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CHINA SOUTHERN POWER GRID

超高压输电公司

2025年IEEE直流技术与系统国际会议 暨IEEE PES直流电力系统技术委员会(中国)年会

The 2025 2nd IEEE International Conference on DC Technology and Systems
IEEE PES China Satellite Technical Committee - DC Power System Annual Meeting

海报展示 Poster Session

Nov. 29 - Nov. 30, 2025

Beijing • China



Conference APP



Live Photos

Guider:

IEEE
IEEE PES

Organizer:

IEEE Beijing Section
North China Electric Power University
IEEE PES China Satellite Technical Committee - DC Power System

Operator:

School of Electrical and Electronic Engineering, North China Electric Power University
State Key Laboratory of Alternate Electrical Power System with Renewable Energy Sources

Co-Operator:

China Southern Power Grid Co., Ltd. EHV Transmission Company



Poster Session

TuA01: DC Power Transmission and Transformation Equipment Technology

Position: Chongqing Room, 1st Floor, Wyndham Beijing North

Time: November 30, 9:00 AM- 12:00 PM

TuA01-2

Study on the microscopic properties of DC light CT composite insulating materials in converter stations

wei Liu

State Grid Xinjiang Electric Power
Research Institute

TuA01-6

An Intelligent On-Load Test System Based on WAPI Network

Qi Zhou

China Southern Power Grid

Chengxi Huang

Liuzhou Bureau of EHV Power
Transmission Company, China Southern
Power Grid Co., Ltd.

Yan Zhao

Liuzhou Bureau of EHV Power
Transmission Company, China Southern
Power Grid Co., Ltd.

Mingwei Qin

Liuzhou Bureau of EHV Power
Transmission Company, China Southern
Power Grid Co., Ltd.

Wenpeng Zhang

Liuzhou Bureau of EHV Power
Transmission Company, China Southern
Power Grid Co., Ltd.

Yusheng Luo

China Southern Power Grid

TuA01-14

Parameter design of DC transformer based on LC resonance principle

Huayong Zhang

Xinjiang Huadian Tianshan Power
Generation Co., Ltd.

Cong Ma

Beijing Power Equipment Group Co.,Ltd.

Guanping Jiang

Beijing Power Equipment Group Co.,Ltd.

Yu Wang

Beijing Power Equipment Group Co.,Ltd.

Yuanmeng Wang

Shandong Taikai DC Technology Co., Ltd.

Wengang Xie

Shandong Taikai DC technology Co., Ltd

TuA01-15

Influence of Compound Stress on IGBT

Guowei Zhou

State Grid Zhejiang Electric Power
Company

Yu Mao

North China Electric Power University

Hu Junhua

State Grid Zhejiang Electric Power Co., Ltd

TuA01-19

Study on The Protective Properties of Natural Ester Insulating Oil with Different Antioxidants

Haoxi Cong

North China Electric Power University

TuA01-20

Characteristics of Electric Field Distribution on Stator Bar End Surface

Haoxi Cong

North China Electric Power University

TuA01-28

Structural Optimization and Application of Main Circulating Pump Mechanical Seal for Valve Cooling System

Sai Ding

Liuzhou Bureau, UHV Transmission
Company.

Chengxi Huang

Liuzhou Bureau of EHV Power
Transmission Company, China Southern
Power Grid Co., Ltd.

Yukun Xiao

Liuzhou Bureau, UHV Transmission
Company

Chang Ruan

Liuzhou Bureau, UHV Transmission
Company.

kai xiao

UHV Transmission Company

Wanli Shi

Liuzhou Bureau, UHV Transmission
Company

Peng Zhang

Liuzhou Bureau, UHV Transmission
Company.

Hangtian Dong

Liuzhou Bureau, UHV Transmission
Company.

TuA01-32

Overview of Control and Protection Strategies for Three-terminal DC Converter Valve Cooling Systems

Song Xu

Kunming Branch of China Southern Power
Grid Ultra High Voltage Transmission
Company

TuA01-33

Analysis of the Application Effectiveness of Intelligent Inspection Robots in UHVDC Converter Stations

Sen He	Electric Power Research Institute of Ultra High Voltage Transmission Company
Weilong Lin	Electric Power Research Institute of CSG EHV Power Transmission Company
Yaohui Xiao	Electric Power Research Institute of CSG EHV Power Transmission Company
ZhenZhen Zhou	Electric Power Research Institute of CSG EHV Power Transmission Company
Yunhai Song	Electric Power Research Institute of CSG EHV Power Transmission Company
Huang Huailin	CSG

TuA01-34

Research on Early Warning Technology for Converter Valve Cooling System

weifeng ding	Electric Power Research Institute of CSG EHV Power Transmission Company
ZhenZhen Zhou	Electric Power Research Institute of CSG EHV Power Transmission Company
Yaohui Xiao	Electric Power Research Institute of CSG EHV Power Transmission Company
Weilong Lin	Electric Power Research Institute of CSG EHV Power Transmission Company
Huang Huailin	CSG

TuA01-38

A Review of Research on High-Voltage Direct Current Circuit Breakers

li liu	Zhou Shan,China
tianyuan duan	Hang Zhou,China
wenkui liu	Pinggao Group Co., Ltd
lizhi ren	China Western Science and Technology Innovation Port, Xixian New Area, Xi'an City, Shaanxi Province
hang zhang	Pinggao Group Co., Ltd
xiaomin zhao	Pinggao Group Co., Ltd

TuA01-41

Converter Station Disconnecter Status Detection System Based on Image Object Recognition

Fangbo Xing	Guiyang Bureau, Ultra High Voltage Transmission Company, China Southern Power Grid Co.
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TuA01-47

Selection of Electrical Performance Parameters for $\pm 1100\text{kV}$ UHVDC Line Surge Arresters

Ziming He	China Electric Power Research Institute
Zixin Guo	China Electric Power Research Institute
Xia Zhao	China Electric Power Research Institute

TuA01-50**Vibration Control System for Wall Bushings under High Seismic Performance Level**

Zihan Gao	Tongji University
Chuan Liao	China Southern Power Grid International Co., Ltd.
Mingdong Lei	China Southern Power Grid International Co., Ltd.
Lu Li	Xi'an XD Electric Engineering Co., Ltd.
Qiang Xie	Tongji University

TuA01-51**Key Technologies of Integrated Gate Driving and On-line Collector-Emitter Voltage Monitoring for High-power IGBTs**

Guowei Zhou	State Grid Zhejiang Electric Power Company
Jingen Hu	State Grid Zhejiang Electric Power Corporation
North China Electric Power University	Baoding

TuA01-52**Seismic Response Analysis of The Bent Section of Gas-Insulated Metal-Enclosed Transmission Lines**

Yixun Zhang	Tongji university
Qiang Xie	Tongji University

TuA01-53**Research on the Control Technology of Straight Insulator Supports for Transmission Lines Based on the Fusion of UAV Images and Point Cloud Data**

Zhi-Bin Ou	Liuzhou Bureau of Ultra High Voltage Transmission Company of China Southern Power Grid Co.
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TuA01-54**Development of an Intelligent Detection and AI Fault Diagnosis System for Optical Fiber Links in HV Converter Stations Under DC Centralized Control Based on OTDR Technology**

Zihan Lei	China Southern Power Grid ultra high voltage transmission company Guiyang
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Wenxin Feng	bureau
Jing Tian	CSG
	China Southern Power Grid Co., LTD. Ultra high voltage transmission company Guiyang bureau
Yinchun Hu	China Southern Power Grid Co., LTD. Ultra high voltage transmission company Guiyang bureau

TuA01-58

Development of a Scaling Model for Characteristic Analysis of UHVDC Converter Transformer

zhang yao	China Electric Power Research Institute
youliang sun	Shandong Electric Power Equipment Co., Ltd
yongwei xu	Shandong Electric Power Equipment Co., Ltd
Wei Ma	State Grid Shanghai Electric Power Company

TuA01-60

Design of the Electric Field Window for an Electric Field Sensor-Based Voltage Measurement Device

Yiming He	Southeast University
Xiong Xiao	Extra High Voltage Power Transmission Company of China Southern Power Grid
Maoheng Jing	China Southern Power Grid
Jinwei Chu	China Southern Power Grid
Feihu Tao	Southeast University
Lei Wang	Southeast University

TuA01-62

Research on Remote Operation and Maintenance Methods for Optical Measurement Systems Based on DC Centralized Control

Ning Yu	Guiyang Bureau CSG EHV
Wenxin Feng	CSG

TuA01-63

Design of a piezoelectric vertical-driven MEMS electric field sensor with interference suppression

GULIN XIA	Southern Power Grid Company Limited
Maoheng Jing	China Southern Power Grid
Xiong Xiao	Extra High Voltage Power Transmission Company of China Southern Power Grid

Li Chun	Electric Power Research Institute of EHV Power Transmission Company China Southern Power Grid
Jinwei Chu	China Southern Power Grid
Wenhao Lu	Maintenance & Test Center of China Southern Power Grid Extra High Voltage Power Transmission Company

TuA01-65

Study on Non-Uniform Pollution Deposition Characteristics and Electric Field Distortion of $\pm 800\text{kV}$ UHVDC Transmission Line Insulators in Humid Mountainous

Yang Zhi Wei	Extra High Voltage Power Transmission Company, Liuzhou Bureau
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TuA01-67

Design of the Heat Dissipation Structure for a Quantum Current Sensor

Li Chun	Electric Power Research Institute of EHV Power Transmission Company China Southern Power Grid
Ximing Gao	EHV Power Transmission Company China Southern Power Grid
Shihong Zhang	Dali Bureau of EHV Power Transmission Company
Xiaoxia Li	Liuzhou Bureau, UHV Transmission Company.
Maoheng Jing	China Southern Power Grid
Dong Feng	EHV Power Transmission Company China Southern Power Grid, Guangzhou
GULIN XIA	Southern Power Grid Company Limited
Feihu Tao	Southeast University
Lei Wang	Southeast University

TuA01-72

Time-Interpolation-Based Phase Detection Method for the Digital Phase-Locked Loop of a MEMS Voltage Sensor

Maoheng Jing	China Southern Power Grid
GULIN XIA	Southern Power Grid Company Limited
Xiong Xiao	Extra High Voltage Power Transmission Company of China Southern Power Grid
Chenglin Ren	China Southern Power Grid
Jiawen Ren	Beijing Institute of Technology
hu chun	Beijing Institute of Technology

TuA01-75

Research on a Differential High-Precision Non-Invasive DC Voltage Measurement Method Using the Charge Simulation Method

Zehao Li	Beijing Information Science and Technology University
Xiong Xiao	Extra High Voltage Power Transmission Company of China Southern Power Grid
Zijian He	Beijing Information Science and Technology University
Maoheng Jing	China Southern Power Grid
Boyuan Gao	BISTU
pengfei Yang	Beijing Information Science and Technology University, Beijing

TuA01-76

Research on High-Precision Voltage Inversion in HVDC Ion-Flow Environments

GULIN XIA	Southern Power Grid Company Limited
Zehao Li	Beijing Information Science and Technology University
Maoheng Jing	China Southern Power Grid
Zijian He	Beijing Information Science and Technology University
Xiong Xiao	Extra High Voltage Power Transmission Company of China Southern Power Grid
pengfei Yang	Beijing Information Science and Technology University, Beijing

TuA01-77

Research on an Intelligent Inspection and Condition Assessment System for $\pm 500\text{kV}$ Double-Circuit HVDC Transmission Lines on the Same Tower Based on Multi-Source UAV Data Fusion

Yang Zhi Wei	Extra High Voltage Power Transmission Company, Liuzhou Bureau
GuoGen Li	Liuzhou Bureau, CSG EHV Power Transmission Company
Caifa Shi	Liuzhou Bureau, CSG EHV Power Transmission Company
xue pengcheng	Liuzhou EHV Bureau of China Southern Power Grid
Chao Li	Liuzhou Bureau, CSG EHV Power

Transmission Company

TuA01-78

Application of Space-Air-Ground Integrated Technology in Slope Instability Risk Early Warning for HVDC Transmission Towers in Complex Terrain of Guangxi

GuoGen Li

Liuzhou Bureau, CSG EHV Power
Transmission Company

TuA01-80

Multi-source Perception Fusion Recognition and Hierarchical Repulsion System for Airspace Threats of Transmission Lines

GuoGen Li

Liuzhou Bureau, CSG EHV Power
Transmission Company

Yang Zhi Wei

Extra High Voltage Power Transmission
Company, Liuzhou Bureau

TuA01-81

Research on Hot-line Replacement Technology and Temporary Support System for Main Member of DC Transmission Line Based on Load Transfer

Yang Zhi Wei

Extra High Voltage Power Transmission
Company, Liuzhou Bureau

TuA01-82

State Assessment and Maintenance Strategy Optimization for DC Grounding Electrode Systems Based on Multi-Parameter Monitoring and Analysis

Yang Zhi Wei

Extra High Voltage Power Transmission
Company, Liuzhou Bureau

GuoGen Li

Liuzhou Bureau, CSG EHV Power
Transmission Company

Cheng Liu

China Southern Power Grid Co., Ltd. Ultra
High Voltage Transmission Company

TuA01-83

Analysis and Prevention of Multiple Self-Explosion in Glass Insulators for 500kV AC Transmission Lines

Wancai Zhong

China Southern Power Grid Co., Ltd. Ultra
High Voltage Transmission Company

Cheng Liu

China Southern Power Grid Co., Ltd. Ultra
High Voltage Transmission Company

Yang Zhi Wei

Extra High Voltage Power Transmission
Company, Liuzhou Bureau

Xiaojie Xie

China Southern Power Grid Co., Ltd. Ultra

Feihu Li	High Voltage Transmission Company China Southern Power Grid Co., Ltd. Ultra High Voltage Transmission Company
Hui Li	China Southern Power Grid Co., Ltd. Ultra High Voltage Transmission Company

TuA01-85

Low Ripple Operation Strategy for High Power and Low Cost Hybrid Hydrogen Production Converters

Hongyu Jiang	North China Electric Power University
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TuA01-86

An Energized Main Member Replacement Method for Rockfall-Damaged Transmission Towers in Mountainous Areas

Lanjianken Lan	Transmission Management Office, Liuzhou Bureau, Ultra-High Voltage Transmission Co.
GuoGen Li	Liuzhou Bureau, CSG EHV Power Transmission Company
Yang Zhi Wei	Extra High Voltage Power Transmission Company, Liuzhou Bureau

TuA01-88

DC Electric Field Distortion in Polyimide Induced by Metal Particles under Electron Irradiation

Juqi Wang	North China Electric Power University
Tianying Peng	North China Electric Power University
Xinyuan Sui	North China Electric Power University
Jian Wang	North China Electric Power University

TuA01-94

Design of Adaptive Improved VDCOL Control Strategy for Suppressing Subsequent Commutation Failure in HVDC Transmission Systems

Xun Liu	northeast electric power university
Tuo Wang	northeast electric power university
Yechun Xin	northeast electric power university
Yupeng He	northeast electric power university
Zhiyuan Chen	northeast electric power university
HaiRun Guo	Northeast Electric Power University

TuA01-98

A Novel Multi-functional Power Electronic Switch- Based Circuit-Breaking and Energy-Dissipating Device

Sihang Wu
Jipei Yang
Dan Shi
Xiaoyi Duan
Linfu Song
Xinyi Cai

Tsinghua University
North China Electric Power University
North China Electric Power University
North China Electric Power University
North China Electric Power University
North China Electric Power University

TuA01-99

Analysis of Single-Phase Reignition in 500kV AC Filter Bank Circuit Breakers in UHVDC Projects

Guining Huang

KunMing Bureau of CSG EHV Transmission
Company

TuA01-101

Research on Reactive Power Support Effect of CLCC Under The Condition of UHV AC/DC Tight Coupling

Hailong Liu

Shanghai University of Electric Power

TuA01-102

Research on Replacement Technology for V-String Composite Insulators under Heavy Load in EHV DC Lines Based on Dynamic Mechanical Monitoring and the "Lift-and-Pull" Method

Yang Zhi Wei

Extra High Voltage Power Transmission
Company, Liuzhou Bureau

TuA01-104

Variable frequency simulation analysis of the insulation electric field of stator windings

Yingjie Guo

North China Electric Power University

Xinpei Wang

North China Electric Power University

xianfeng li

North China Electric Power University

Jian Wang

North China Electric Power University

Hanwen Ren

North China Electric Power University

Ikromjon Usmonovich Rakhmonov

Tashkent State Technical University

TuA01-106

Effect of DC Step-up Voltage Polarity on the Motion Behavior of Linear Metal Particles and the Capture Efficiency of Particle Traps

Weiguo Li

Maintenance & Test Center of China
Southern Power Grid Extra High Voltage
Power Transmission Company

Xuexue Nie

North China Electric Power University

Changhong Zhang

Maintenance & Test Center of China
Southern Power Grid Extra High Voltage
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mingyang li
China Southern Power Grid Corporation
Limited Ultra High Voltage Transmission
Company Electric Power Research Institute
Xu Yang
Maintenance & Test Center of China
Southern Power Grid Extra High Voltage
Power Transmission Company

TuA01-107

Test method for arc ignition of key materials used in power facilities

Zhicheng Xie
China Southern Power Grid ultra-high
voltage transmission company
Jun Deng
Maintenance & Test Center of China
Southern Power Grid Extra High Voltage
Power Transmission Company
Haibin Zhou
China Southern Power Grid ultra-high
voltage transmission company
zhicheng Pan
China Southern Power Grid

TuA01-108

Research on Simplified Modeling of Controllable Line Commutated Converter

Mengting Yang
Shanghai University of Electric Power

TuA01-111

An Optimized Design Method for Fast Desaturation Detection Circuit in IGBT Short-Circuit Faults

Chao You
State Grid Heilongjiang Electric Power
Company Ltd., Electric Power Research
Institute.
Zhan He
North China Electric Power University
Xiangxi Mu
North China Electric Power University
Xueting Lei
Electric Power Research Institute of State
Grid Heilongjiang Electric Power Co., LTD
Xin Chen
State Grid HeiLongJiang Electric Power
Research Institute

TuA01-113

An Asymmetric DC Transformer and Its Black-Start Strategy for DC collection of Deep-Sea Wind Farm

Ziming Wang
North China Electric Power University
Bangbang He
North China Electric Power University
Jianzhong Xu
North China Electric Power University

TuA01-115

Study of steady state current equalization method for silicon carbide MOSFET devices

Xiaoyan Zhao	Zhuhai Power Supply Bureau of Guangdong Power Grid Co., Ltd.
Yong Chen	Guangdong Power Grid Co., Ltd.
xu cheng	DC Power Distribution and Consumption Technology Research Center of Guangdong Power Grid Co., Ltd.
Yanqun Liao	Zhuhai Power Supply Bureau of Guangdong Power Grid Co., Ltd.

TuA01-117

Silicon Carbide MOSFET Gate Oxide Short-Circuit Failure Mechanism

xu cheng	DC Power Distribution and Consumption Technology Research Center of Guangdong Power Grid Co., Ltd.
Yong Chen	Guangdong Power Grid Co., Ltd.
Yanqun Liao	Zhuhai Power Supply Bureau of Guangdong Power Grid Co., Ltd.
Xingyu Pei	Zhuhai Power Supply Bureau Guangdong Power Grid Co., Ltd.

TuA01-120

A Control Strategy for Non Capacitor Voltage Sensor of Offshore DC Transformer

Zhang Lijun	Shanghai University of Electric Power
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TuA01-122

Design and Performance Validation of Fire- and Explosion-proof Insulation Barrier for Transformers

Haibin Zhou	China Southern Power Grid ultra-high voltage transmission company
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TuA01-123

Harmonic Coupling Modeling and Analysis of Grid-Connected Inverters Considering Control Loop Effects

Sai Wang	Shandong University
Yahui Li	Shandong University
Yong Wang	State Grid Jinan Power Supply Company
Weiming Wang	Shandong University
Shuyi Tong	Shandong University
Junze Lu	Shandong University

TuA01-127

Location of Oscillation Sources in Wind Farms Based on Interharmonic Dynamic Energy Flow

Weiming Wang	Shandong University
Yahui Li	Shandong University
Xiao Liu	State Grid
Sai Wang	Shandong University
Junze Lu	Shandong University
Shuyi Tong	Shandong University

TuA01-129

Development of Direct Power Control Multi-split Air Conditioning System based on the Mechanism Limit of the Equipment

Guohua Jin	Zhuhai Gree Electric Appliances Co., Ltd.
Guochuang Energy Internet Innovation Center	Guangdong
JunJie Zhao	N/A
Anqi Ye	Tsinghua University

TuA01-130

Nondestructive Testing of Epoxy Resin Subjected to Multi-Factor Aging Using Terahertz Waves

Haibin Zhou	China Southern Power Grid ultra-high voltage transmission company
Zhicheng Xie	China Southern Power Grid ultra-high voltage transmission company
Jun Deng	Maintenance & Test Center of China Southern Power Grid Extra High Voltage Power Transmission Company

TuA01-131

Characteristics of Dissociated Gas Products During the Self-Healing Process of Metallized Polypropylene Films

Ruiqiang Wen	School of Electrical and Electronic Engineering
Xuke Gao	North China Electric Power University
Cong Wang	North China Electric Power University
Geng Chen	North China Electric Power University
Youping Tu	North China Electric Power University

TuA01-134

Breakdown characteristics of SF₆ gas in different electric field forms under impulse voltage

Shuo Zhao	North China Electric Power University
Zihan Xu	North China Electric Power University
ZiWang Li	North China Electric Power University
Changhong Zhang	Maintenance & Test Center of China

Tianshuo Yang
Yujie Zhou
Geng Chen
Cong Wang
Youping Tu

Southern Power Grid Extra High Voltage
Power Transmission Company
North China Electric Power University
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North China Electric Power University
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TuA01-135

Temporal Production Simulation Method for Integrated Electricity-Hydrogen-Ammonia Energy Systems

Xu Qiuming

Electric Power Research Institute, China
Southern Power Grid

Yu Lei

Electric Power Research Institute, China
Southern Power Grid

Lin Xinhao

Electric Power Research Institute, China
Southern Power Grid

Liu Yinliang

Electric Power Research Institute, China
Southern Power Grid

Yuanlǔ Zerui

Electric Power Research Institute, China
Southern Power Grid

Lei Yiyong

China Southern Power Grid Co., Ltd.

Lian Yiqing

China Southern Power Grid Co., Ltd.

Chen Youxin

North China Electric Power University

Shang Jin

North China Electric Power University

TuA01-136

Vulnerability-based Probabilistic Seismic Performance Quantification of 750kV

Yongfu Ma

State Grid Qinghai Electric Power
Company Electric Power Research
Institute

Lili Wang

State Grid Qinghai Electric Power
Company Electric Power Research
Institute

Kunning He

College of Civil Engineering, Tongji
University

Zile Wang

State Grid Qinghai Electric Power
Company Electric Power Research
Institute

Chengong Li

State Grid Qinghai Electric Power
Company Electric Power Research
Institute

Qiang Xie

Tongji University

TuA02: DC Transmission Control and Protection Technology**Position: Kungui Room, 2nd Floor, Wyndham****Time: November 30, 9:00 AM- 12:00 PM****TuA02-1**

Optimization Research on Cable Selector Instrument for AC Protection Retrofit Decommissioning

Junjie Lan

Southeast University

Cheng Yang

China southern powergrid

Jinlin Wei

Kunming Bureau, EHV Transmission

Company, China Southern Power Grid

Han Zhang

Ultra High Voltage Transmission Company

Kunming Bureau,

Shikai Li

CSG EHV Transmission Company Kunming

Yu Zhang

CHINA SOUTHERN POWER GRID

TuA02-3

Research on current limitation and overload function in Yunnan-Guizhou interconnection project

Zicong Zhang

CSG EHV Transmission

Shiwei Zhao

CSG EHV Transmission

Xinwen Wu

Kunming Bureau CSG EHV Transmission
Company

Jialei Wang

CSG EHV Transmission

Qiyao Shen

CSG EHV Transmission

Hao Sun

Kunming Bureau of CSG EHV Transmission
Company**TuA02-5**

Fault Analysis and Improvement Research on CPU Redundancy of Valve Cooling System in UHV Converter Stations

Xinwen Wu

Kunming Bureau CSG EHV Transmission
Company

Shiwei Zhao

CSG EHV Transmission

Zicong Zhang

CSG EHV Transmission

Menglin Hu

China Southern Power Grid Co., LTD. Ultra
high voltage transmission company**TuA02-7**

The Logic Analysis on Fault Restart of Lu Gaozhao DC Line

Weiyu Lu

KunMing Bureau of CSG EHV Transmission
Company

TuA02-9

Analysis and Localization of Mis-triggering Faults For HVDC Transmission Converter Valves

Cong Huang	Liuzhou Bureau, Extra High Voltage Power Transmission Company, China Southern Power Grid Corporation Ltd.
Yunze Deng	Liuzhou Bureau, Extra High Voltage Power Transmission Company, China Southern Power Grid Corporation Ltd.
Wanli Shi	Liuzhou Bureau, UHV Transmission Company
Guangbin Qin	Liuzhou Bureau, Extra High Voltage Power Transmission Company, China Southern Power Grid Corporation Ltd.
Boyi Fang	Liuzhou Bureau, Extra High Voltage Power Transmission Company, China Southern Power Grid Corporation Ltd.
Hang Li	Baise Bureau, Extra High Voltage Power Transmission Company, China Southern Power Grid Corporation Ltd
Wenjun Nong	Liuzhou Bureau, Extra High Voltage Power Transmission Company, China Southern Power Grid Corporation Ltd.
Kunlun Han	Guangxi University
Yang Song	Liuzhou Bureau, Extra High Voltage Power Transmission Company, China Southern Power Grid Corporation Ltd.

TuA02-10

Research on fault detection analysis and optimization measures in bipolar region of UHV multi-terminal flexible DC transmission system

Hangtian Dong	Liuzhou Bureau, UHV Transmission Company.
Wanli Shi	Liuzhou Bureau, UHV Transmission Company
Yukun Xiao	Liuzhou Bureau, UHV Transmission Company
Peng Zhang	Liuzhou Bureau, UHV Transmission Company.
Chang Ruan	Liuzhou Bureau, UHV Transmission Company.

TuA02-13

Research on Automatic Power Control of DC Transmission Channel in the Context of Electricity Spot Market and Application in Engineering Practice

Jialei Wang	CSG EHV Transmission
Shiwei Zhao	CSG EHV Transmission
Hao Sun	Kunming Bureau of CSG EHV Transmission Company
Siyuan Wu	China Southern Power Grid Co., Ltd. EHV Transmission Company
Zicong Zhang	CSG EHV Transmission
Deqi Pu	China Southern Power Grid Co., Ltd. EHV Transmission Company

TuA02-16

Mechanism and Solutions of False Trip Caused by Main Signal Latching Fault in Valve Control System of UHVDC Flexible Converter Station

Yukun Xiao	Liuzhou Bureau, UHV Transmission Company
Wanli Shi	Liuzhou Bureau, UHV Transmission Company
Sai Ding	Liuzhou Bureau, UHV Transmission Company.
Chang Ruan	Liuzhou Bureau, UHV Transmission Company.
Hangtian Dong	Liuzhou Bureau, UHV Transmission Company.
Peng Zhang	Liuzhou Bureau, UHV Transmission Company.
Xiaoxia Li	Liuzhou Bureau, UHV Transmission Company.
Jianhua Lu	Liuzhou Bureau, UHV Transmission Company.

TuA02-22

Research on Coordinated Current Limiting Functionality for Three Substations in the Yunnan-Guizhou Interconnection Project

Zicong Zhang	CSG EHV Transmission
Shiwei Zhao	CSG EHV Transmission
Xinwen Wu	Kunming Bureau CSG EHV Transmission Company
Jianxiang Huang	Kunming Bureau of CSG EHV Transmission Company
Jialei Wang	CSG EHV Transmission

Qiyao Shen

CSG EHV Transmission

TuA02-23

Research on Coordinated Control Strategy for Valve Group and Pole Fault Power Transfer in UHVDC Three-Terminal Transmission System

Zongzhang Yang

Kunming Bureau CSG EHV Transmission
Company

Liyun Zha

CSG EHV Transmission Company

Lei Long

China Southern Power Grid Co., Ltd.

Kunming Bureau of EHV Power
Transmission Company

Jianglong Yu

Kunming Bureau of EHV Power
Transmission Company

TuA02-25

Analysis and Research on U-I Control Characteristics of $\pm 500\text{kV}$ Multi-terminal DC Transmission System

Liyun Zha

CSG EHV Transmission Company

Lei Long

China Southern Power Grid Co., Ltd.

Kunming Bureau of EHV Power
Transmission Company

Zongzhang Yang

Kunming Bureau CSG EHV Transmission
Company

WenJun Mao

China Southern Power Grid Co.,
Ltd. Kunming Bureau of EHV Transmission
Company

Dongxu Deng

China Southern Power Grid Corporation
Limited Ultra High Voltage Transmission
Company

Weiyu Lu

KunMing Bureau of CSG EHV Transmission
Company

TuA02-36

Improved measures for non-electrical protection in busbar area of multi-terminal flexible HVDC transmission system

Hangtian Dong

Liuzhou Bureau, UHV Transmission
Company.

Wanli Shi

Liuzhou Bureau, UHV Transmission
Company

Chang Ruan

Liuzhou Bureau, UHV Transmission
Company.

Yukun Xiao

Liuzhou Bureau, UHV Transmission

Sai Ding	Company
	Liuzhou Bureau, UHV Transmission
	Company.
Peng Zhang	Liuzhou Bureau, UHV Transmission
	Company.

TuA02-39

Analysis of Bipolar Short-Circuit Faults in HVDC Transmission Systems and Research on Control and Protection Strategies

Kang Guo	Kunming Bureau, EHV Transmission
	Company, China Southern Power Grid
Jinlin Wei	Kunming Bureau, EHV Transmission
	Company, China Southern Power Grid
Shuai Yan	Kunming Bureau CSG EHV Transmission
	Company
Zhenyu Wu	Kunming Bureau CSG EHV Transmission
	Company
Yuan Zhou	Kunming Bureau CSG EHV Transmission
	Company
Han Zhang	Ultra High Voltage Transmission Company
	Kunming Bureau,
Xiang Ju	Kunming Bureau CSG EHV Transmission
	Company
Junjie Lan	Southeast University

TuA02-43

Research on Shunt-Type DC Current Transformer Signal Processing System and Sampling Method

Xueyou Zhang	Super High Voltage Branch of State Grid
	Anhui Electric Power Co
Chengcheng He	EHV Power Transmission Branch of State
	Grid Anhui Electric Power Company
Hongde Yuan	State Grid Anhui Electric Power Company
	Limited EHV Branch
Shaodong Li	NR Electric Co., Ltd.
Yun Wang	Super High Voltage Branch of State Grid
	Anhui Electric Power Co
Jian Wu	NR Electric C.,Ltd

TuA02-44

Study on Temperature Effect of Remote Module in Optical Measurement System of DC Centralized Monitoring and Control Converter Station

XinRui Chen	Guiyang Bureau of China Southern Power Grid Ultra High Voltage Transmission Company
Wenxin Feng	CSG
Zhiyuan Qiu	China Southern Power Grid Co., Ltd. Ultra High Voltage Transmission Company
Hao Liu	Guiyang Bureau
Ning Yu	Guiyang Bureau CSG EHV
Fangbo Xing	Guiyang Bureau, Ultra High Voltage Transmission Company, China Southern Power Grid Co.
Yao Na	CSG EHV Power Transmission Company
Caiqing Wu	China Southern Power Grid Co., Ltd. Ultra High Voltage Transmission Company
	Guiyang Bureau
Zhongyu Feng	Extra High Voltage Power Transmission Company, Guiyang Bureau, China Southern Power Grid Co., Ltd

TuA02-48

Analysis and Optimization of Abnormal Shutdown Timing in Kunliulong Three-terminal Hybrid DC Operation with Minimum Power

Chang Ruan	Liuzhou Bureau, UHV Transmission Company.
Wanli Shi	Liuzhou Bureau, UHV Transmission Company
Hangtian Dong	Liuzhou Bureau, UHV Transmission Company.
Yukun Xiao	Liuzhou Bureau, UHV Transmission Company
Xiaoxia Li	Liuzhou Bureau, UHV Transmission Company.
Sai Ding	Liuzhou Bureau, UHV Transmission Company.
Peng Zhang	Liuzhou Bureau, UHV Transmission Company.
Jianhua Lu	Liuzhou Bureau, UHV Transmission Company.

TuA02-84

Statistical Analysis of the Impact of Luxi VSC-HVDC Synchronous Frequency Control Function on Asynchronous Power Grid Frequency After Commissioning

WenJun Mao

China Southern Power Grid Co.,
Ltd.Kunming Bureau of EHV Transmission
Company

Jinlin Wei

Kunming Bureau, EHV Transmission
Company, China Southern Power Grid
csg

Qiang Zhang

Liyun Zha

Dongxu Deng

CSG EHV Transmission Company

China Southern Power Grid Corporation

Limited Ultra High Voltage Transmission

Company

TuA02-87

Fault Ride-Through Method of Wind Farm Grid-Connected System via HVDC Based on Nonlinear Control

Shenbo Qian

Hua Xue

Yiyan Sang

Shanghai University of Electric Power

Shanghai University of Electric Power

Shanghai University of Electric Power

TuA02-89

Analysis and Optimization Measures of AC-DC Crosstalk Maloperation Risk in HVDC Control and Protection Systems

Ying Liu

China Southern Power Grid Ultra-high
Voltage Transmission Company

TuA02-97

Analysis of the Cause of Bypass Breaker Bounding Phenomenon in an ± 800 kV UHVDC Project

Jinlin Wei

Kunming Bureau, EHV Transmission

Company, China Southern Power Grid

WenJun Mao

China Southern Power Grid Co.,

Ltd.Kunming Bureau of EHV Transmission
Company

Kang Guo

Kunming Bureau, EHV Transmission

Company, China Southern Power Grid

Junjie Lan

Southeast University

Han Zhang

Ultra High Voltage Transmission Company

Kunming Bureau,

Shuai Yan

Kunming Bureau CSG EHV Transmission
Company

TuA02-100

Research on Pre-synchronization Control Strategy for Sending-End Islanded-to-Grid Transition in Renewable Energy MMC-HVDC System

Aoqun Liu

North China Electric Power University

TuA02-114

An Adaptive SOC Virtual Inertia Control Strategy for Receiving-End GFM-MMCs with DC-Side Battery Energy Storage

Wenkun chen

North China Electric Power University

xiaoling xiong

North China Electric Power University

chenlong wang

North China Electric Power University

TuA02-121

Voltage-Feedback Supplementary Damping Control for Suppressing Sub/Super-Synchronous Oscillations in Wind Power Systems Integrated via MMC-HVDC

Yangdou Liang

Guangxi Power Grid Co., Ltd

Wentao Li

North China Electric Power University

Wuneng Ling

Guangxi Power Grid Co., Ltd

Yanhui Xu

North China Electric Power University

Li Xiong

Guangxi Power Grid Co., Ltd

Zhencheng Liang

Guangxi Power Grid Co., Ltd

Qiuquan Deng

Guangxi Power Grid Co., Ltd

TuA02-124

Research on Mechanism and Coordinated Suppression of Transient Overvoltage in HVDC Systems with High Penetration of Renewable Energy Sources

Peiran Zhang

EHV Power Transmission Company

Hang Liu

China Southern Power Grid EHV

Transmission Company

Fangqun Liao

China Southern Power Grid EHV

Transmission Company

Yanbo Hao

North China Electric Power University

Shuyu Liang

North China Electric Power University

Pu Yan

North China Electric Power University

TuA03: DC Power Distribution Network Technology (including Low-Frequency Transmission Technology)

Position: 1st Floor, Ramada

Time: November 30, 9:00 AM- 12:00 PM

TuA03-18

Development of a Status Detection System for Remote Modules in HVDC Centralized Monitoring Converter Station Optical Measurement Systems

Rui Fang	CSG EHV Power Transmission Company
Min He	CSG EHV Power Transmission Company
Wenxin Feng	CSG
Shipeng Huang	China Southern Power Grid Company Limited Extra High Voltage Power Transmission Company Guiyang Bureau

TuA03-24

A novel Observation Method for Line Sag of UHVDC Line with Large Angle of Deviation

Xiongjun Tao	Kunming Bureau of EHV Transmission Company
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TuA03-40

Vision-infrared Fusion Arc/spark Detection and Early Warning System and Method for Robot Dog Power Operation Site

Fangbo Xing	Guiyang Bureau, Ultra High Voltage Transmission Company, China Southern Power Grid Co.
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TuA03-66

Modeling and Analysis of Transmission Line UAV Laser Point Cloud Data Based on Full-Process Automation Technology

Chao Li	Liuzhou Bureau , CSG EHV Power Transmission Company
xue pengcheng	Liuzhou EHV Bureau of China Southern Power Grid
Zu-Biao Huang	Liuzhou Burenau,CSG EHV Power Transmission Company
Yang Zhi Wei	Extra High Voltage Power Transmission Company, Liuzhou Bureau
Caifa Shi	Liuzhou Bureau , CSG EHV Power Transmission Company

TuA03-70

A Closed-Loop Detection Scheme for MEMS Resonant Electric Field Sensors Operating in Alternating Electric Fields

Xiong Xiao

Extra High Voltage Power Transmission
Company of China Southern Power Grid
Southern Power Grid Company Limited
China Southern Power Grid
Maintenance & Test Center of China
Southern Power Grid Extra High Voltage
Power Transmission Company

GULIN XIA

Maoheng Jing

Wenhao Lu

Li Chun

Electric Power Research Institute of EHV
Power Transmission Company China
Southern Power Grid

Jinwei Chu

China Southern Power Grid

TuA03-91

Thermal and Reliability Assessment of SiC Power Modules Using Different Die-Attach and Ceramic Substrate Materials

Xu Zhang

Beijing Institute of Smart Energy

Hao Li

Beijing Institute of Smart Energy

Lei Wang

Beijing Institute of Smart Energy

Chao Li

Beijing Institute of Smart Energy

Wenyuan Li

Beijing Institute of Smart Energy

Rui Jin

Beijing Institute of Smart Energy

Ying Cao

State Grid Zhejiang Electric Power
Research Institute

TuA03-112

Current-limiting Function Integration of Direct Current Circuit Breaker and Its Operating Characteristic

Yumin Zhang

Tianjin University

Jing Xu

Economics & Technology Research
Institute, State Grid Tianjin Electric Power
Company

Xiaoguang Xi

Economics & Technology Research
Institute, State Grid Tianjin Electric Power
Company Tianjin, China

He Yang

Economics & Technology Research
Institute, State Grid Tianjin Electric Power
Company Tianjin, China

Zhihao Zhu

Pinggao Group Co., Ltd

Zhicheng Zhang

Shandong Taikai High Voltage Switchgear
Co., Ltd,

Weijie Wen

Tianjin University

TuA03-118

Active Voltage Support Strategy for Distribution Networks Using Multi-Layer Mapping Relationships

Yong Wang

Shandong University

Xinhui Wang

Shandong University

Bowen Li

Shandong University

Zhijie Liu

Shandong University

Canyu Cui

Shandong University

Xiaohan Huang

Shandong University

TuA03-132

Black-Start Optimization Model for Distribution Netw...rdination Between SOPs and Grid-Forming Energy Storage Systems

donglei bai

China Agricultural University

Sifan Xie

China Agricultural University

Lu Zhang

China Agricultural University

Li Yuan

Nari Technology Co., Ltd.

Zhang Linli

State Grid Shandong

TuA03-133

Multi-Objective Scheduling Strategy for Active Distribution Networks Based on Vehicle-Grid Interaction

Ying Wu

State Grid Shandong Electric Power
Research Institute

Feng Wang

State Grid Shandong Electric Power
Company

Zhen Wei

Qingdao Power Supply Company of State
Grid Shandong Electric Power Company

Xiaolin Zhou

State Grid Shandong Electric Power
Company Weifang Power Supply
Company

Yuanfu Li

State Grid Shandong Electric Power
Company Weifang Power Supply
Company

Lisheng Li

State Grid Shandong Electric Power
Research Institute

Wuxia Xu

Shandong University

TuA04: DC Transmission and Distribution System Simulation Technology

Position: 1st Floor, Ramada

Time: November 30, 9:00 AM- 12:00 PM

TuA04-61

Research on Simulation Method of Aerodynamic Parameters of Ice-Covered Conductors

Zhu Xuetong

Tsinghua University

Qiu Gang

Electric Power Co., Ltd. Electric Power

Science Research Institute

Nailong Zhang

State Grid Jiangsu Electric Power Co., Ltd.

Wenxuan Zhou

Tsinghua University

Fanghui Yin

Tsinghua University

TuA04-90

Smooth switching between Grid-Connected and Islanded Modes of Operation

Boxuan Si

Shanghai University of Electric Power

Yang Fu

Shanghai University of Electric Power

TuA05: Low-Voltage Direct-Current (LVDC) Technology**Position: 1st Floor, Ramada****Time: November 30, 9:00 AM- 12:00 PM****TuA05-8**

Analysis and Implementation of DC Filter Removal in the Low-Voltage DC System of the 500kV Substation

Chengxi Huang

Liuzhou Bureau of EHV Power
Transmission Company, China Southern
Power Grid Co., Ltd.

Wenpeng Zhang

Liuzhou Bureau of EHV Power
Transmission Company, China Southern
Power Grid Co., Ltd.

Yan Zhao

Liuzhou Bureau of EHV Power
Transmission Company, China Southern
Power Grid Co., Ltd.

Mingwei Qin

Liuzhou Bureau of EHV Power
Transmission Company, China Southern
Power Grid Co., Ltd.

Qi Zhou

China Southern Power Grid

Yusheng Luo

China Southern Power Grid

TuA05-73

Closed-Loop Detection System for a MEMS Resonant Voltage Sensor Based on Phase-Sensitive Detection

hu chun

Beijing Institute of Technology

Dan Yang

Beijing Institute of Technology

Dezhi Zheng

Beijing Institute of Technology

Jinyang Li

bit

wang yilin

Beijing Institute of Technology

Chenglin Ren

China Southern Power Grid

Xiong Xiao

Extra High Voltage Power Transmission
Company of China Southern Power Grid

Wenhao Lu

Maintenance & Test Center of China
Southern Power Grid Extra High Voltage
Power Transmission Company**TuA05-74**

Research on Non-Intrusive Voltage Inversion Method Based on Finite Element Modeling of Converter valve arm voltage

Zijian He

Beijing Information Science and Technology

Xiong Xiao

Zehao Li

Maoheng Jing

Boyuan Gao

pengfei Yang

University

Extra High Voltage Power Transmission

Company of China Southern Power Grid

Beijing Information Science and Technology

University

China Southern Power Grid

BISTU

Beijing Information Science and Technology

University, Beijing

TuA05-93

Development of Energy Management Experimental System for PV-Storage-Charging-Hydrogen Integrated Stations Based on Low Voltage DC Technology

Yufei Wang

Shiqi Liu

Yiyun Tu

Shanghai University of Electric Power

Shanghai University of Electric Power

Shanghai University of Electric Power

TuA05-125

Review of the Application of DC Power Supply Systems in Street Lights

Yuanjun Hou

Shanghai University of Electric Power

TuA06: DC System Planning and Design**Position: 1st Floor, Ramada****Time: November 30, 9:00 AM- 12:00 PM****TuA06-4**

Analysis and Improvement Measures of Current Limiting Resistance Value in Multi Circuit
Ultra-High Voltage Direct Current System with Common Ground Electrode

Dongxu Deng

China Southern Power Grid Corporation
Limited Ultra High Voltage Transmission
Company

TuA06-27

Study on the dynamic response and collapse failure of 500kV DC transmission tower line system
under multi-point earthquake excitation

Hong Bin Zai

Jincheng Power Supply Company of State
Grid Shanxi Electric Power Company

Hao Yu Liu

Jincheng Power Supply Company of State
Grid Shanxi Electric Power Company

Yu Jun Li

Jincheng Power Supply Company of State
Grid Shanxi Electric Power Company

TuA06-128

Power System Disturbance Identification Methods Considering Data

Rong Chen

North China Electric Power University

Ziliang Huang

State Grid Shaanxi Electric Power Research
Institute

Jun Li

State Grid Shaanxi Electric Power Research
Institute

Xiaochuan Song

State Grid Shaanxi Electric Power Company
Limited

Yansheng Li

State Grid Shaanxi Electric Power Company
Limited

Zhiyuan Zhou

State Grid Shaanxi Electric Power Company
Limited

Qinbo Liu

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Hongtao Tan

State Grid Shaanxi Electric Power Research
Institute

Hao Liu

North China electric power university



