, Interface Systems, Analytical Tools and Cybersecurity Infrastructure and Monitoring	S.P. ASHOK	USA	B4 - Session 2	Mon. Aug. 31
B4-106	Compacting HVDC VSC and LCC Converter Stations for Land Use Minimization	R. ADAPA	USA	B4 - Session 2	Mon. Aug. 31
B4-107	Towards a deployment plan for a future European offshore grid: development of topologies	O. ANTOINE	BELGIUM	B4 - Session 3	Tue. Sep. 1
B4-108	Black-start and system restoration utilizing the NEMO Modular Multilevel Converter – a practical test in the Belgian transmission system	J. RIMEZ	BELGIUM	B4 - Session 1	Mon. Aug. 31
B4-109	Commissioning of VSC HVDC converters for STATCOM operation	S. BØDAL	NORWAY	B4 - Session 3	Tue. Sep. 1
B4-110	Open-Source HVDC Control - a High-Level Perspective	K. SHARIFABADI	NORWAY	B4 - Session 4	Tue. Sep. 1
B4-111	European Experiences in HVDC System Reliability and Availability	P. LINDBLAD	FINLAND	B4 - Session 4	Tue. Sep. 1
B4-112	Challenges of HVDC standardization in external insulation design of converter stations	L AREVALO	SWEDEN	B4 - Session 4	Tue. Sep. 1
B4-113	HVDC Lifecycle management – a Reliability & Availability perspective	U ELGQVIST	SWEDEN	B4 - Session 4	Tue. Sep. 1
B4-114	Improved VSC HVDC for over head line HVDC transmission	Y HÄFNER	SWEDEN	B4 - Session 2	Mon. Aug. 31
B4-115	System studies for the Baihetan-Jiangsu ±800 kV Hybrid UHVDC project	M ANDERSSON	SWEDEN	B4 - Session 1	Mon. Aug. 31
B4-116	Planning and implementation of an HVDC link embedded in a low fault level AC system with high penetration of wind generation	K LINDEN	SWEDEN	B4 - Session 1	Mon. Aug. 31
B4-117	Levelized Energy Cost Improvement through Concept Selection and Availability Optimization for the Norfolk Windfarms' Export Links	C.A. PLET	NETHERLANDS	B4 - Session 2	Mon. Aug. 31
B4-118	Dynamic stability issues of VSC-HVDC systems in AC Transmission Emulation Control: the Piossasco - Grande Ile case	C. PISANI	ITALY	B4 - Session 1	Mon. Aug. 31
B4-119	Design and functional aspects of a new HVDC link of Crete Island with the mainland Transmission System of Greece	K. LEONTARITIS	GREECE	B4 - Session 1	Mon. Aug. 31
B4-120	Multi Terminal Extension of Embedded Point to Point VSC HVDC Schemes	O D ADEUYI	UNITED KINGDOM	B4 - Session 1	Mon. Aug. 31

## CIGRE - 2020 e-session / Paper presentations

B4-121	A new approach to operational type testing of HVDC valves	C C DAVIDSON	UNITED KINGDOM	B4 - Session 2	Mon. Aug. 31
B4-122	Combined Bridge MMC as efficient solution for HVDC systems with DC fault ride through requirements	S. SEMMLER	GERMANY	B4 - Session 3	Tue. Sep. 1
B4-123	Towards a deployment plan for a future European offshore grid: cost-benefit analysis of topologies	J. MOORE	NETHERLANDS	B4 - Session 1	Mon. Aug. 31
B4-124	Demonstration of Multi-terminal DC Grid Integration with an MMC Test Bench	F. LOKU	GERMANY	B4 - Session 2	Mon. Aug. 31
B4-125	Improving synthetic inertia provision by power electronic interfaced power sources to support future system stability	W. GAWLIK	AUSTRIA	B4 - Session 2	Mon. Aug. 31
B4-126	The Celtic Interconnector – linking the electricity grids of Ireland and France	K. FRENCH	IRELAND	B4 - Session 2	Mon. Aug. 31
B4-127	Functions and Commissioning test of New Hokkaido-Honshu HVDC Link	M. MORI	JAPAN	B4 - Session 3	Tue. Sep. 1
B4-128	Experience in the HVDC equipment development for Vyborg converter complex upgrade at SS 400 Vyborg PJSC FGC UES	E. DAVYDOV	RUSSIA	B4 - Session 4	Tue. Sep. 1
B4-129	Method for detecting of faulted section in cable-overhead HVDC line	J. KAPITULA	RUSSIA	B4 - Session 4	Tue. Sep. 1
B4-130	Improvement of the oscillatory behaviour of the HVDC link between Spain and France	A. DÍAZ-GARCÍA	SPAIN	B4 - Session 2	Mon. Aug. 31
B4-131	Optimization and Simulation for Network Performance of Back to Back VSC-HVDC Systems	L. LIU	CHINA	B4 - Session 3	Tue. Sep. 1
B4-132	Calculation method for peak short-circuit currents for the security of HVDC grids	A. SACIAK	GERMANY	B4 - Session 3	Tue. Sep. 1
B4-133	System Design and Development of HYOSUNG 200MW BTB VSC-HVDC in a KEPCO System	J. H. KIM	KOREA	B4 - Session 3	Tue. Sep. 1
B4-134	The Method of Components Critical Priority Assessment for HVDC Station Asset Management System	Y. M. KIM	KOREA	B4 - Session 3	Tue. Sep. 1
B4-135	Seismic Design and Validation of the HVDC Valve Structure	S.M. KIM	KOREA	B4 - Session 3	Tue. Sep. 1
B4-136	Fundamental Frequency Blocking Filters for Champa-Kurukshetra HVDC ±800kV, 6000MW HVDC Parallel Bipole Transmission System – Design Consideration	AAKAN DUGAR	INDIA	B4 - Session 3	Tue. Sep. 1
B4-137	Assessment of protection strategy options for future DC grids	A BERTINATO	FRANCE	B4 - Session 4	Tue. Sep. 1
B4-138	Technical solutions to predict and mitigate inadvertent interaction of two parallel connected VSC-HVDC schemes feeding an islanded offshore Oil and Gas grid	S DENNETIERE	FRANCE	B4 - Session 3	Tue. Sep. 1
B4-139	A Survey of the Reliability of HVDC Systems throughout World during 2017 – 2018	M.G. BENNETT	SC B4	B4 - Session 2	Mon. Aug. 31
B4-201	Engineering Design and Control Method for Hangzhou's Flexible DC Distribution Network	J. LIAN	CHINA	B4 - Session 1	Mon. Aug. 31
B4-202	A New Method for Distinguishing DC Line Faults in Flexible DC Distribution System	J. YANG	CHINA	B4 - Session 1	Mon. Aug. 31
B4-203	Development of Multi-Terminal DC link in Distribution Network	C. HAN	KOREA	B4 - Session 1	Mon. Aug. 31
B4-204	The Flexible Power Link of Western Power Distribution: A Case Study	P. MAIBACH	SWITZERLAND	B4 - Session 1	Mon. Aug. 31

## CIGRE - 2020 e-session / Paper presentations

B4-301	Advantages of M-SSSC Devices over Traditional Series Compensation	B. BOJORQUEZ	USA	B4 - Session 4	Tue. Sep. 1
B4-302	Recent FACTS Applications in Chesf Power Grid: Aspects of Technological Development	M. LIMA	BRAZIL	B4 - Session 4	Tue. Sep. 1
B4-303	Phoenix: The World's First Hybrid Synchronous Condenser System	R RIVAS	SWEDEN	B4 - Session 1	Mon. Aug. 31
B4-304	Capability and Flexibility of Energy Storage Enhanced STATCOMs in Low Inertia Power Grids	T SOONG	SWEDEN	B4 - Session 1	Mon. Aug. 31
B4-306	Evaluating Modular Voltage Source Converter Based Technology in the GB Transmission System with EMT Studies	R GUPTA	UNITED KINGDOM	B4 - Session 4	Tue. Sep. 1
B4-307	Development of active filter function for STATCOM	T. TATSUMI	JAPAN	Not presented	0
B4-309	NSSS STATCOM – The Optimal Dynamic Reactive Support Solution for a Weak Network	J. HU	CANADA	B4 - Session 4	Tue. Sep. 1
B4-310	Study and Operational Experiences of STATCOM for Emerging Grid with Renewable Power Network	SANGI JANA	INDIA	B4 - Session 1	Mon. Aug. 31
B4-311	Ascutney SVC - Engineering, Testing and Commissioning	J. HU	CANADA	B4 - Session 4	Tue. Sep. 1
B4-NGN 01	Analysis and Protection of Valve-Side Single-Phase-to-Ground Faults in HB-MMC based Bipolar HVDC Systems	Gen Li	UNITED KINGDOM	B4 - Session 3	Tue. Sep. 1
B4-NGN 02	Inverter Design Considerations for Low Inertia Weak Grids	Malsha Annakkage	CANADA	B4 - Session 4	Tue. Sep. 1

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (B5 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
B5-101	Impact of Standardization of PACS on Reducing Human Errors in Engineering and Testing	A.P. APOSTOLOV	USA	B5 - Session 2	Thu. Aug. 27
B5-102	Prevention of Human Errors in Transmission Line Protection and Fault Location Functions by Eliminating the Need for Settings	F. LOPES	BRAZIL	B5 - Session 2	Thu. Aug. 27
B5-103	Challenges and experiences of utilities in Brazil to new procedures and human resources management to reduce PAC systems risks in a new complex digital enviroment	P. FLORES	BRAZIL	B5 - Session 2	Thu. Aug. 27
B5-104	Formal Methods to Power-System Automation	L. LISBOA	BRAZIL	B5 - Session 2	Thu. Aug. 27
B5-105	Human Aspects in Protection, Automation and Control Systems (PACS)	S. CAMPOS	BRAZIL	B5 - Session 2	Thu. Aug. 27
B5-106	The challenge of tackling human errors in the PACS environment	A. PEREIRA	BRAZIL	B5 - Session 2	Thu. Aug. 27
B5-107	Human Errors related to PACS: Experience and Expectations of Elia, the Belgian TSO	C. MOORS	BELGIUM	B5 - Session 3	Fri. Aug. 28
B5-108	The central role of human resources in PACS Asset Management	M. PETRINI	ITALY	B5 - Session 3	Fri. Aug. 28
B5-109	Process bus based Busbar Protection – Easier Installation and Life-Cycle Management for the Digital Substation	C TEOH	UNITED KINGDOM	B5 - Session 3	Fri. Aug. 28
B5-110	Engineering and Validation Support Framework for Power System Automation and Control Applications	J. RESCH	AUSTRIA	B5 - Session 3	Fri. Aug. 28
B5-111	Common Errors and Traps in Design, Testing and Commissioning of Protection and Control Schemes	S. BHOLA	AUSTRALIA	B5 - Session 3	Fri. Aug. 28
B5-112	Human aspects related to IEC 61850 testing: How to believe or don't believe in testing	J. CARDENAS	SPAIN	B5 - Session 3	Fri. Aug. 28
B5-113	Benefits derived from the use of Digital Twins of Protection and Control Systems	J. ROMÁN	SPAIN	B5 - Session 3	Fri. Aug. 28
B5-114	How to Improve Human Decisions with a PMU'S Automatic System for the Control of Stability of a HVDC Link in Red Eléctrica de España (REE)	J. MARTÍN	SPAIN	B5 - Session 3	Fri. Aug. 28
B5-115	The Decision Tree Forest for the Defects and Weak Points of Relay Protection Devices	Y. LIU	CHINA	B5 - Session 3	Fri. Aug. 28
B5-116	Human Errors in Maintenance and Modification of Protection System in Thailand	B. KONGKAE0	THAILAND	B5 - Session 3	Fri. Aug. 28
B5-117	Human aspects in testing and commissioning of digital substations, based on experiences from real installations	S. MEIER	SWITZERLAND	B5 - Session 3	Fri. Aug. 28
B5-201	Model-Based Systems Engineering Views of Software Defined Process Bus Networks	D.K. HOLSTEIN	USA	B5 - Session 2	Thu. Aug. 27
B5-202	Analyzing the Limits of Data Transmission in the Process Bus	P. JUNIOR	BRAZIL	B5 - Session 2	Thu. Aug. 27
B5-203	Digitalization at Eletrobras Eletrosul – Challenges on fully digital substation PACS communication network architecture specifications	M. ALEXANDRINO	BRAZIL	B5 - Session 2	Thu. Aug. 27

## CIGRE - 2020 e-session / Paper presentations

B5-204	Best practices and challenges on designing a LAN communication network for 61850 Digital Substations	M. ZAPPELLA	BRAZIL	B5 - Session 2	Thu. Aug. 27
B5-205	Test Systems Consideration in the Design of Communications Networks for Digital Substations	A.P. APOSTOLOV	USA	B5 - Session 2	Thu. Aug. 27
B5-206	Architecture of Communication Network in Statnett Digital Substation	N. HURZUK	NORWAY	B5 - Session 1	Thu. Aug. 27
B5-207	Experience gained and Recommendations for Implementation of Process Bus in Protection, Automation and Control Systems (PACS)	R. LØKEN	NORWAY	B5 - Session 1	Thu. Aug. 27
B5-208	FITNESS: Live comparison of reliability and availability of different communication and redundancy architectures for digital substations	P MOHAPATRA	UNITED KINGDOM	B5 - Session 1	Thu. Aug. 27
B5-209	Development of Advanced Communication Unit for Ring Topology Network and Application to Special Protection Scheme	M. KUWABARA	JAPAN	B5 - Session 1	Thu. Aug. 27
B5-210	Implementation of Overload Protection Relay System based on IEC 61850 for Simplification of communication network	K. NISHIZAWA	JAPAN	B5 - Session 1	Thu. Aug. 27
B5-211	Data segregation and traffic anomaly detection within the transmission substations and the whole power system	E. CASALE	ITALY	B5 - Session 2	Thu. Aug. 27
B5-212	Experience in organization of communication network PMU data transmission in protection, automation and control systems	D. DUBININ	RUSSIA	B5 - Session 1	Thu. Aug. 27
B5-213	IEC 61850 communications monitoring and diagnostics system implementation experience	D. ZHUKOV	RUSSIA	B5 - Session 1	Thu. Aug. 27
B5-214	Optimising LAN Architecture For Improved Reliability And Resilience	R. HUGHES	AUSTRALIA	Not presented	0
B5-215	5G wireless communications for smart grid: a PACS case with network slice	Y. CAO	CHINA	B5 - Session 2	Thu. Aug. 27
B5-216	Design constraints and choices for the LAN in RTE's R#SPACE system	X. MICHAUT	FRANCE	B5 - Session 1	Thu. Aug. 27
B5-217	Redundancy in the IEC 61850-Based Digital Substation System for KEPCO's 154kV Substations	S. Y. MOON	KOREA	B5 - Session 1	Thu. Aug. 27
B5-218	Engineering and Management of Communication Networks in Powergrid's Full Digital Substations	BARIN DE BHOWMICK	INDIA	B5 - Session 1	Thu. Aug. 27
B5-219	Assessment of Dynamic and Programmable Network Redundancy Management Method based on Software Defined Network Technology in A Fully Digital Substation	H LI	UNITED KINGDOM	B5 - Session 1	Thu. Aug. 27
B5-220	Experience in Communication Network Design for High Performance Requirements in IEC 61850 Process Bus based Substation	PRAVEEN A.N	INDIA	B5 - Session 1	Thu. Aug. 27
B5-221	Implementation of QOS in the process bus for Digital Substations	N. NELIS	CHILE	Not presented	0
B5-222	The 'Protection over MPLS' project - Testing line differential protection and teleprotection over an IP/MPLS communication network	J. CASEIRO	PORTUGAL	B5 - Session 1	Thu. Aug. 27

## CIGRE - 2020 e-session / Paper presentations

B5-223	Pilot Experience of IEC 61850 real-time communication between digital substations enabling new protection and automation concepts in Al-Dhafrah in Transco Power system	P. KREUTZER	SWITZERLAND	B5 - Session 1	Thu. Aug. 27
B5-NGN 01	Testing, Commissioning and Operational Aspects of Substation Automation System – Areas of Human Intervention and Approach to Mitigate Human Errors	S.K.JADAV	INDIA	B5 - Session 3	Fri. Aug. 28



## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (C1 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
C1-101	Quantifying Extreme Events Impacts Using a Coupled Electricity Economy Model	V. KUMAR	USA	C1 - Session 2	Mon. Aug. 31
C1-102	Methodology for Defining the Configuration of Transmission Lines in Two Simple Circuits Instead of a Double Circuit – Approach under Electric and Environmental Aspects and Forced Shutdown Susceptibility	M. CURY	BRAZIL	C1 - Session 1	Mon. Aug. 31
C1-103	Brazil's Power Transmission Grid Geographic Database Regulation	S. FEITOSA	BRAZIL	C1 - Session 2	Mon. Aug. 31
C1-104	Development of a Resilient Master Plan For Dominica	F. SPARAVIER	BELGIUM	C1 - Session 2	Mon. Aug. 31
C1-105	Improving reliability and stability of supply industrial customer by grid reinforcement and installation of intra-factory generation	M PRZYGRDZKI	POLAND	C1 - Session 1	Mon. Aug. 31
C1-106	Multicriterial analyses and selection of the best option for revitalization and development of the southern part of Croatian 400 kV network and connection to the power system of Bosnia and Herzegovina	G. MAJSTROVIC	CROATIA	Not presented	0
C1-107	Planning Studies for Connection of 500 MW Photovoltaic Power Plant to Oman Grid at Ibri	ENG. HISHAM AL RIYAMI	GULF STATES	C1 - Session 2	Mon. Aug. 31
C1-108	OPEX benchmarking exercise amongst GCC Transmission Utilities	ENG. ABDULLAH HASSAN	GULF STATES	C1 - Session 2	Mon. Aug. 31
C1-109	Sizing of the series and shunt compensation of the COA-WOA interconnection and impacts on the maximum transfer capacity	ENG. AL-ASERI	GULF STATES	C1 - Session 1	Mon. Aug. 31
C1-110	Techno-Economic Evaluation of 1500MW Generation Connection to the Main Interconnected Transmission System in Oman	ENG. AL SIYABI	GULF STATES	C1 - Session 2	Mon. Aug. 31
C1-111	A methodology to compute resilience indicators for the Italian Transmission System	E. CIAPESSONI	ITALY	C1 - Session 1	Mon. Aug. 31
C1-112	"Elicitation of Structured Expert Judgment to estimate the probability of a major power system unreliability event "	K BELL	UNITED KINGDOM	C1 - Session 1	Mon. Aug. 31
C1-113	Planning for 100% Variable Renewable Energy (VRE) on an Island Power System	P. TUSON	SOUTH AFRICA	C1 - Session 2	Mon. Aug. 31
C1-114	Development of Resilience Issues and Challenges in the SEERC Region (South East European Regional Council of CIGRE)	K. REICH	AUSTRIA	Not presented	0
C1-115	Bulk System Planning Aiming to Improve System Resilience	D. SEKIGUCHI	JAPAN	C1 - Session 1	Mon. Aug. 31
C1-116	North Sea Wind Power Hub – System Configurations, Grid Implementation and Techno-economic Assessment	G. MISYRIS	DENMARK	C1 - Session 1	Mon. Aug. 31
C1-117	Software and hardware complex for making decisions on the impact on power grid equipment, taking into account its technical condition and importance index using modern methods of diagnostics and data processing	A. GUSAROVA	RUSSIA	Not presented	0
C1-118	Economic and social Contribution from Red Electrica Group Investments	R. DE LA FUENTE	SPAIN	C1 - Session 2	Mon. Aug. 31

## CIGRE - 2020 e-session / Paper presentations

C1-119	Research on Practical Method for Optimizing Energy Storage Capacity based on Large-Scale Offshore Wind Power	S. U	CHINA	C1 - Session 1	Mon. Aug. 31
C1-120	Theoretical Analysis and Operational Practice of Pure Renewable Energy Power Supply in Europe and China	J. PI	CHINA	C1 - Session 1	Mon. Aug. 31
C1-121	Fault Current Limiter Using Series Reactors in Indian Power System	SUBIR SEN	INDIA	C1 - Session 1	Mon. Aug. 31
C1-122	New Requirements for Grid Codes to Increase Resilience of Power Grids under Severe Natural Disasters	M. MOHAMMADI	IRAN	Not presented	0
C1-123	Major flooding resilience of a substation	G. SERNA	FRANCE	C1 - Session 1	Mon. Aug. 31
C1-124	Development of Power Transmission System Interconnections in South-Asian Region	SUBIR SEN	INDIA	C1 - Session 2	Mon. Aug. 31
C1-125	A coordinated approach to transparency and harmonised criteria for TSOs reporting on power systems in Med-TSO	A. SAINZ	SPAIN	C1 - Session 2	Mon. Aug. 31
C1-126	Photovoltaic power plant design for high voltage substation utilities	B. FILIP	ROMANIA	Not presented	0
C1-127	Mathematical model of power system's dynamic stiffness and used it for resilience planning at increasing renewable power mix	OLEG AGAMALOV	UKRAINE	C1 - Session 1	Mon. Aug. 31
C1-128	Reliability Assessment for Integration of Renewable Energy Projects In the National Electric System of Jordan	K. ALWALIDI	JORDAN	C1 - Session 1	Mon. Aug. 31
C1-129	Transmission Expansion Planning for System Resilience Using Convex Relaxations	J. CHAVEZ	PERU	C1 - Session 2	Mon. Aug. 31
C1-130	Increase resilience through investment in transmission, replacing expansion in distribution	X. OVIEDO	CHILE	Not presented	0
C1-201	Economic and environmental benefits of electric vehicle smart charging in a large-scale EV integration scenario in France	A TEJEDA	FRANCE	C1 - Session 3	Tue. Sep. 1
C1-202	Integration of Electric Vehicles in a High Penetrated Renewable Energy Market	J. ZHU	USA	C1 - Session 3	Tue. Sep. 1
C1-203	Power Market Development in the Greater Mekong Sub-region	D.R. OSTOJIC	USA	C1 - Session 3	Tue. Sep. 1
C1-204	Advances in probabilistic analyses addressing enhanced electrification of end-uses and the progressive decarbonisation of the generation fleet	T. BAFFA SCIROCCO	ITALY	C1 - Session 3	Tue. Sep. 1
C1-205	A Whole Energy Systems Study - The Glasgow Energy Operator	G S HAWKER	UNITED KINGDOM	C1 - Session 3	Tue. Sep. 1
C1-206	Power Systems in the context of district heating and cooling networks as an integrated energy system approach - Regulations and Business Cases within the IEA DHC Annex TS3	T. KNEISKE	GERMANY	C1 - Session 3	Tue. Sep. 1
C1-207	Dispatch of Multi-Energy Systems with District Heating Network Considering the Renewable Power Generation Uncertainties	Q. GAO	CHINA	Not presented	0
C1-208	Optimising Energy Efficiency Business Model in industrial sector for electric utility in Thailand	J. KRIDSANANONT	THAILAND	Not presented	0
C1-209	Installation and Test Result of Regenerative Braking System in Electrified Railways	S.H PARK	KOREA	C1 - Session 3	Tue. Sep. 1

## CIGRE - 2020 e-session / Paper presentations

C1-210	Impact of Decarbonization on Transmission Network Planning and Delivery: comparing the German and Chilean Experiences	J. ARANEDA	CHILE	C1 - Session 3	Tue. Sep. 1
C1-301	Software Tool for Automation of Transmission Margin Calculation of the Brazilian Interconnected Power System	F. ALVES	BRAZIL	C1 - Session 3	Tue. Sep. 1
C1-302	A security constrained planning methodology for HVDC interconnectors and grids	H. ERGUN	BELGIUM	C1 - Session 4	Tue. Sep. 1
C1-303	micro vs MEGA grid solutions for the future power system	E HILLBERG	SWEDEN	C1 - Session 3	Tue. Sep. 1
C1-304	Technical and Economic Feasibility Analysis of Aegean Island Interconnections to the Mainland Grid	J. KABOURIS	GREECE	C1 - Session 4	Tue. Sep. 1
C1-305	Quantifying risk in low voltage network planning using smart meter data and probabilistic modelling	G EDWARDS	UNITED KINGDOM	C1 - Session 4	Tue. Sep. 1
C1-306	The Impact of Reduced System Inertia on System Planning and HVDC Interconnection	W A BUKHSH	UNITED KINGDOM	C1 - Session 4	Tue. Sep. 1
C1-307	Potentials and systemic aspects for the integration of renewable energies in the North African and Middle East electricity system	U. BACHHIESL	AUSTRIA	C1 - Session 4	Tue. Sep. 1
C1-308	The Integrated Planning of Taiwan Transmission System in Coordination with the Development of Renewable Energy	P.-H. HO	TAIWAN	Not presented	0
C1-309	Geospatial Analysis Techniques for Transmission System Needs Identification: A Case Study with High Shares of Distributed Energy Resources	P. DALY	IRELAND	C1 - Session 3	Tue. Sep. 1
C1-310	Renewable energy interconnection acceleration scheme	K. YAMAKI	JAPAN	C1 - Session 3	Tue. Sep. 1
C1-311	Secure operation of the Australian National Electricity Market with high levels of wind and solar in 2025	B. O'CONNELL	AUSTRALIA	C1 - Session 4	Tue. Sep. 1
C1-312	Dimensioning of STATCOM for Grid Code Compliance of Renewable Energy Plants	E. OLEA-OREGI	SPAIN	C1 - Session 4	Tue. Sep. 1
C1-313	A Security Constrained Optimal Power Flow for interconnected Meshed AC and DC Transmission Systems with a high proportion of Offshore Wind Generation	F. RUDOLPH	GERMANY	C1 - Session 4	Tue. Sep. 1
C1-314	First Swing Stability and SSR Mitigation in KEPCO Grid by Using TCSC	J.S. YOON	KOREA	C1 - Session 4	Tue. Sep. 1
C1-315	Reliability and Capacity Credit Evaluations of Jeju island Power System Including REG Combined with ESS	U.J. OH	KOREA	C1 - Session 4	Tue. Sep. 1
C1-316	Whole System Coordination in Network Planning	C HIGGINS	UNITED KINGDOM	C1 - Session 3	Tue. Sep. 1
C1-318	Planning of transmission systems in Chile after the regulatory changes introduced in 2016	J. TORO	CHILE	Not presented	0
C1-319	Combined Transmission and Distribution Expansion Planning	A. OUDALOV	SWITZERLAND	C1 - Session 3	Tue. Sep. 1
C1-320	Integrated technical and economic model of distributed energy resources for power grid planning	S. GRASSI	SWITZERLAND	C1 - Session 4	Tue. Sep. 1
C1-NGN 01	The Power-to-Gas technology in the energy transition prospective: economic opportunities from sector coupling and provision of ancillary services to the power system	C. Businge	ITALY	C1 - Session 3	Tue. Sep. 1

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (C2 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
C2-101	Mitigating Inter-Area Oscillations Using Adaptive Wide-Area Damping Controller Based on Measurement-Driven Model: Case Studies on Realistic Grid Models and Actual Events	L. ZHU	USA	C2 - Session 2	Thu. Aug. 27
C2-102	Using Content Management to Improve Real Time Operation as Well as Preparing for Artificial Intelligence	A. OLIVEIRA	BRAZIL	C2 - Session 1	Thu. Aug. 27
C2-103	Analysis of Underfrequency Load Shedding During Taiwan's 8/15 Blackout Event	Y.-H. CHANG	TAIWAN	Not presented	0
C2-104	Contributions of the Geospatial Transmission Management System (GGT) to prevent environmental impacts caused by fires on transmission lines	S. FEITOSA	BRAZIL	C2 - Session 1	Thu. Aug. 27
C2-105	Using Synchrophasor Technology for Monitoring and Analysing January 11, 2019 North American Eastern Interconnection System Oscillations	I. SINGH	USA	C2 - Session 2	Thu. Aug. 27
C2-106	Using Mobile M-SSSCs to Manage Outage Windows for Major Construction and Maintenance Projects	C. HEIER	USA	Not presented	0
C2-107	Real-time estimation of frequency stability using a dynamic model tuned based on real events	M. KUIVANIEMI	FINLAND	C2 - Session 1	Thu. Aug. 27
C2-108	Developing practices for power system restoration: The Finnish experience on restoration field-testing and training	A.-J. NIKKILÄ	FINLAND	C2 - Session 2	Thu. Aug. 27
C2-109	Reliability of the GCC Interconnector	DR. NASSER AL-SHAHRANI	GULF STATES	C2 - Session 1	Thu. Aug. 27
C2-110	Optimal Placement of Phasor Measurement Units for Full Topological Observability in the Power System of South Eastern Europe	VLADIMIR BECEJAC	SERBIA	C2 - Session 2	Thu. Aug. 27
C2-111	Method and Software Tool for Assessment of Seasonal Step-Up Transformer Optimal Tap Settings	JASNA DRAGOSAVAC	SERBIA	C2 - Session 2	Thu. Aug. 27
C2-113	The Assessment of the HVDC Frequency Control Methods in the Nordic Power System	D OBRADOVIC	SWEDEN	C2 - Session 2	Thu. Aug. 27
C2-114	Advanced and Rapid Tool in Control Room to Determine the Cause and Location of Events in Transmission Network	I. IVANKOVIC	CROATIA	C2 - Session 2	Thu. Aug. 27
C2-115	Inter-area oscillations in Continental European power system: events analysis and countermeasures	C. PISANI	ITALY	C2 - Session 2	Thu. Aug. 27
C2-116	Application of Wide-Area and Monitoring and Control Techniques for Fast Frequency Control in Power Systems with Low Inertia	Q HONG	UNITED KINGDOM	C2 - Session 2	Thu. Aug. 27
C2-117	Online Security Assessment and System Optimization for Close to Real-Time Decision Support: Recent Advances and Lessons Learned from a Joint Development Project	A. KUBIS	GERMANY	C2 - Session 1	Thu. Aug. 27
C2-118	Enhancing Decision Support Tools in Ireland and Northern Ireland Control Centres to Facilitate Integration of Large Shares of Wind Generation	M. VAL ESCUDERO	IRELAND	C2 - Session 1	Thu. Aug. 27
C2-119	Optimal Transmission Line Switching with Genetic Algorithm to Restrict Short Circuit Current in Istanbul Anatolian Side	ERDI DOGAN	TURKEY	C2 - Session 1	Thu. Aug. 27
C2-120	Development of "Keystone Japanese Coordinating system for energy balancing"	T. OCHI	JAPAN	C2 - Session 1	Thu. Aug. 27

## CIGRE - 2020 e-session / Paper presentations

C2-121	Short term local weather forecast apply to nationwide Photo Voltic (PV) solar farm in Jordan	AHMED ALDOHNI	JORDAN	C2 - Session 1	Thu. Aug. 27
C2-122	Stability Margin Monitoring Systems: Instrument for Grid Transmission Capacity Increase	V. DYACHKOV	RUSSIA	C2 - Session 1	Thu. Aug. 27
C2-123	Prospects of application of synchrophasor technology for the development of monitoring and control systems for future power system	D. DUBININ	RUSSIA	C2 - Session 2	Thu. Aug. 27
C2-124	Operational manifestation of low system strength conditions - Australian Experience	B. BADRZADEH	AUSTRALIA	C2 - Session 2	Thu. Aug. 27
C2-125	Evolution and improvements in REE renewable energy forecasting systems	J.J. ABELLÁN-PÉREZ	SPAIN	C2 - Session 1	Thu. Aug. 27
C2-126	Application of On-Line Dynamic Security Assessment Techniques in SGCC Dispatching System	C. MA	CHINA	C2 - Session 1	Thu. Aug. 27
C2-127	Impact of large scale renewable energy on transient stability of sending end grid of ultra-high voltage DC transmission	Y. CHI	CHINA	C2 - Session 2	Thu. Aug. 27
C2-128	Research on Strategy Knowledge Base Construction Method for Intelligent Management and Control of Complex Power Grid	M. XIE	CHINA	C2 - Session 1	Thu. Aug. 27
C2-129	An Operator Assistant System for Fast and Reliable Decision Support based on a Dynamic Digital Mirror	C. BROSINSKY	GERMANY	C2 - Session 1	Thu. Aug. 27
C2-130	New adaptive automata to minimize RES curtailment	O. HARP	FRANCE	C2 - Session 1	Thu. Aug. 27
C2-131	Establishment of Variable Renewable Energy Forecast Center: Challenges for Thailand	C. AMORNVIPAS	THAILAND	Not presented	0
C2-132	Automatic Abnormal Incident Notification System at EGAT's Northeastern Dispatching Control Center (Alarm Summary)	N. EUA-ANANT	THAILAND	C2 - Session 2	Thu. Aug. 27
C2-133	A Study on the Establishment of the Optimal Management of Fault Current by Voltage in Korea Power System	H.J. SON	KOREA	C2 - Session 1	Thu. Aug. 27
C2-134	Development of Transmission Operation Planning Assessment System (TOPAS)	T. G. KIM	KOREA	C2 - Session 1	Thu. Aug. 27
C2-135	Advance voltage control solutions for Romanian power system	C. CONSTANTIN	ROMANIA	C2 - Session 2	Thu. Aug. 27
C2-136	Use of Meteorological Radar image to improve Resiliency of Indian grid	ALOK KUMAR	INDIA	C2 - Session 1	Thu. Aug. 27
C2-137	Real Time Fault Level Monitoring For Network Capacity Management	M KHADDOUMI	UNITED KINGDOM	C2 - Session 1	Thu. Aug. 27
C2-138	Capacity Building of Indian System Operators in the emerging environment	ADITYA P. DAS	INDIA	C2 - Session 2	Thu. Aug. 27
C2-139	Synchrophasor Technology Applications in Generating Substations	K. NARENDRA	CANADA	C2 - Session 2	Thu. Aug. 27
C2-140	A software-in-the-loop testbed platform implementation for new PMU-based wide area control strategies for future system operation	J. NOREÑA	COLOMBIA	C2 - Session 2	Thu. Aug. 27
C2-141	Dynamic control of embedded HVDC to contribute to transient stability enhancement	J.C. GONZALEZ	FRANCE	C2 - Session 2	Thu. Aug. 27
C2-142	Experience of fast-acting wide area control with geothermal governing to manage separation and island running	B. HEIMISSON	ICELAND	C2 - Session 2	Thu. Aug. 27

## CIGRE - 2020 e-session / Paper presentations

C2-143	Use of Dynamic Line Rating System in System Operation and Planning	JANKO KOSMAC	SLOVENIA	C2 - Session 1	Thu. Aug. 27
C2-201	State of the Art Implementation of Linear State Estimator in Control Centers	A. BOSE	USA	C2 - Session 3	Fri. Aug. 28
C2-202	Egypt-Sudan Electricity Interconnection – Technology Concepts and Operational Experience	M KAMH	EGYPT	C2 - Session 3	Fri. Aug. 28
C2-203	New challenges in the evolving Transmission System Operator and Regional Security Coordinator business	DANNY KLAAR	NETHERLANDS	C2 - Session 3	Fri. Aug. 28
C2-204	The role of load and distributed generation in bottom-up power system restoration	C. PISANI	ITALY	C2 - Session 3	Fri. Aug. 28
C2-205	TSO-DSO Co-Operation – Control Centre Tools Requirements	J. POLLOCK	SC C2	C2 - Session 3	Fri. Aug. 28
C2-206	ESO/DSO coordination for reactive power services from DERs in the UK's Power Potential innovation project: initial trial results	I MARTINEZ SANZ	UNITED KINGDOM	C2 - Session 3	Fri. Aug. 28
C2-207	TSO / DSO Cooperation and Interactions in Systems with Very High Shares of Renewable Generation	W.H. WELLSOW	GERMANY	C2 - Session 3	Fri. Aug. 28
C2-208	TSO-DSO Cooperation in a System of Systems	G. DE JONG	NETHERLANDS	C2 - Session 3	Fri. Aug. 28
C2-209	Co-ordinated Approach between TSO and DSO for the Utilisation of Voltage Control Resources using Distributed Wind Generation in Ireland	D. CORCORAN	IRELAND	C2 - Session 3	Fri. Aug. 28
C2-210	Transformation of TSO-DSO interface and operation through digitalisation	A HAZI	UNITED KINGDOM	C2 - Session 3	Fri. Aug. 28
C2-211	TSO-DSO data exchange : Integration of new data into RTE operational security analyses process	O ARNAUD	FRANCE	C2 - Session 3	Fri. Aug. 28
C2-212	Numerical simulation and robustness analysis of TSO-DSO collaboration in activation of distributed renewable sources	NERMIN SULJANOVIC	SLOVENIA	C2 - Session 3	Fri. Aug. 28
C2-NGN 01	Automatic Computing of Multi-infeed Predictive Indexes Providing Situational Awareness in Real-Time Operation of Hybrid AC-HVDC Systems	LYGIA SILVIA	BRAZIL	C2 - Session 3	Fri. Aug. 28
C2-NGN 02	Daily post-operative analysis of the primary frequency regulation for detection of very low frequency oscillation sources	JORGE CABRERA	PERU	C2 - Session 3	Fri. Aug. 28

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (C2-C6 session)	Main author	Main author's country	Session of presentation	Day (CEST)
C2-C6-301	Demonstrated Capabilities of Flexible Demand Response for Enhancing System Reliability and Flexibility	A. CHUANG	USA	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-302	Brazilian Interconnected Power System - The Use of Wind Power Farm in the Restoration Process	A. GUARINI	BRAZIL	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-303	Challenges and Measures to Integrate Renewable Energy Sources, Distributed Energy Resources and Storage Means in the Brazilian Power System	S. CISNEIROS	BRAZIL	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-304	Integrating Distributed Energy Resources - A Wholesale Perspective	C. WANG	USA	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-305	Coordination of Distributed Resources in the Provision of Essential Reliability Services for Active Power Management	M. RICHWINE	USA	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-306	Battery Energy Storage Systems for frequency grid stability in Senegal	A. NEVE	BELGIUM	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-307	Polish – Japanese partnership in the field of on-line Special Protection Scheme as a new solution for power system security	L SZCZEPANIAK	POLAND	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-308	Advance Dispatching and real time electric load forecasting featuring data mining techniques	C. MARTARELLI	ITALY	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-309	“Puglia Active Network” project: flexibility from Regional Smart Grid	G. SAPIENZA	ITALY	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-310	Optimal Distribution System Preventive Scheduling for Enhancing Resilience Under Wildfire	N. D. HATZIARGYRIOU	GREECE	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-311	Objectives and setup of an aFRR-pilot in the Dutch electricity system	J. FRUNT	NETHERLANDS	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-312	Stability challenges and solutions for reducing inertia: PMU-based measurement and machine-learning forecasting	D H WILSON	UNITED KINGDOM	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-313	Restoration of Power Networks Utilising Distributed Energy Resources	P CHANDLER	UNITED KINGDOM	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-314	Methodology for considering underlying, decentralized flexibilities at frequency restoration reserves in Germany	D. LEHMANN	GERMANY	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-315	Centralized and Decentralized Distribution Grid Control: Towards a New Intelligent Architecture	M. GIUNTOLI	GERMANY	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-316	An advanced method for steady-state security assessment considering dynamic thermal capacities of grid assets	M. SCHRAMMEL	AUSTRIA	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-317	Development of balancing control and grid stabilization services based on VPP	M. TSUNEMATSU	JAPAN	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-318	Frequency adjustment with integrated control of distributed storage batteries	S. OKA	JAPAN	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-319	Frequency Regulation in an Isolated Grid with a High Penetration of Renewables	H.M. TRÓNDHEIM	DENMARK	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-320	Power System Restoration - Report on a Bottom-Up Restoration Test at the Amprion Transmission Grid	W. H. WELLSSOW	GERMANY	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-321	Flexibility and grid services from integrated electricity-hydrogen distributed energy systems	P. MANCARELLA	AUSTRALIA	C2-C6 - Session 1	Fri. Aug. 28

## CIGRE - 2020 e-session / Paper presentations

C2-C6-322	Grid Forming Energy Storage System addresses challenges of grids with high penetration of renewables (A case study)	S. CHEREVATSKIY	AUSTRALIA	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-323	MPP awareness in Automatic Generation Control (AGC) with wind farm participation	K. DOENGES	SPAIN	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-324	Multi-self-verification and Multi-self-switching based Adaptive Synchronphasor Estimator and Its Application	Q. XU	CHINA	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-325	Research on Ubiquitous Power Dispatch and Control Technologies of Renewable Energy Based on Cyber-Physical-Social Systems	H. XU	CHINA	Not presented	0
C2-C6-326	Grid control centre extension platform for flexibility aggregation of DER in the EU-project "EU-SysFlex"	S. WENDE-VON BERG	GERMANY	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-327	Identification and comparison of virtual power plants process models used in Futureflow project	D. ILISIU	ROMANIA	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-328	Lift Irrigation Projects for better System Operation under high Renewable Energy penetration	K.B.V. RAMKUMAR	INDIA	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-330	System Operation Challenges with Large and Distributed Generators	PANKAJBHAI SUTHAR	INDIA	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-331	Virtual Power Plant – A multi service framework for coordination of centralised flexibilities	R. MARTINS	PORTUGAL	C2-C6 - Session 1	Fri. Aug. 28
C2-C6-NGN 3	The Distributed Energy Resources (DER) Marketplace Project	TIANG TING	NGN	C2-C6 - Session 1	Fri. Aug. 28



## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (C3 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
C3-101	Sustainable Development Goals and their importance in the relationship between First Nations and Energy Producer Companies	A. FONSECA	BRAZIL	C3 - Session 1	Tue. Aug. 25
C3-102	Building the R&DI business case for Sustainable Development in the Electricity Sector in Brazil	K. GARCIA	BRAZIL	C3 - Session 1	Tue. Aug. 25
C3-103	Methodology for the evaluation of a "better grid project" implementation	J. KAYS	GERMANY	C3 - Session 1	Tue. Aug. 25
C3-104	Opportunities and Challenges Related to SDGs in Electric Power Sector: Analysis of Companies in Japan and Worldwide	S. YOKOKAWA	JAPAN	C3 - Session 1	Tue. Aug. 25
C3-105	Terna Envision path for Sustainable Electrical Infrastructure	F. GIARDINA	ITALY	C3 - Session 1	Tue. Aug. 25
C3-106	Fighting Against Haze via Generation Scheduling with Coal Reduction Constraints: Practice in Shaanxi China	B. WANG	CHINA	C3 - Session 1	Tue. Aug. 25
C3-107	Research and Empirical Analysis of Sustainability Management System of Power Grid Enterprises	S. QUAN	CHINA	C3 - Session 1	Tue. Aug. 25
C3-108	Research on the method to tap the potential of electricity substitution based on the digital characteristics of load curve	P. ZHENG	CHINA	C3 - Session 1	Tue. Aug. 25
C3-201	An Analysis of the Dye Sensitized Solar Cell	M. AUGUSTIN	USA	C3 - Session 2	Tue. Aug. 25
C3-202	Limiting land degradation and carbon footprint when developing new transmission lines	E. T. TORSÆTER	NORWAY	C3 - Session 2	Tue. Aug. 25
C3-204	Integrating Natural Capital Assessment in the creation of substations Sustainable substation; from dream to reality Case description Substation de Laarberg	J. DEN HARTOG	NETHERLANDS	C3 - Session 2	Tue. Aug. 25
C3-205	Environment, Health and Safety Aspects of Gas-Insulated Electric Power Equipment Containing Non-SF6 Gases and Gas Mixtures	W. SHEN	CHINA	C3 - Session 2	Tue. Aug. 25
C3-206	The impact of distributed generation intensive development on ecological performance of remote power supply centers	S. EROSHENKO	RUSSIA	C3 - Session 2	Tue. Aug. 25
C3-207	How ecodesign helps to inform the digital transformation strategy of RTE?	M. NUNES	FRANCE	C3 - Session 2	Tue. Aug. 25
C3-208	The environmental impact of the regasification process: case study for the first Floating Storage Regasification Unit (FSRU) project in Thailand	P. BAIMAI	THAILAND	C3 - Session 2	Tue. Aug. 25
C3-209	Experience on Electric and Magnetic field induction under 765/400kV power transmission lines	DHYEY SHAH	INDIA	C3 - Session 2	Tue. Aug. 25
C3-210	Environmental impact of energy transition Lessons learned from a first experience on the French adequacy forecast study	K NUSSBAUM	FRANCE	C3 - Session 2	Tue. Aug. 25
C3-301	Avian Action Plan, a comprehensive strategy for bird protection	L. MOIANA	ITALY	C3 - Session 2	Tue. Aug. 25
C3-302	Video monitoring to study the behaviour of birds on a marked overhead line and to determine the risk of collision	N. KUCHER	GERMANY	C3 - Session 2	Tue. Aug. 25
C3-303	An overview of bird pest control in electric power transmission in Japan	M. SHIRAI	JAPAN	C3 - Session 2	Tue. Aug. 25

## CIGRE - 2020 e-session / Paper presentations

C3-304	Development of Eco-friendly Electric Transmission Towers in KEPCO	S. D. MUN	KOREA	C3 - Session 2	Tue. Aug. 25
C3-305	Evaluation of monitoring practices related to the impacts of very high-tension power lines on birds in Portugal: Suggestions for improvement	F. MOREIRA	PORTUGAL	C3 - Session 2	Tue. Aug. 25
C3-306	A nature-protection supervision in the construction of infrastructure objects as an example of good practice	NUŠA VANIC	SLOVENIA	C3 - Session 2	Tue. Aug. 25
C3-307	TasNetworks' strategy to mitigate the impact of power lines on threatened birds	M. FISH	AUSTRALIA	C3 - Session 2	Tue. Aug. 25
C3-NGN 01	Mixing landscape architecture and engineering – Evolution of professional practices in the transformation of electric system infrastructures	A. BAILLY	FRANCE	C3 - Session 2	Tue. Aug. 25
C3-NGN 02	The Use of a Robot for the Installation of Birds Anti-Collision Device	MARTINS	BRAZIL	C3 - Session 2	Tue. Aug. 25

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (C4 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
C4-101	ADVANCED MODELLING OF COMPLEX NETWORKS TO REDUCE LOSSES	R BRYANS	UNITED KINGDOM	C4 - Session 1	Tue. Aug. 25
C4-102	Fault Level Monitoring in Distribution Grids	D GHEORGHE	UNITED KINGDOM	C4 - Session 1	Tue. Aug. 25
C4-103	Corona losses reduction of OHL 500 kV of Omsk electric power system based on signal processing of PMU	V. RYABCHENKO	RUSSIA	Not presented	0
C4-104	Online risk assessment of power system transmission lines based on multivariate analysis of lightning and weather data	J. NOREÑA	COLOMBIA	C4 - Session 1	Tue. Aug. 25
C4-105	Validation of primary frequency control simulation models based on field-tests of production units	E AGNEHOLM	SWEDEN	C4 - Session 1	Tue. Aug. 25
C4-106	Inertia Measurement Method to Address Declining System Resilience	B BERRY	UNITED KINGDOM	C4 - Session 1	Tue. Aug. 25
C4-107	Analysis, Monitoring and Mitigation of Common Mode Oscillations on the Power System of Ireland and Northern Ireland	P. WALL	IRELAND	C4 - Session 1	Tue. Aug. 25
C4-108	Synchronous condenser solution to replace synchronous generators for providing system strength in a large-scaler power system - South Australian experience	B. BADRZADEH	AUSTRALIA	C4 - Session 1	Tue. Aug. 25
C4-109	Comparing the Linear and Square Models for Defining the Power System Frequency Static Response Slope based on Transient Synchrophasor Data	P. KOVALENKO	RUSSIA	Not presented	0
C4-110	Frequency analysis in the Romanian power system under major grid disturbances	L. TOMA	ROMANIA	C4 - Session 1	Tue. Aug. 25
C4-111	Modelling of emergency automatics of Georgian power system	G. ARZIANI	GEORGIA	C4 - Session 1	Tue. Aug. 25
C4-112	Electromagnetic environment and electromagnetic compatibility study at power substations	R. BORISOV	RUSSIA	C4 - Session 1	Tue. Aug. 25
C4-113	Calculations leading to voltage stability and transformer assessment in the presence of geomagnetically induced current	C. GAUNT	SOUTH AFRICA	C4 - Session 1	Tue. Aug. 25
C4-114	Monitoring and Modelling of Geomagnetically Induced Currents Across the Australian National Electricity Market	G. HESSE	AUSTRALIA	C4 - Session 1	Tue. Aug. 25
C4-115	Geomagnetic Disturbances and evaluation of their impacts on Korean Power Systems	J.W. WOO	KOREA	C4 - Session 1	Tue. Aug. 25
C4-116	Evaluation of Inverter Based Resources Transient Stability Performance in Weak Areas in Southwest Power Pool's System Footprint	D. RAMASUBRAMANIAN	USA	C4 - Session 1	Tue. Aug. 25
C4-117	Full-frequency network equivalent models for inverter-based systems	F. CAMARA	BRAZIL	C4 - Session 1	Tue. Aug. 25
C4-118	Test Feeder System and Benchmark Demonstrating Feeder Hosting Capacity and Smart Inverter	T. KHANDELWAL	USA	C4 - Session 1	Tue. Aug. 25
C4-119	Generator fault current injection: Are system operators asking for the right thing?	A. MORTON	AUSTRALIA	C4 - Session 2	Tue. Aug. 25

## CIGRE - 2020 e-session / Paper presentations

C4-120	Implementation of Emerging Techniques & Tools for Reliability, Stability and Flexibility of RE Rich Modern Power Grid with Multidimensional Approach – Indian Grid Context	NILESH M SHETH	INDIA	C4 - Session 2	Tue. Aug. 25
C4-121	Planning for Resilience in High Renewable Power Systems	N.W. MILLER	USA	C4 - Session 2	Tue. Aug. 25
C4-122	The operational risk management of UHVDC transmission system considered external meteorological environment	J. WANG	CHINA	C4 - Session 2	Tue. Aug. 25
C4-123	Optimal Power Flow based security and risk considering voltage stability and overload	R. GARCIA	COLOMBIA	C4 - Session 2	Tue. Aug. 25
C4-124	Load Validation and Forecasting on Systems with DER	M. MONDELLO	USA	C4 - Session 2	Tue. Aug. 25
C4-125	ICT-tool for assessment of the performance and stability of frequency containment reserves in the Nordic synchronous area	H EKESTAM	SWEDEN	C4 - Session 2	Tue. Aug. 25
C4-127	Power system analysis tools for renewable generation connections	N. PAHALAWATH HA	AUSTRALIA	C4 - Session 2	Tue. Aug. 25
C4-128	Stability Analysis of Grid-Connected Voltage Source Converters	J.C. PÉREZ-CAMPIÓN	SPAIN	Not presented	0
C4-129	Design and Application of State-of-the-art Synchronous Condensers to facilitate the energy transition	K. CHAN	SWITZERLAND	C4 - Session 2	Tue. Aug. 25
C4-201	Model Verification for Inverter-Based Resources for Improved Bulk Power System Reliability	R. QUINT	USA	C4 - Session 2	Tue. Aug. 25
C4-202	Benban PV Solar Park – Impact on the Operation of the Egyptian Power Transmission System –	M KAMH	EGYPT	C4 - Session 2	Tue. Aug. 25
C4-203	Modern Grid Stability Aspects and Mitigation with Traditional and Innovative Solutions – Lessons learned from actual cases	S KARAMITSOS	UNITED KINGDOM	C4 - Session 2	Tue. Aug. 25
C4-206	Large-scale electromagnetic transient model validation based on measured system disturbances	B. BADRZADEH	AUSTRALIA	C4 - Session 2	Tue. Aug. 25
C4-207	Assessment of the dynamic frequency stability of the future continental Europe power system – Interconnected incidents and system splits	J. FOURNEL	FRANCE	C4 - Session 2	Tue. Aug. 25
C4-208	System studies on the French network including HVDC stations and using real-time simulation	A PETIT	FRANCE	C4 - Session 2	Tue. Aug. 25
C4-209	OSMOSE: Grid Forming performance assessment within multiservice storage system connected to the transmission grid	C CARDOZO	FRANCE	C4 - Session 2	Tue. Aug. 25
C4-210	Sub synchronous Resonance of DFIG-based Wind Farms Connected to Series-Compensated Transmission Systems in North China: Field Data and Theoretical Analysis	X. DONG	CHINA	C4 - Session 2	Tue. Aug. 25
C4-211	Subsynchronous Resonance Study and Torsional Vibration Monitoring Program in the National Electric System of Chile	V. VELAR	CHILE	C4 - Session 2	Tue. Aug. 25
C4-301	Harmonic Modelling and Model Validation of DFIG Wind Turbines	R. KAZEMI	USA	C4 - Session 3	Wed. Aug. 26
C4-302	Impact of WTG converter impedance model on harmonic amplification factor of the Dutch 110 kV transmission network using a 383 MW wind farm case study	D. VREE	NETHERLANDS	C4 - Session 3	Wed. Aug. 26

## CIGRE - 2020 e-session / Paper presentations

C4-303	Proposition of the Superposition Method with Multiple Sources and Impedances in order to Attribute Responsibilities over Harmonic Distortions	M. CARLI	BRAZIL	C4 - Session 3	Wed. Aug. 26
C4-305	System-wide amplification of background harmonics due to the integration of high voltage power cables	J. B. KWON	DENMARK	C4 - Session 3	Wed. Aug. 26
C4-306	Resonance in ESS Operation in a Large Scale Plant System with Capacitor Bank	J.S HUH	KOREA	C4 - Session 3	Wed. Aug. 26
C4-307	High-order harmonic resonance phenomena in the frequency range from 2 kHz to 9 kHz of low voltage system in Japan	J. YOSHINAGA	JAPAN	C4 - Session 3	Wed. Aug. 26
C4-308	Considerations on the frequency-dependent grid impedance in meshed HVAC grids - Parametric sensitivity analysis and impact of power electronic assets	S. WENIG	GERMANY	C4 - Session 3	Wed. Aug. 26
C4-309	Frequency and time domain field tests and cable model validation for the Italy – Montenegro 500 kV HVDC submarine cable link	F. PALONE	ITALY	C4 - Session 3	Wed. Aug. 26
C4-310	Trends in Power Quality Disturbance Compatibility in Australia	N. BROWNE	AUSTRALIA	C4 - Session 3	Wed. Aug. 26
C4-311	Power Quality Monitoring Of HVAC Solar Power Station Using Sequence Voltages From Synchrophasor – A Case Study	C RETHI NAIR	INDIA	Not presented	0
C4-312	Power Quality in Argentinean Electrified Railways: Comparison of measurements in two different traction substations	F. ISSOURIBEHERE	ARGENTINA	C4 - Session 3	Wed. Aug. 26
C4-314	Interaction between GIS and Power Transformers Simulation and Mitigation	P. MIGUEL	BRAZIL	C4 - Session 3	Wed. Aug. 26
C4-315	Insulation Coordination for Grid-Connected Power Electronic Apparatus	L. GRABER	USA	C4 - Session 3	Wed. Aug. 26
C4-317	A Parametric Study Towards a Generic Mitigation Against Excessive Circuit Breaker TRVs in Series Reactor Applications in the Netherlands	K. VELITSIKAKIS	NETHERLANDS	C4 - Session 3	Wed. Aug. 26
C4-318	The comparison of the different methods for the determination of the shielding failure rate of a transmission overhead line	I. TANNEMAAT	NETHERLANDS	C4 - Session 3	Wed. Aug. 26
C4-319	Lightning protection of wind turbines constructed in heavy lightning area	K. YAMAMOTO	JAPAN	C4 - Session 3	Wed. Aug. 26
C4-320	Dynamic Lightning Protection of Smart Grid Power Load Centers	C. TONG	CHINA	C4 - Session 3	Wed. Aug. 26
C4-321	Lightning Analysis for $\pm 500$ kV HVDC XLPE Cable System Combined with Overhead Transmission Lines	C. K. JUNG	KOREA	Not presented	0
C4-322	Capacitors Banks for Reactive Power Compensation in Wind Power Plants: Aspects of Electromagnetic Transients and Components Specification	D. SENA	BRAZIL	C4 - Session 4	Wed. Aug. 26
C4-323	A Comprehensive Assessment of Concerns and Mitigation Measures for the Application of Inline Reactors to Reduce Short Circuit Levels	I. RAHIMI	CANADA	C4 - Session 4	Wed. Aug. 26
C4-324	Voltage and Current Inversion and its Impact on Distance and Differential Protective Relaying in an Overcompensated Transmission System	H ERIKSSON	SWEDEN	C4 - Session 4	Wed. Aug. 26

## CIGRE - 2020 e-session / Paper presentations

C4-325	Post-mortem incident analysis on a hydro power plant main transformer by digital simulation – A Case Study of dielectric failure due to Transformer-GIS interaction	C. CARDOSO	PORTUGAL	C4 - Session 4	Wed. Aug. 26
C4-326	Development of Desert-Dust and Sea-Salt Deposition Database Required for Outdoor Insulation Coordination in Israeli Power Grid	E. VOLPOV	ISRAEL	Not presented	0
C4-327	Experimental Investigation of Ground Return Currents and Mutual Induction in Extruded Cables	S. NAUTA	NETHERLANDS	C4 - Session 4	Wed. Aug. 26
C4-NGN 01	Large-scale Electromagnetic Transient Models for System Studies – Development and Modelling Impacts	Nathan Crooks	AUSTRALIA	C4 - Session 1	Tue. Aug. 25
C4-NGN 02	An approach to assessment of the impact of topology changes and fundamental frequency load-flow variations on harmonic voltage levels in a transmission grid	Valery Solodovnikov	RUSSIA	C4 - Session 3	Wed. Aug. 26

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (C5 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
C5-101	Pricing Future Markets: How Alternative Pricing Can Impact Renewable Penetration Levels and the Resource Mix	R.B. HYTOWITZ	USA	Not presented	0
C5-102	Need of Improvements in the Brazilian Energy Market to Consider Separate Prices for Energy and Services	J. MELLO	BRAZIL	C5 - Session 1	Wed. Sep. 2
C5-103	Market Transformation to Value Energy, Reliability, and Flexibility Services	C. WANG	USA	C5 - Session 1	Wed. Sep. 2
C5-104	From services to markets – system and market impacts of energy transition in European markets	R. HIRVONEN	FINLAND	C5 - Session 1	Wed. Sep. 2
C5-105	Principles for allocation of cross-zonal capacities for the exchange of balancing capacity or sharing of reserves	R. BEUNE	NETHERLANDS	C5 - Session 1	Wed. Sep. 2
C5-106	System Operator Challenges in Spot Market	ENG.S AL-RAWAHI	GULF STATES	C5 - Session 1	Wed. Sep. 2
C5-107	Incentivizing Generator Flexibility Investments: A Stochastic Analysis of Various Market Designs	J. FRASIER	USA	C5 - Session 1	Wed. Sep. 2
C5-108	System Services for Power Systems with a High Level of Renewables	N. DELANEY	IRELAND	C5 - Session 1	Wed. Sep. 2
C5-109	Integrating multi-period uncertainty management reserves into the Irish balancing market	J. GING	IRELAND	C5 - Session 1	Wed. Sep. 2
C5-110	Evolutions of Japanese markets to secure appropriate ancillary service corresponding to a large amount of RES installation - Establishment of Capacity market and Balancing market -	Y. TAKAMIZAWA	JAPAN	C5 - Session 1	Wed. Sep. 2
C5-111	Market Integration of HVDC Lines: Cost Savings from Loss Allocation and Redispatching	A. TOSATTO	DENMARK	C5 - Session 1	Wed. Sep. 2
C5-112	Identifying Emerging Ancillary Services changes in the Australian NEM	I. ROSE	AUSTRALIA	C5 - Session 1	Wed. Sep. 2
C5-113	Research on Coordination Optimization Strategy of Peak Shaving and Frequency Modulation Auxiliary Service	W. ZHENG	CHINA	Not presented	0
C5-114	A world-first: On the pooling of battery energy storage and pumped-hydro	A. SCHNEIDER	GERMANY	C5 - Session 1	Wed. Sep. 2
C5-115	On lost profit calculations and pricing in liberalized power markets	V. BOROKHOV	RUSSIA	C5 - Session 1	Wed. Sep. 2
C5-116	Paradigm Shift in Thailand's Energy Sector: Effects from Increased REGs on Conventional Power Plant Operation and Power System Security	W. WONGLIMAMORNERT	THAILAND	C5 - Session 2	Wed. Sep. 2
C5-117	Transition From Administered To Market Linked Imbalance Handling Mechanism In Indian Electricity Market	K.V.N. PAWAN KUMAR	INDIA	C5 - Session 2	Wed. Sep. 2
C5-118	The Economic and Environmental Value of the Demand Response Market in Korea	S. I. KIM	KOREA	C5 - Session 2	Wed. Sep. 2
C5-119	Experience of Implementation of Reserve Regulation Ancillary Services and Fast Response Ancillary Services in India	ANUPAM KUMAR	INDIA	C5 - Session 2	Wed. Sep. 2
C5-120	To socialise or not to socialise the cost of imbalances from non-programmable renewable generation	N. PINHO DA SILVA	PORTUGAL	C5 - Session 2	Wed. Sep. 2

## CIGRE - 2020 e-session / Paper presentations

C5-121	Implementation of Security Constrained Economic Dispatch Pan India	PHANISANKAR CHILUKURI	INDIA	C5 - Session 2	Wed. Sep. 2
C5-201	A Holistic Framework for Electricity Market Design: The Benefits of Regulatory and Market Coordination	J. FRASIER	USA	C5 - Session 3	Fri. Sept. 3
C5-202	Evolution of Regulatory Framework on Reinforcements, Improvements and End of Useful Life of the Electric Power Transmission Assets in Brazil	E. NEVES	BRAZIL	C5 - Session 2	Wed. Sep. 2
C5-203	Assessing the Pricing Approach for Renewable Energy Reserve Auctions in Brazil: Do We Have Misleading Prices?	A. PERRELLI	BRAZIL	C5 - Session 2	Wed. Sep. 2
C5-204	Regulation of Economic Incentive for the Improvement of the Operational Performance of the HVDC Transmission System in Brazil	S. FEITOSA	BRAZIL	C5 - Session 2	Wed. Sep. 2
C5-205	Constrained-off energy events in wind farms on Brazilian Market	R. FERREIRA	BRAZIL	C5 - Session 2	Wed. Sep. 2
C5-208	The transition to new dynamic market arrangements in Ireland and Northern Ireland in the context of high levels of variable renewable generation	A. M. DOWNEY	IRELAND	C5 - Session 2	Wed. Sep. 2
C5-209	Renewable Energy Targets and Policies in Turkey and Development of Photovoltaic Solar Energy	HUSEYIN ALTUNTAS	TURKEY	C5 - Session 3	Fri. Sept. 3
C5-210	Sensibility to Consumers' Outflow	V. BEREZOVSKY	RUSSIA	C5 - Session 3	Fri. Sept. 3
C5-211	Market tools for managing thermal generation fleet.	G. LABUTIN	RUSSIA	C5 - Session 3	Fri. Sept. 3
C5-212	Research of China's two tier spot market and its evolution path	L. MA	CHINA	C5 - Session 3	Fri. Sept. 3
C5-213	The realization of the fairness and efficiency goals in the electricity market and its application in the Guangdong power market	Z. JING	CHINA	Not presented	0
C5-214	A Novel Demand Response Market Clearing Auction Model for Independent System Operators	M. AHMED	CANADA	C5 - Session 3	Fri. Sept. 3
C5-215	Financial Systemic Risk Level Model_C5-PS2	J. CARDONA	COLOMBIA	C5 - Session 2	Wed. Sep. 2
C5-216	Assignment of transmission system installations after the regulatory changes approved in 2016 in Chile	J. TORO	CHILE	C5 - Session 3	Fri. Sept. 3
C5-217	From a system of shared payment between generators and customers to a regime of payment of final customers	J. TORO	CHILE	C5 - Session 3	Fri. Sept. 3
C5-301	Latent Clustering Model for Co-optimization of Transmission and Generation Investments Under Uncertainty	J. BUKENBERGER	USA	C5 - Session 4	Fri. Sept. 3
C5-302	Socio-economic competitive costs for flexibility-based alternatives to traditional investments in distribution network capacity	E. GRAMME	NORWAY	C5 - Session 3	Fri. Sept. 3
C5-303	Development and Impact of Flow-Based Methodology in Core Region	M. VAJDIC	CROATIA	C5 - Session 3	Fri. Sept. 3
C5-304	Improving wholesale electricity market design for electric power systems with high shares of intermittent renewable energy sources	M. C. DALENA	ITALY	C5 - Session 3	Fri. Sept. 3



## CIGRE - 2020 e-session / Paper presentations

C5-305	The consideration of novel and flexible network usage in Japan - Attempts to minimize social cost by optimizing network investment considering generation curtailment -	K. FURUSAWA	JAPAN	C5 - Session 4	Fri. Sept. 3
C5-306	Ancillary Services Market reform according to the new European Electricity Directive: open points for the design of the future TSO-DSO coordination and the DSO's procurement of flexibility services in the Italian context	G. LENAZ	ITALY	C5 - Session 4	Fri. Sept. 3
C5-307	System strength, inertia and network loss factors - implications for power networks and renewable generation	S. HINCHLIFFE	AUSTRALIA	C5 - Session 3	Fri. Sept. 3
C5-308	The Role of Price Signals in the Economically Efficient Integration of Demand Response and Distributed Energy Resources with the Central Electricity Supply System	L. HOCH	AUSTRALIA	C5 - Session 3	Fri. Sept. 3
C5-309	Evaluating Various Battery Behaviours to Maximise Consumer Value Across the Electricity Supply Chain	E. MA	AUSTRALIA	C5 - Session 3	Fri. Sept. 3
C5-310	Improved method for calculating ISKs based on node transmission contribution	X. LI	CHINA	C5 - Session 4	Fri. Sept. 3
C5-311	How to Give a Reasonable Economic Signals Through Transmission Service Cost: Analysis based on Game Theory with the Example of Korean Transmission System	H. CHANG	KOREA	C5 - Session 4	Fri. Sept. 3
C5-312	Markets and platforms to coordinate the procurement of system services from large-scale and small-scale assets connected to the electricity network	C. MADINA	SPAIN	C5 - Session 4	Fri. Sept. 3
C5-313	Strategy for Northeast Asia Power System Interconnection Technical Assistance to Mongolia General Overview of a Northeast Asia Power Trade	P LIENHART	FRANCE	C5 - Session 4	Fri. Sept. 3
C5-NGN 01	Evolving Policy, Standards and Guidelines to address issues affecting markets	B M Rana	INDIA	C5 - Session 2	Wed. Sep. 2
C5-NGN 02	Simulating the Economic Impact of a Dynamic Line Rating Project in a Regional Transmission Operator (RTO) Environment	S Murphy	USA	C5 - Session 2	Wed. Sep. 2

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (C6 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
C6-101	Analysis of Voltage Stability Index for a Distribution Grid with Photovoltaic and Battery Energy Storage Systems	T. BLASI	BRAZIL	C6 - Session 2	Thu. Aug. 27
C6-102	Analysis of Benefits After Installing Battery Energy Storage in Distribution Feeder with Presence of Photovoltaic Plants in Brazilian Electrical System	S. ROCHA	BRAZIL	C6 - Session 2	Thu. Aug. 27
C6-103	Impacts of a Power Storage Systems Based on Lead Carbon and Lithium Technologies in 13,8 kV Distribution Network - Technical, Economic and Regulatory Challenges	L. LEITE	BRAZIL	C6 - Session 2	Thu. Aug. 27
C6-104	Lessons learnt from the 800 MWh Utility Scale Battery Energy Storage Systems (BESS) Project in South Africa	K DEDEKIND	SOUTH AFRICA	C6 - Session 2	Thu. Aug. 27
C6-106	Contribution of energy storage to capacity adequacy – Application to island power systems	G. N. PSARROS	GREECE	C6 - Session 1	Thu. Aug. 27
C6-107	Research on SOC balanced control of flexible group energy storage system with echelon used batteries	M. LUO	CHINA	Not presented	0
C6-108	Distributed Resources Providing Ancillary Services: operating DSO owned storage without market interferences	M. ROSSI	ITALY	C6 - Session 1	Thu. Aug. 27
C6-109	Implementation of Battery Energy Storage for Frequency and Power Profile Regulation, and Spinning Reserve Management	P. ZINCK	CANADA	C6 - Session 2	Thu. Aug. 27
C6-110	Energy storage application for improving transients performance of synchronous distributed generation	V. SAMOYLENKO	RUSSIA	C6 - Session 1	Thu. Aug. 27
C6-111	Assessment of distribution grid losses depending on storage location for residential PV systems in three grids in the region of Murcia	D. RUBIO-MIGUEL	SPAIN	C6 - Session 1	Thu. Aug. 27
C6-112	Considerations for Energy Storage in Distribution Planning	J. PEPPANEN	USA	C6 - Session 2	Thu. Aug. 27
C6-113	Accounting for the uncertainty associated with consumer-led demand side response	G MCFADZEAN	UNITED KINGDOM	C6 - Session 1	Thu. Aug. 27
C6-114	Modelling Considerations for Assessing Smart Inverter Functions - A Case Study from Northern California	J. PEPPANEN	USA	C6 - Session 1	Thu. Aug. 27
C6-115	Using advanced modular FACTS to increase flexibility of distribution networks and enable the connection of more distributed energy resources	C WINNING	UNITED KINGDOM	C6 - Session 1	Thu. Aug. 27
C6-116	Optimization of the Effect of Electric Vehicle Charging Stations by Using Particle Swarm Optimization	HAZAL CIFTCI	TURKEY	C6 - Session 1	Thu. Aug. 27
C6-117	Effects of Electric Vehicles Charging on Power Distribution Systems “A Case Study in Aqaba-Jordan”	RUIA DAHOUD	JORDAN	C6 - Session 1	Thu. Aug. 27
C6-118	Research on Ordered Charge Control System of Electric Vehicles Based on New Acquisition Communication and Control Equipment	L. JIANG	CHINA	C6 - Session 1	Thu. Aug. 27
C6-119	A Conceptual Framework for Sub-Transmission Expansion Planning of Active Distribution Systems, focused on South American Networks	M. SAMPER	ARGENTINA	C6 - Session 1	Thu. Aug. 27
C6-120	Achievements, Experiences, and Lessons Learned from the European Research Infrastructure ERIGrid related to the Validation of Power and Energy Systems	T. STRASSER	AUSTRIA	C6 - Session 1	Thu. Aug. 27

## CIGRE - 2020 e-session / Paper presentations

C6-122	Installation of DER in Distribution Automation Schemes	M. MONDELLO	USA	C6 - Session 1	Thu. Aug. 27
C6-123	Innovative Solutions for Smart Management of Power Grids	J.C. DÍAZ	SPAIN	C6 - Session 1	Thu. Aug. 27
C6-124	Voltage Control in the Active Networks, Oman Case Study	ENG. AHMED AL-NADABI	GULF STATES	C6 - Session 1	Thu. Aug. 27
C6-126	Smart Transformer Use in Net-Zero Energy Factories	P. LOMBARDI	GERMANY	C6 - Session 1	Thu. Aug. 27
C6-127	Reduction method for planning cross energy carrier networks in the cellular approach applicable for stability assessment in low-voltage networks	A. TRAUPMANN	AUSTRIA	C6 - Session 1	Thu. Aug. 27
C6-201	Distributed Energy Resources aggregation platforms for the provision of flexibility services by Working Group C6.35	A. OUDALOV	SC C6	C6 - Session 3	Fri. Aug. 28
C6-202	Microgrid Control Platform to Provide Industrial Site in the USA with Efficient and Reliable Management of Distributed Resources and Energy Storage Systems	H. BITARAF	USA	C6 - Session 2	Thu. Aug. 27
C6-203	Optimal Energy Management and Control for Load Management in V2G EV-integrated Microgrid	G. BYEON	KOREA	C6 - Session 3	Fri. Aug. 28
C6-204	Cyber-Physical Resilient Interoperable Microgrid Networks	D. ISHCENKO	USA	C6 - Session 2	Thu. Aug. 27
C6-205	Using a Real Time Digital Simulator to Test a Microgrid Integrated Solar Storage Technology	S.R. KOTHANDARAMAN	USA	C6 - Session 2	Thu. Aug. 27
C6-206	A Microgrid Validation Centre to enable Validation and Optimisation of the Design, Simulation, Intelligent Control and Asset Management of Microgrid	M OSBORN	UNITED KINGDOM	C6 - Session 2	Thu. Aug. 27
C6-207	Cellular approach and new grid edge solutions for distribution systems and industrial sites in Germany	B. BUCHHOLZ	GERMANY	C6 - Session 3	Fri. Aug. 28
C6-208	Demonstrating a Virtual Power Plant on the Isles of Scilly	S C E JUPE	UNITED KINGDOM	C6 - Session 3	Fri. Aug. 28
C6-209	Real-Time Control Algorithm for the Integration of a Battery Energy Storage System to Optimize the Power Generation on a real Island Microgrid System: Conceptualization and Validation	J. IGLESIAS	SPAIN	C6 - Session 3	Fri. Aug. 28
C6-210	4-legs electronic active load for anti-islanding evaluation	J. BALLESTÍN-FUERTES	SPAIN	C6 - Session 2	Thu. Aug. 27
C6-211	Battery Energy Storage System based Voltage and Frequency Control of An Island Distribution Network	P PONNAGANTI	DENMARK	C6 - Session 3	Fri. Aug. 28
C6-212	Enhancing flexibility, reliability, and resilience of isolated power systems via Variable Speed Diesel Integration	M. NEGNEVITSKY	AUSTRALIA	C6 - Session 3	Fri. Aug. 28
C6-214	ENEL experience in rural electrification in South America area	E. VALIGI	ITALY	Not presented	0
C6-215	Conceptualising hybrid power system and microgrid design for a remote touristic village supply	ESMA MUSIC	BOSNIA HERZEGOVINA	C6 - Session 3	Fri. Aug. 28
C6-216	Tapping of Power from Overhead Earthwire of EHV Transmission Line to Supply Remotely Located Load-Powergrid Experience	DHEERAJ SRIVASTAVA	INDIA	C6 - Session 3	Fri. Aug. 28
C6-217	A simple rule-based energy management system for off-grid system	L. SIGRIST	SPAIN	C6 - Session 3	Fri. Aug. 28
C6-218	Hardware in the loop microgrid controller testing	H.M. SANCHEZ	COLOMBIA	C6 - Session 2	Thu. Aug. 27

## CIGRE - 2020 e-session / Paper presentations

C6-219	Novel Control of Multi-Level Inverter Based Microgrid with Hybrid Generation	BHAVESH R. BHALJA	SC C6	Not presented	0
C6-220	Development of a state estimator based modular toolset	BALINT HARTMANN	HUNGARY	C6 - Session 3	Fri. Aug. 28
C6-221	Active Distribution Test System for Typical New Zealand MV and LV Networks	N. K. C. NAIR	NEW ZEALAND	C6 - Session 3	Fri. Aug. 28
C6-NGN 01	E-PORT SMART ENERGY MASTER PLAN AND CONTROL SYSTEM	Polly Osborn	UNITED KINGDOM	C6 - Session 1	Thu. Aug. 27
C6-NGN 02	Evaluation of the Impacts of Distributed Generation's Power Factor on Active Distribution Grid Operation	Thais Blasi	BRAZIL	C6 - Session 1	Thu. Aug. 27
C6-NGN 03	Resiliency Assessment of Multi-Microgrid Scheduling Approaches	Michael Spiegel	AUSTRIA	C6 - Session 3	Fri. Aug. 28

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (D1 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
D1-101	Predictive maintenance based on continuous monitoring of OLTCs electrical signatures	A. BARBOSA	BRAZIL	D1 - Session 1	Wed. Sep. 2
D1-102	Development and implementation of Partial discharges on-line monitoring module in GIS 110KV switchgears	W GIL	POLAND	D1 - Session 1	Wed. Sep. 2
D1-103	Identification and Improved Quantification of Inhibitors in Mineral Insulating Oils using FTIR Spectroscopy and Partial Least Squares Regression	P. ÅGREN	FINLAND	D1 - Session 1	Wed. Sep. 2
D1-104	Influence of temperature variation on transformer bushing monitoring	N ABEYWICKRAMA	SWEDEN	D1 - Session 1	Wed. Sep. 2
D1-105	A New Partial Discharge Measuring System in HVGIS Based on Magnetic Field Antennas	A. RODRIGO MOR	NETHERLANDS	D1 - Session 1	Wed. Sep. 2
D1-106	Challenges for space charge measurements with the PEA technique in the thick insulation of HVDC Cables	M. ALBERTINI	ITALY	D1 - Session 1	Wed. Sep. 2
D1-107	Cigré Prototype Installation Test for Gas-Insulated DC Systems - Testing a Gas-Insulated DC Transmission line (DC-GIL) for $\pm 550$ kV and 5000 A under Real Service Conditions	M. HALLAS	GERMANY	D1 - Session 1	Wed. Sep. 2
D1-108	Evaluation of dynamic loading capability for optimal loading strategies of power transformers	I. LUPANDINA	AUSTRIA	D1 - Session 1	Wed. Sep. 2
D1-109	Partial Discharge Analysis in Gas-Insulated HVDC Systems Using Conventional and Non-Conventional Methods	T. GÖTZ	GERMANY	D1 - Session 1	Wed. Sep. 2
D1-110	Spectral measurement of the precipitations composition in OIP insulation of the high-voltage bushings	M. LYUTIKOVA	RUSSIA	D1 - Session 1	Wed. Sep. 2
D1-111	A measurement system for insulator puncture test with short front impulse voltage	Y. LI	AUSTRALIA	D1 - Session 1	Wed. Sep. 2
D1-112	Extended Frequency Range Testing of HV Cables	J. TUSEK	AUSTRALIA	D1 - Session 1	Wed. Sep. 2
D1-113	PD Testing Setup Composed by GIS, Cable and Power Transformer to Compare Different PD Monitoring Technologies	A. SÁNCHEZ	SPAIN	D1 - Session 2	Wed. Sep. 2
D1-114	On-Line Diagnosis Methods for Transformer Winding Deformation Based on Running Voltage and Current Correlation Mining	Y. ZHENG	CHINA	D1 - Session 2	Wed. Sep. 2
D1-115	Development of a Multi-Parameter Online Monitoring Equipment for EHV Transformer Bushing	L. ZHANG	CHINA	D1 - Session 2	Wed. Sep. 2
D1-116	Proposal of a Calibration Methodology of UHF Partial Discharge Measurements for Power Transformers	S. COENEN	GERMANY	D1 - Session 2	Wed. Sep. 2
D1-117	A new method for evaluating the degree of polymerization of paper insulation of power transformers	A. SABITOV	RUSSIA	D1 - Session 2	Wed. Sep. 2
D1-118	Field Experience in Oil-filled Power Transformers Fault Diagnosis by Frequency Response of Stray Losses (FRSL)	P. SINGKHAWAT	THAILAND	D1 - Session 2	Wed. Sep. 2
D1-119	Analysis of puncture breakdown characteristics according to inner defect types of GIS epoxy insulator	T.H. KIM	KOREA	D1 - Session 2	Wed. Sep. 2
D1-120	Oxidative degradation of mineral oils in power transformers over service time. Effect of the economic owner on maintenance strategies	A. ZAYA-JIMENEZ	SPAIN	D1 - Session 2	Wed. Sep. 2

## CIGRE - 2020 e-session / Paper presentations

D1-121	Development of OF Cable Insulation Deterioration Diagnosis Technique Using Support Vector Machine	H.J. PARK	KOREA	D1 - Session 2	Wed. Sep. 2
D1-122	Monitoring of active part drying for instrument transformers by dielectric measurements	C PERRIER	FRANCE	D1 - Session 2	Wed. Sep. 2
D1-123	Measurement and behavior of partial discharge for SF6 substitute gases in HVDC GIS/GIL	C TOIGO	FRANCE	D1 - Session 2	Wed. Sep. 2
D1-202	Proposal of test method for evaluating the induction time (IT) of natural ester insulating oils	A. MARTINS	BRAZIL	D1 - Session 3	Fri. Sep. 3
D1-203	LCA and Smoke Test of Dielectric Fluids based on Natural Esters	F. SCATIGGIO	ITALY	D1 - Session 3	Fri. Sep. 3
D1-204	Investigation into the effect of cold temperature on the physical properties of dielectric liquids	P M LIVESEY	UNITED KINGDOM	D1 - Session 3	Fri. Sep. 3
D1-206	Characterization of pressboard mechanical properties for understanding the dynamic behaviour of transformer winding clamping pressure	T. SAHA	AUSTRALIA	D1 - Session 3	Fri. Sep. 3
D1-207	A new type of failure of composite insulators: service experience, degradation characteristics, root cause, experimental simulation and countermeasures	X. LIANG	CHINA	D1 - Session 3	Fri. Sep. 3
D1-208	Investigations of long-term transition processes on solid-gas insulated HVDC bushings under high thermal and electrical stress	M. SCHELER	GERMANY	D1 - Session 3	Fri. Sep. 3
D1-209	The Electrical Characteristics of Low Current Surface Discharges with Liquid Electrodes and the Adaption of Test Parameters for a DC Inclined-Plane-Test	S. KUEHNEL	GERMANY	D1 - Session 3	Fri. Sep. 3
D1-210	Analysis of stray gas according to oil characteristics and vacuum process conditions of insulation oil in power transformer	J.H. SONG	KOREA	D1 - Session 3	Fri. Sep. 3
D1-211	Analysis Of 400 Kv Failed Silicone Rubber Insulators: Role Of Micro-Cracks In Glass Fiber Rod And Electric Field Distribution In Failure Mechanism-Case Study	NITIN R SHINGNE	INDIA	D1 - Session 3	Fri. Sep. 3
D1-212	Implementation of space charge measurement using the Pulsed Electro-Acoustic method during ageing of HVDC model cable	L BERQUEZ	FRANCE	D1 - Session 3	Fri. Sep. 3
D1-213	Low temperature behaviour and dielectric performance of Fluoronitrile/CO2/ O2 mixture	M. WALTER	SWITZERLAND	D1 - Session 3	Fri. Sep. 3
D1-214	Degradation of insulating gases with low environmental footprint in operation	P. STOLLER	SWITZERLAND	D1 - Session 3	Fri. Sep. 3
D1-301	Byproduct-free curing of a highly insulating polyethylene copolymer blend: an alternative to peroxide crosslinking	M. MAURI	NORWAY	D1 - Session 4	Fri. Sep. 3
D1-302	Replacement of area substation transformers with flexible units of reduced footprint and increased overloadability	R SZEWCZYK	POLAND	D1 - Session 4	Fri. Sep. 3
D1-303	New test procedure intended to evaluate adhesion of core/housing interface of composite insulators	I GUTMAN	SWEDEN	D1 - Session 4	Fri. Sep. 3
D1-304	Measurement and simulation of transient field stresses and impacts on advanced insulation design and new test procedures for HVDC components	I. WIRTH	GERMANY	D1 - Session 4	Fri. Sep. 3
D1-305	3D Printed Solid Insulator: Possibilities and Challenges	M. KURIMOTO	JAPAN	D1 - Session 4	Fri. Sep. 3

## CIGRE - 2020 e-session / Paper presentations

D1-306	Features of the choosing insulation voltage of AC systems under increased frequency	T. SHADRIKOV	RUSSIA	D1 - Session 4	Fri. Sep. 3
D1-307	Electric Field Relaxation by Functionally Graded Insulating Materials in GIS	D. J. PARK	KOREA	D1 - Session 4	Fri. Sep. 3
D1-308	Erosion Performance of Boron Nitride Filled Silicone Rubber Composite as an Outdoor Insulator Weathershed Material	M. JO THOMAS	INDIA	D1 - Session 4	Fri. Sep. 3
D1-309	Dielectric stress on and design of GIS support insulators for HVDC-applications	U. STRAUMANN	SWITZERLAND	D1 - Session 4	Fri. Sep. 3
D1-NGN 01	Investigation of the innovative type of insulation SCOTCH 1601	V. Pankova	RUSSIA	D1 - Session 4	Fri. Sep. 3

## CIGRE - 2020 e-session / Paper presentations

Paper number	Paper title (D2 sessions)	Main author	Main author's country	Session of presentation	Day (CEST)
D2-101	Big Data Analytics for Predictive Lightning Outage Management Using Spatially Aware Logistic Regression	M. KEZUNOVIC	USA	D2 - Session 2	Tue. Aug. 25
D2-102	Artificial Intelligence Applications to Electric Power Systems Asset Management	A.P. APOSTOLOV	USA	D2 - Session 1	Tue. Aug. 25
D2-103	Failure reduction and predictive replacement approach for overhead lines using big data and advanced analytics	A. FRAIOLI	ITALY	D2 - Session 1	Tue. Aug. 25
D2-104	Incremental machine learning implementation for voltage forecasts and predicted violation alerts	A KULKARNI	UNITED KINGDOM	D2 - Session 2	Tue. Aug. 25
D2-105	Developing Enhanced Information and Data Exchange to Enable Scalable TSO-DSO Interoperability	G A TAYLOR	UNITED KINGDOM	D2 - Session 1	Tue. Aug. 25
D2-106	Improvement of operability and maintainability using new information and telecommunication technologies	Y. SAKAMOTO	JAPAN	D2 - Session 1	Tue. Aug. 25
D2-107	Artificial Intelligence and Machine Learning Applications in the Distribution Network in Greece	M. CHAMPAKIS	GREECE	D2 - Session 2	Tue. Aug. 25
D2-108	Adopting IIoT Technology to Realize Controllability of Existing Small-scale Distributed Energy Resources	S. LAI	TAIWAN	D2 - Session 1	Tue. Aug. 25
D2-109	Electric Power Utilities Disturbance analysis using Bayesian Networks of Events	G. ARROYO-FIGUEROA	MEXICO	D2 - Session 2	Tue. Aug. 25
D2-110	Development of intelligent control systems for decentralized distributed energy resources based on a digital platform	S. KOVALYOV	RUSSIA	D2 - Session 1	Tue. Aug. 25
D2-111	Application of modern information and communication technologies for improving the effectiveness power systems	A. RODIONOV	RUSSIA	D2 - Session 1	Tue. Aug. 25
D2-112	Machine learning as a tool to improve the efficiency of high-voltage power equipment lifecycle management	A. KHALYASMAA	RUSSIA	D2 - Session 2	Tue. Aug. 25
D2-113	Research and Application of Virtual Dispatchers in Intelligent Distribution Network Based on Artificial Intelligence	W. ZHENG	CHINA	D2 - Session 1	Tue. Aug. 25
D2-114	Research on the Architecture for Smart Energy Service System Based on Industrial Internet	X. DONG	CHINA	D2 - Session 2	Tue. Aug. 25
D2-116	An Instance Segmentation and Depth Perception based Obstacle Detection and Distance Measurement Method for Substation Patrol Robot	H. XU	CHINA	D2 - Session 2	Tue. Aug. 25
D2-117	An intelligent power grid post-fault restoration support system based on knowledge graph	J. LU	CHINA	D2 - Session 2	Tue. Aug. 25
D2-118	Experience of development and implementation of automated system for monitoring and analysis of functioning of relay protection devices (IED's) and assessment of correct protection operation	O. FEDOROV	RUSSIA	D2 - Session 1	Tue. Aug. 25
D2-119	Development an AI Algorithm and Drone Operation System for Diagnosis of Transmission Facilities in KEPCO	N. JUNG	KOREA	D2 - Session 2	Tue. Aug. 25
D2-120	Peer-to-Peer Energy Trading: A Case Study in Thailand	S. KAEWCHIRD	THAILAND	D2 - Session 2	Tue. Aug. 25
D2-121	Facilitating Power Banking And Overarching Arrangement Through Smart Contracts Based On Block Chain Technology	SANTOSH KUMAR JAIN	INDIA	D2 - Session 2	Tue. Aug. 25
D2-122	MANINT Project: Digital Transformation of the Management of Transmission Grid Operating Assets	M. GARNACHO	SPAIN	D2 - Session 1	Tue. Aug. 25



## CIGRE - 2020 e-session / Paper presentations

D2-123	A Multi-Agent System platform for State Estimation in power distribution grids in the context of distributed generation	A. COJOACA	ROMANIA	D2 - Session 1	Tue. Aug. 25
D2-124	Internet of Distributed Energy Architecture (IDEA): new approach on transactive energy	I. CHAUSOV	RUSSIA	D2 - Session 2	Tue. Aug. 25
D2-125	Impact of Big Data, Internet of Things and Analytics in Indian Power System - A Case Study	PRAVEEN KUMAR AGARWAL	INDIA	D2 - Session 1	Tue. Aug. 25
D2-127	CNDbot: A Robot for Operation Information Management in the Colombian Power Grid	S. JIMENEZ	COLOMBIA	D2 - Session 1	Tue. Aug. 25
D2-128	On the Path to Autonomous Power System Management	A. OUDALOV	SWITZERLAND	D2 - Session 2	Tue. Aug. 25
D2-129	How to deploy Augmented Reality solutions into day to day DSO operations	MATJAŽ OSVALD	SLOVENIA	D2 - Session 1	Tue. Aug. 25
D2-130	Management of data from smart measuring device for predictive maintenance	MAJA SAVINEK	SLOVENIA	Not presented	0
D2-201	Assessing Blockchain Technology to Enable High DER Scenarios Using Hardware in the Loop Testing	N. GURUNG	USA	D2 - Session 3	Wed. Aug. 26
D2-202	Distributed Energy Resources and the Smart Grid: The Role of Soft Cybersecurity	G. AZEVEDO	BRAZIL	D2 - Session 3	Wed. Aug. 26
D2-203	Leveraging SOC-as-a-Service to Counter Some of the Cybersecurity Challenges of Combined IT and OT Operations	D.K. HOLSTEIN	USA	D2 - Session 3	Wed. Aug. 26
D2-204	Applying Automated Cyber Risk Assessment for the Smart Grid	DJENANA CAMPARA	BOSNIA HERZEGOVINA	D2 - Session 3	Wed. Aug. 26
D2-205	CYber Resilience framework for ENERgy systems	G. DONDOSSOLA	ITALY	D2 - Session 3	Wed. Aug. 26
D2-206	An Intrusion Detection System for the Smart Grid based on Computational Intelligence Algorithm	G. ARROYO- FIGUEROA	MEXICO	D2 - Session 3	Wed. Aug. 26
D2-207	Security threats and challenges in the transmission of condition and forecast data for determining the availability of substation equipment	T. BOEHM	GERMANY	D2 - Session 3	Wed. Aug. 26
D2-208	Collaborative Cybersecurity Solution for Substations	S. WANG	TAIWAN	D2 - Session 3	Wed. Aug. 26
D2-209	Boosting Cybersecurity in Communication Gateways for Better Substation Protection and Control	J. LIN	TAIWAN	D2 - Session 3	Wed. Aug. 26
D2-210	Critical Infrastructure Cyber Security: Applications of Machine Learning and Artificial Intelligence in Detecting, Responding to and Containing Threats	L. WATTS	AUSTRALIA	D2 - Session 3	Wed. Aug. 26
D2-211	Cybersecurity challenges related to Distributed Energy Resources and Flexibility Providers	F. RAMÍREZ	SPAIN	Not presented	0
D2-212	Cybersecurity for EV charging infrastructures communications based on a tool developed to identify cyber-attacks and to restore security	J. ROMERO	SPAIN	D2 - Session 3	Wed. Aug. 26
D2-213	Cyber Secured Grid Operations with Machine Learning Implementation- A Case Study	YASH KULKARNI	INDIA	D2 - Session 3	Wed. Aug. 26
D2-214	Leading North American Electric Utility Implements Corporate Wide Standard for Secure Access & Device Management (SADM) to Improve Grid Reliability and Operational Efficiencies	A. HAMDON	CANADA	D2 - Session 3	Wed. Aug. 26

## CIGRE - 2020 e-session / Paper presentations

D2-215	Assuring secure access for operation and maintenance to substation-based telecom devices	J DE GEVIGNEY	FRANCE	D2 - Session 3	Wed. Aug. 26
D2-301	Challenges in the Migration to Packet Switched Networks for Teleprotection Service of Power Transmission Lines	L. LEITE	BRAZIL	D2 - Session 4	Wed. Aug. 26
D2-302	Time Distribution Applications in the Power Utility Environment	A. VIRO	FINLAND	D2 - Session 4	Wed. Aug. 26
D2-303	SIARA – Proving suitability of R-GOOSE over Packet Switched Wide Area Networks for future wide area applications	P MOHAPATRA	UNITED KINGDOM	D2 - Session 4	Wed. Aug. 26
D2-304	Comprehensive Validation of Packet-Based Communications for Future Energy Systems	S M BLAIR	UNITED KINGDOM	D2 - Session 4	Wed. Aug. 26
D2-305	Measures to improve the reliability of IP networks for electric power systems aiming at operation efficiency and cost reduction	H. DOI	JAPAN	D2 - Session 4	Wed. Aug. 26
D2-306	PACS challenges for Packet Switched Networks	J. RAMIREZ	VENEZUELA	D2 - Session 4	Wed. Aug. 26
D2-307	Application of MPLS-TP for Transporting Power System Protection Data	N. JOSHI	AUSTRALIA	D2 - Session 4	Wed. Aug. 26
D2-308	Telecommunications Network Modernisation in Utilities: Challenges of Migrating from Time Domain Multiplexing (TDM) Technology to Packet Switched Network (PSN)	P. TUAZON	AUSTRALIA	D2 - Session 4	Wed. Aug. 26
D2-309	Verification and Validation of MPLS-TP for Tele-protection (Current Differential) services with existing TDM (SDH & PDH), Radio & WDM technologies through Proof of Concept	K. KULBHUSHAN	AUSTRALIA	D2 - Session 4	Wed. Aug. 26
D2-310	A Unified Communication Architecture for Smart Grid WAN/FAN/NAN Services	Y. SHI	CHINA	D2 - Session 4	Wed. Aug. 26
D2-311	Migration to Packet Switched Networks in Iran National Grid Dispatching Center	S. KHALAJ	IRAN	D2 - Session 4	Wed. Aug. 26
D2-312	Development of IoT Sensor System for Monitoring/Diagnosis of the Power Distribution System	C.M. SON	KOREA	D2 - Session 4	Wed. Aug. 26
D2-313	Migration to Hybrid MPLS-TP & SDH Communication System for a More Reliable Performance of the 500 kV System	C. DI PALMA	ARGENTINA	D2 - Session 4	Wed. Aug. 26
D2-314	Strategies for implementing teleprotection function over packet-switched networks	S BULJORE	FRANCE	D2 - Session 4	Wed. Aug. 26
D2-315	Using IEC 61850 for distance and differential protection over WAN MPLS-TP networks	M. KRANICH	SWITZERLAND	D2 - Session 4	Wed. Aug. 26
D2-NGN 01	Design of Midway Energy(Middleware System) developed as part of Illuminator	S. KAVIYA	NETHERLANDS	D2 - Session 2	Tue. Aug. 25
D2-NGN 02	Application of Machine Learning Methods in Multimodal Forecasting Aided State Estimation for False Data Injection Attack Detection	I. LUKICHEVA	RUSSIA	D2 - Session 3	Wed. Aug. 26