The 7th International Conference
Energy & Meteorology

TOWARDS CLIMATE-RESILIENT ENERGY SYSTEMS

27 – 29 JUNE 2023
PADOVA, ITALY

icem
2023

WELCOME TO ICEM 2023

On behalf of the ICEM 2023 Organising Committee, I would like to welcome you to the 7th International Conference Energy & Meteorology at the Galzignano Terme Spa and Golf Resort near Padua, Italy.

The theme of ICEM 2023 is 'Towards climate-resilient energy systems'. I'm thrilled to say we have an exciting programme of plenary speakers, workshops, parallel sessions and poster presentations covering the key issues relating to this increasingly crucial topic.

Since our first ICEM back in 2011, the conference has grown to become an established platform for meteorologists and energy industry specialists to share the substantial knowledge and expertise within both sectors.

ICEM 2023 promises to be another fantastic event. We hope you enjoy this opportunity to further expand the boundaries of energy and meteorology, and explore how weather and climate technology can help to tackle the energy transition head on!

I look forward to seeing you at ICEM 2023.

ALBERTO TROCCOLI
ICEM 2023 Convener
Founder & Managing Director, WEMC

DON'T FORGET TO SHARE YOUR CONFERENCE EXPERIENCES #ICEM2023ITALY

ICEM – A HISTORY OF INNOVATION IN WEATHER, CLIMATE AND ENERGY

WEMC
World Energy & Meteorology Council

ICEM 2023 OFFERS PLENTY OF OCCASIONS TO NETWORK WITH YOUR PEERS AND GET TO KNOW OTHER DELEGATES

WELCOME DRINKS & REGISTRATION – MONDAY 26TH JUNE 14:00–20:00

RECEPTION -ICE BREAKER - TUESDAY 27TH JUNE 19:30–22:00 HOTEL MAJESTIC, POOL AREA

Complimentary reception. Join us for this ice-breaker evening where you will meet other ICEM2023 delegates and enjoy an drinks and canapes around the pool area.

TASTING OF LOCAL SPECIALTIES –WEDNESDAY 28TH 18:45– 19:45 HOTEL MAJESTIC, POOL AREA

A complimentary demonstration session of how to prepare local specialities with tasting

CONFERENCE DINNER WEDNESDAY 28TH JUNE 20:00–23:30 HOTEL SPORTING

The ICEM 2023 conference dinner will be held at the HotelSporting. Enjoy a delicious evening meal and the opportunity to meet and socialise with other ICEM delegates.

PLENARY SPEAKERS

Chris Hewitt

DIRECTOR OF THE CLIMATE SERVICES BRANCH, WORLD METEOROLOGICAL ORGANIZATION

Roberta Boscolo

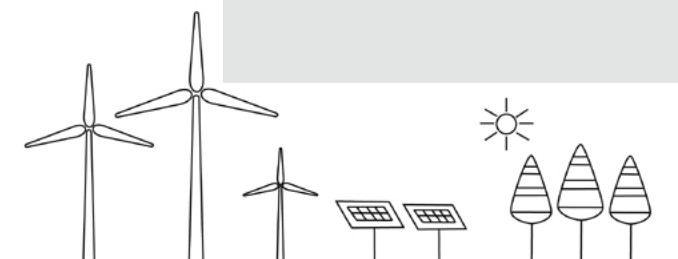**LEAD CLIMATE & ENERGY,** WORLD METEOROLOGICAL ORGANIZATION

Morgan M. Scott

DIRECTOR – CLIMATE READI, SUSTAINABILITY & ECOSYSTEM STEWARDSHIP, ELECTRIC POWER RESEARCH INSTITUTE (EPRI)

Massimo Tavoni

DIRECTOR, RFF–CMCC EUROPEAN INSTITUTE ON ECONOMICS AND THE ENVIRONMENT; PROFESSOR, POLITECNICO DI MILANO

PLENARY SPEAKERS

David Moncoulon

HEAD OF THE MODELLING R&D DEPARTMENT, CCR

Matthias Lange

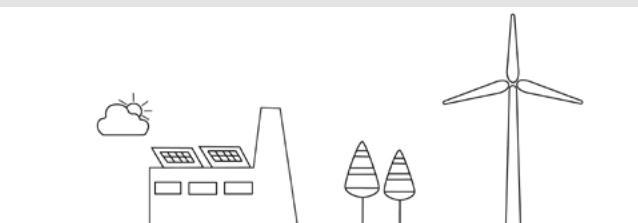**MANAGING DIRECTOR AND CO-FOUNDER, ENERGY & METEO SYSTEMS**

Jinsun Lim

ENERGY AND ENVIRONMENT POLICY ANALYST, INTERNATIONAL ENERGY AGENCY

Georges Kariniotakis

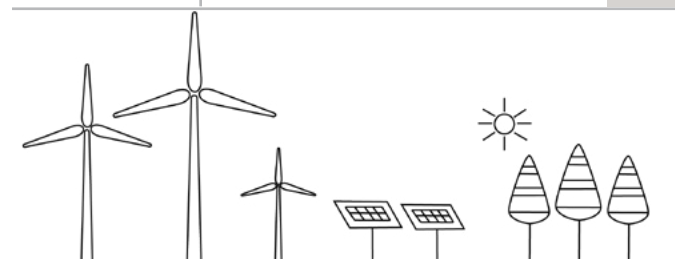**PROFESSOR, HEAD OF RENEWABLES & SMARTGRIDS GROUP, MINES PARIS, PSL UNIVERSITY**
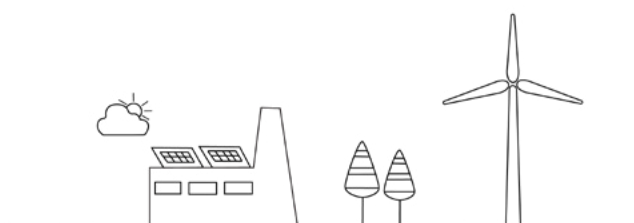
PROGRAMME
TUESDAY 27TH JUNE

08:00–09:00	**REGISTRATION – HOTEL SPLENDID FOYER**
09:00 –10:45	**OPENING PLENARY SESSIONS** **HOTEL SPLENDID, SALA DEI GIGANTI** Chair: **SUE-ELLEN HAUPT, NCAR, & WEMC, USA**
09:05–09:15	Welcome address **ALBERTO TROCCOLI** Director, WEMC & ICS, UK/ITALY
09:15–09:40	Getting Climate READi: A Common Framework for Physical Climate Risk Assessment of the Power System **MORGAN SCOTT** Director, Climate READI, USA
09:40–10:05	Climate Services, for climate-resilient energy systems **CHRIS HEWITT** Director, Climate WMO, SWITZERLAND
10:05–10:30	Envisioning climate-compatible futures though model integration **MASSIMO TAVONI** Director, RFF-EIEE CMCC & Politecnico Milano, ITALY
10:30–10:45	**Q&A & DISCUSSION**
10:45–11:15	**MORNING BREAK – HOTEL SPLENDID FOYER**
11:15–12:45	**POSTER SESSION– HOTEL SPLENDID FOYER** Chair: **MARION SCHROEDTER-HOMSCHEIDT, DLR**
12:45–14:00	**LUNCH – HOTEL SPORTING**

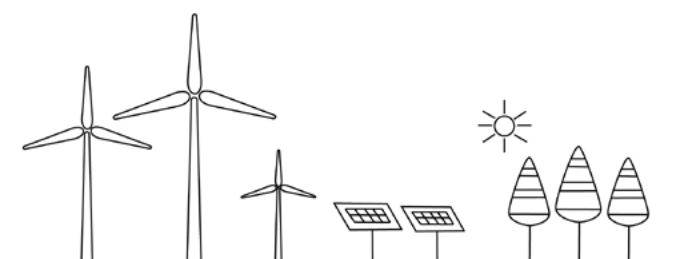| PARALLEL SESSIONS	ROOM 1 SALA DEI GIGANTI	ROOM 2 SALA PETRARCA	ROOM 3 SALA DEGLI SCROVEGNI
14:00–15:35	**ENERGY POLICY, PROGRAMMES & CROSS-SECTORAL ISSUES** Chair: **JAN REMUND, METEOTEST**	**CLIMATE & ENERGY MODELLING** Chair: **LAURENS STOOP, UNV. UTRECHT & TENNET**	**ENERGY RESOURCE MANAGEMENT** Chair: **LUEDER VON BREMEN, DLR**
14:00–14:15	Identifying Gaps in Meteorology Knowledge Required to Further Develop Wind Energy **SUE ELLEN HAUPT**	Inter-annual climate variability and adequate planning of future energy systems **LEONARD GÖKE**	How weather and grid distribution determine PV forecast error integration costs **DAN TRAVERS**
14:15–14:30	Smart Charging of Electric Vehicles in Energy Systems with high Shares of Renewable Energies **CARSTEN HOYER-KLICK**	Severity of variable renewably energy droughts in Europe **MARTIN KITTEL**	Knowledge-guided machine learning reveals European month-ahead temperature is more predictable than suggested by numerical models **SEM VIJVERBERG**

PARALLEL SESSIONS	ROOM 1 SALA DEI GIGANTI	ROOM 2 SALA PETRARCA	ROOM 3 SALA DEGLI SCROVEGNI
14:30–14:45	Here comes the sun on Strawberry fields: the agrivoltaics project REGACE **CRISTINA CORNARO**	Modelling the effects of climate change on Austrian future electricity system **DEMET SUNA**	MIA: A flexible data-driven system for climate impact modelling applied for subseasonal-to-seasonal prediction of renewable energy in Brazil. **GABRIEL PEREZ**
14:45–15:00	Reducing the carbon footprint of mini-grids in Africa: the value of solar PV **THÉO CHAMARANDE**	Variable renewable energy droughts in the power sector — a model-based analysis and implications in the European context **MARTIN KITTEL**	An irradiance probabilistic prediction system based on WRF-Solar EPS and the analog ensemble **STEFANO ALESSANDRINI**
15:00–15:15	Renewable generation and green hydrogen: infrastructural requirements for a resilient, independent, net-zero energy system **GIANNI GORETTI**	Application of hydrological droughts pooling procedures on low wind power generation events in the UK **PANIT POTISOMPORN**	Identifying statistical behaviors explaining the different performances of site-adaptation of GHI depending on the satellite database **LOÏC YEZEGUELIAN**
15:15–15:35	**PANEL Q&A**	**PANEL Q&A**	**PANEL Q&A**
15:35–16:15	AFTERNOON BREAK – HOTEL SPLENDID FOYER		

16:15–18:00

WORKSHOP SESSION – SALA PETRARCA

Energy and meteorology education

Convenors: **JUAN A. AÑEL – SUSANA BAYO-BESTEIRO – MATTHEW WRIGH**

WORKSHOP SESSION – SALA DEGLI SCOVEGNI

Weather and climate services

Convenors: **JAMES FELLON – JAKE BADGER JUSTIN SHARP**

16:15–18:00

PANEL SESSION – SALA DEI GIGANTI   **Towards climate-resilient energy systems**

Convenors: **LAURENT DUBUS – SUE ELLEN HAUPT**

Please, to participate to the discussion:
Register on https://www.mural.co/
Download "Mural" app
Scan the QR code

19:30–22:00

RECEPTION -ICE BREAKER - HOTEL MAJESTIC

Complimentary reception. Join us for this ice-breaker evening where you will meet other ICEM2023 delegates and enjoy an drinks and canapes around the pool area.
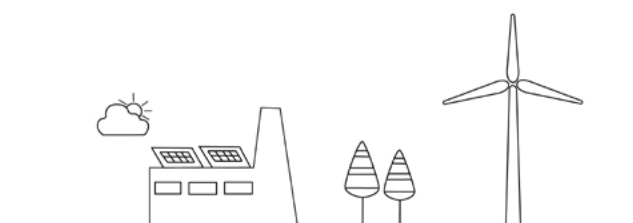
ICEM 2023

PROGRAMME

WEDNESDAY 28ᵀᴴ JUNE

08:00–09:00	**REGISTRATION – HOTEL SPLENDID FOYER**
09:00–10:40	**SESSION, SALA DEI GIGANTI, HOTEL SPLENDID** Chair: **LAURENT DUBUS, RTE & WEMC**
09:00–09:40	Climate change modelling and impacts on the power system in France **DAVID MONCOULON** Head of Department R&D Modelling, CCR, France
09:40–10:20	Why we as a company like to do projects with research institutes **MATTHIAS LANGE** Director: EMS, Germany
10:20–10:40	The WMO Portal for Weather and Climate Services for Energy **ROBERTA BOSCOLO** Lead climate & Energy, WMO, Switzerland
10:40–11:10	**MORNING BREAK – HOTEL SPLENDID**
11:10–12:30	**POSTER SESSION – HOTEL SPLENDID FOYER** Chair: **JAKE BADGER, DTU**
12:30–13:45	**LUNCH – HOTEL SPORTING**

PARALLEL SESSIONS	ROOM 1 SALA DEGLI GIGANTI	ROOM 2 SALA PETRARCA	ROOM 3 SALA DEGLI SCROVEGNI
13:45–15:35	**ENERGY PLANNING & FINANCING** Chair: **CARSTEN HOYER-KLICK DLR**	**WEATHER & CLIMATE SERVICES FOR ENERGY** Chair: **THOMAS SCHMIDT DLR**	**ENERGY OPERATIONS & MAINTENANCE** Chair: **JARED LEE NCAR**
13:45–14:00	Firm Power Generation **JAN REMUND**	ProPower: Evaluating the value of probabilistic forecasts in power systems **LUEDER VON BREMEN**	Discussion on improving efficiency in machine learning wind power forecast for operational purposes **DANIELE PERONA**
14:00–14:15	Overview of New Capabilities in the NSRDB **MANAJIT SENGUPTA**	A Guide to Optimal Renewable Energy Solutions: IEA Recommended Practice for the Implementation of Renewable Energy Forecast Solutions **JOHN ZACK**	Enhancing regional PV power estimation using physics-based models, solar irradiance data and deep learning **GABRIEL KASMI**

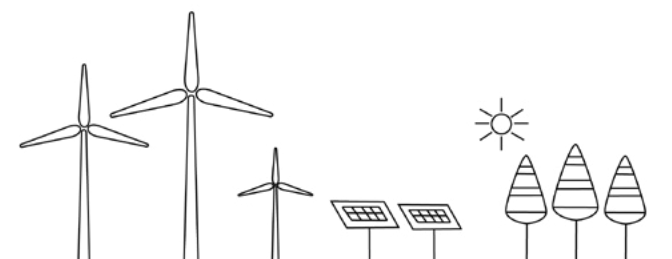| PARALLEL SESSIONS	ROOM 1 SALA DEI GIGANTI	ROOM 2 SALA PETRARCA	ROOM 3 SALA DEGLI SCROVEGNI
14:15–14:30	What is a realistic annual energy yield from very large wind farm clusters and energy islands? **JAKE BADGER**	IEA Wind Task 51 Forecasting for the Weather Driven Energy System **GREGOR GIEBEL**	A tailored solar power forecasting system for optimized grid management in Tahiti, French Polynesia **DAMIEN RAYNAUD**
14:30–14:45	A new Wind Atlas for Italy **SIMONE SPERATI**	The NASA POWER Global Solar Insolation and Meteorological Parameter Web Services Through NASA/AWS Cloud-based Services **FALGUNI PATADIA**	Daily global aerosol and radiation forecasts including aerosol-radiation-cloud interaction **VANESSA BACHMANN**
14:45–15:00	Developing datasets of tidal and wave energy generation from renewable resource models **CAMILLA THOMSON**	The new CAMS Radiation Service v4.5 – method improvements and variability class-dependent validation **MARION SCHROEDTER-HOMSCHEIDT**	A new methodology for the identification of wet-snow conditions for snow sleeves forecast on the overhead power lines **RICCARDO BONANNO**
15:00–15:15	Mitigation of global warming by direct cooling of the atmosphere **DIMITRE KARAMANEV**	Worldwide benchmark of 10 databases of modelled global and direct solar irradiance at 129 radiometric stations **ELENA E. COLLINO**	Assessing the gains of a photovoltaic collective self-consumption from residential and tertiary buildings **SYLVAIN CROS**
15:15–15:35	**PANEL Q&A**	**PANEL Q&A**	**PANEL Q&A**
15:35–16:05	**AFTERNOON BREAK –HOTEL SPLENDID FOYER**		
16:05–17:45	**WORKSHOP SESSION – SALA DEI GIGANTI** **Data science and new challenges with AI** Convenors:**SUE HELLEN HAUPT** **GEORGES KARINIOTAKIS**	**WORKSHOP SESSION – SALA PETRARCA** **Visualisation of Climate and Sectoral indicators** Convenors: **PENNY BOORMAN** **ALBERTO TROCCOLI**	
18:45–19:45	**TASTING OF LOCAL SPECIALTIES, HOTEL MAJESTIC, POOL AREA** A complimentary demonstration session of how to prepare local specialities with tasting		
20:00–23:30	**CONFERENCE DINNER – HOTEL SPORTING**		

THE PROGRAMME MAY BE SUBJECT TO CHANGES

ICEM 2023

PROGRAMME

THURSDAY 29TH JUNE

08:00–09:00	REGISTRATION – HOTEL SPLENDID FOYER		
PARALLEL SESSIONS	**ROOM 1** **SALA DEI GIGANTI**	**ROOM 2** **SALA PETRARCA**	**ROOM 3** **SALA DEGLI SCROVEGNI**
09:00–10:35	**CLIMATE & ENERGY MODELLING** Chair: **STEFANO ALESSANDRINI** **NCAR**	**ENERGY SYSTEMS RISK ASSESSMENT & INVESTMENT** Chair: **MARION SCHROEDTER-HOMSCHEIDT** **DLR**	**ENERGY OPERATIONS & MAINTENANCE/ENERGY POLICY** Chair: **MANAJIT SENGUPTA** **NREL**
09:00–09:15	Energy Pathways to 2050 – Evolution in weather-related risks to France's power system **BÉNÉDICTE JOURDIER**	Effects of flexibility costs on electricity systems depending on regional wind and PV capacities with an application to France **SAMOURO DANSOKHO**	A Methodology to Improve the Predictability of Offshore Wind Energy Generation: Evidence from Great Britain **KEVIN F FORBES**
09:15–09:30	Characterization of atmospheric conditions leading to compound low wind power production and high electricity consumption in France **FRANÇOIS COLLET**	Global photovoltaic potential in climate change scenarios: role of aerosols and associated costs **ALEJANDRA ISAZA**	Improving a probabilistic icing risk forecast system for wind farm operation **RÉMI DUPONT**
09:30–09:45	Impacts of climate change on the Italian power system **ALICE DI BELLA**	Future residential electricity consumption under climate change in France: application of a fine-granularity thermosensitivity model **QIQI TAO**	Evolution of the wet snow hazard for the electricity network in Corsica in 2050 **SYLVIE PAREY**
09:45–10:00	The impact of climate change on electricity generation and demand profiles in Europe until 2100 **FRANZISKA SCHÖNIGER**	Establishment of a climatological frame of reference of cold weather for gas transporters **MARIE CASSAS**	Impacts of climate intervention/ geoengineering by stratospheric sulfate injection on solar power in Spain **JUAN ANTONIO AÑEL**
10:00–10:15	Climate change resilient future energy systems: assessing the impact of heatwaves in Germany **MADHURA YELIGETI**	Adaptation of the French Transmission Network to Climate Change – The case of underground lines resilience to extreme heat **LAURENT DUBUS**	Electricity sector subsidies and reforms in Ethiopia: An economy-wide analysis **AMSALU WOLDIE YALEW**
10:15–10:35	**PANEL Q&A**	**PANEL Q&A**	**PANEL Q&A**
10:35–11:05	**MORNING BREAK – HOTEL SPLENDID**		

PARALLEL SESSIONS	ROOM 1 SALA DEI GIGANTI	ROOM 2 SALA PETRARCA	ROOM 1 SALA DEGLI SCROVEGNI
11:05–12:40	**CLIMATE & ENERGY MODELLING** Chair: **LAURENT DUBUS, RTE & WEMC**	**ENERGY OPERATIONS & MAINTENANCE** Chair: **GREGOR GIEBEL, DTU**	**WEATHER AND CLIMATE SERVICES FOR ENERGY** Chair: **JUAN AÑEL UNIV. VIGO**
11:05–11:20	A climate change compatible approach and database for energy systems prospective studies in Europe **LAURENS P STOOP**	An Overview of the WRF-Solar Ensemble Prediction System **MANAJIT SENGUPTA**	WMO Global Energy Resilience Atlas: Climate Risk Indices for Hydropower **RICHAIHU WU**
11:20–11:35	Generation of a future-proof hydro inflow dataset for power system studies **NICHOLAS FABIO BONFANTI**	Impact of solar eclipses on weather variables for the energy sector **YANN MICHEL**	Building a climate service for hydro-power ressources: Application to Mpatamanga project in Malawi within FOCUS-Africa project **HIBA OMRANI**
11:35–11:50	Extreme and long-lasting events of high demand and low renewable generation with long climate model simulations and rare event algorithm **BASTIEN COZIAN**	Comparison of short-term (hour-ahead) solar irradiance forecasts from all-sky imager, satellite images and numerical weather prediction models **THOMAS SCHMIDT**	Hydrological Seasonal Forecast as a Resource Assessment Tool for the Upper Adige Catchment **MATTIA ZARAMELLA**
11:50–12:05	Using Climate-Sensitive Critical Infrastructure Power Reserves to Improve Grid Resilience **JAMES C FALLON**	West African solar forecast errors and their link with meteorological conditions: case study of Zagtouli solar farm **LÉO CLAUZEL**	Implementation of customized hydropower model for enhancing the hydropower generation in Tanzania **ALBERTO TROCCOLI**
12:05–12:20	Metrics for assessing climate change impacts on European resource adequacy **LAURENS P STOOP**	NYSolarCast: Utility and Distributed Solar Power Forecasting for New York State **JARED A. LEE**	A-CDFt: an analytical extension of the CDFt bias-adjustment method adopted in the context of the EU C3S Energy Service. **LETIZIA LUSITO**
12:20–12:40	**PANEL Q&A**	**PANEL Q&A**	**PANEL Q&A**
12:40–14:00	**LUNCH – HOTEL SPORTING**		
	PLENARY SESSION – SALA DEI GIGANTI Chair: **JAKE BADGER, DTU**		
14:00–14:45	Renewable Energy Forecasting — State of the art, highlight results of Smart4RES and future directions	Convenors: **GEORGES KARINIOTAKIS**	
14:45–15:35	Climate risk and impact assessments for energy security	Convenors: **JINSUN LIM**	
15:35–16:15	**AFTERNOON BREAK – HOTEL SPLENDID FOYER**		
16:15–17:00	**CHAIR: ALBERTO TROCCOLI, WEMC & ICS CONCLUSIONS, AWARD CEREMONY & CLOSING SALA DEI GIGANTI**		

11

WORKSHOP: TOWARDS CLIMATE-RESILIENT ENERGY SYSTEMS

TUESDAY 27TH JUNE 16:15-18:00   SALA DEI GIGANTI - HOTEL SPLENDID

Chair: **LAURENT DUBUS, RTE & WEMC - SUE-ELLEN HAUPT, NCAR & WEMC**

This panel session will focus on major challenges from the weather and climate perspective that need to be addressed to improve knowledge and to facilitate action and decisions that will make energy systems climate-resilient.

16:15-16:20	**INTRODUCTION**	CHAIR: **LAURENT DUBUS**, RTE & WEMC
16:20-16:30	Enel Climate Data for businesses adaptation strategy	**LAURA DI BERNARDO,** ENEL **MARIO CIANCARIN,** ENEL
16:30-16:40	Understanding climate change to support adaptation	**GIULIANA BARBATO,** CMCC
16:40-16:50	The role of multidecadal climate variability and climate change in designing future highly renewable power systems	**JAN WOHLAND,** ETH ZURCH
16:50-17:50	**OPEN DISCUSSION WITH AUDIENCE**	MODERATOR: **SUE-ELLEN HAUPT,** NCAR & WEMC
17:50-18:00	**CLOSING REMARKS AND ADJOURN**	MODERATOR: **LAURENT DUBUS,** RTE & WEMC

WORKSHOP: ENERGY AND METEOROLOGY EDUCATION

TUESDAY 27TH JUNE 16:15-18:00 SALA PETRARCA - HOTEL SPORTING

Chair: **JUAN A. AÑEL UNIV. VIGO - SUSANA BAYO-BESTEIRO, UNIV. VIGO - MATTHEW WRIGHT UNIV. OXFORD/RMETS**

In this workshop, we will address the challenges and opportunities that are present in energy and meteorology education. We will discuss what is missing from high school and university curricula, and what educational formats MOOCs, summer schools, MSc programmes, etc.

16:15-16:20	**INTRODUCTION**	CHAIR: **JUAN AÑEL,** UNIV VIGO **MATTHEW WRIGHT,** UNIV. OXFORD/RMETS
16:20-16:35	Energy and meteorology education: overview of what is out there at the moment	**JUAN AÑEL,** UNIV VIGO
16:35-17:10	Break into groups to discuss gaps in energy-meteorology education Groups feed back to the rest of the participants and we summarize the key gaps	MODERATOR: **JUAN AÑEL,** UNIV VIGO **MATTHEW WRIGHT,** UNIV. OXFORD/RMETS
17:10-17:35	Overview of communicating energy-meteorology information to the general public Tips on how to present to the general public	**MATTHEW WRIGHT,** UNIV. OXFORD/RMETS
17:35-17:55	Break into groups to practice communicating your work to the general public, emphasizing the link between energy and meteorology Volunteers demonstrate their communication to the rest of the group	MODERATOR: **JUAN AÑEL,** UNIV VIGO **MATTHEW WRIGHT,** UNIV. OXFORD/RMETS
17:55-18:00	**CLOSING REMARKS AND ADJOURN**	CHAIR: **JUAN AÑEL,** UNIV VIGO **MATTHEW WRIGHT,** UNIV. OXFORD/RMETS

WORKSHOP: WEATHER AND CLIMATE SERVICES

TUESDAY 27TH JUNE 16:15–18:00 SALA DEGLI SCROVEGNI – HOTEL MAJESTIC

Chair: JAMES FALLON, UNIV. READING

A practical workshop using weather and climate data to support decision-making in the energy sector. A hands-on approach to using energy-relevant data will be demonstrated through a python notebook

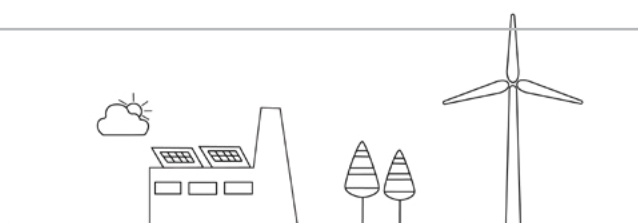|		
16:15–16:20	**INTRODUCTION**	**JAKE BADGER**
16:20–17:00	Interactive Session: Climate Services Notebook	**JAMES FALLON**
17:00–17:20	Overview of Live Climate Services	**JAKE BADGER**
17:20–17:55	Discussion: the "Next Generation" of Climate Services	
17:55–18:00	**CLOSING REMARKS AND ADJOURN**	**JAKE BADGER AND JAMES FALLON**

WORKSHOP: DATA SCIENCE AND NEW CHALLENGES WITH AI

WEDNESDAY 28TH JUNE   16:05–17:45 SALA DEI GIGANTI –HOTEL SPLENDID

Chair: SUE ELLEN HAUPT, NCAR & WEMC - GEORGES KARINIOTAKIS, MINES PARIS

In this workshop, we will learn how will improve the energy transition. How will humans feel about being replaced by AI and will it be accepted. Also what is the role of interpretable AI and is it essential to full acceptance and utilization.

16:05–16:10	Introduction	SUE-ELLEN HAUPT, NCAR & WEMC
16:10–16:30	AI for power grid development studies	VINCENT LEFIEUX, RTE
16:30–16:50	Innovative AI contributions to renewable energy forecasting	GEORGES KARINIOTAKIS, MINES PARIS
16:50–17:05	Recent developments of machine learning for weather forecasting	**STEFANO ALESSANDRINI,** NCAR
17:05–17:40	**DISCUSSION, Q&A**	
17:40–17:45	**CLOSING REMARKS AND ADJOURN**	

ICEM 2023

WEDNESDAY 28ᵀᴴ JUNE   16:05–17:45 SALA PETRARCA –HOTEL SPORTING

Chairs: **PENNY BOORMAN, WEMC – ALBERTO TROCCOLI, WEMC/ICS**

In this workshop, we will exploit climate and other sector indicators to enhance your decision through online data visualisation tools, with a focus on TEAL tool.

16:05–16:30	Introduction and Demonstration	MODERATORS: **PENNY BOORMAN,** WEMC **STEFANO CORDEDDU,** ICS
16:30–17:00	Testing session in groups	
17:00–17:30	Feedback session and Q&A	MODERATORS: **PENNY BOORMAN,** WEMC **STEFANO CORDEDDU,** ICS
17:30–17:45	**CLOSING REMARKS AND ADJOURN**	**ALBERTO TROCCOLI,** WEMC/ICS

The Organising Committee would like to thank all of our sponsors for supporting this year's International Conference Energy & Meteorology.

ICEM 2023 is sponsored by:

Playing a central role within the French and European power systems, RTE is a vital economic partner of businesses and regions, a pivotal player in the energy transition and the move towards renewable energy sources, and a firm proponent of Europe-wide electrical solidarity.

POSTER SESSIONS

There will be two dedicated and interactive poster sessions which will provide ample opportunity to discuss the many high quality poster abstracts we received. Posters will be displayed for the entire duration of the conference. Each presenter will have one minute to present their poster.

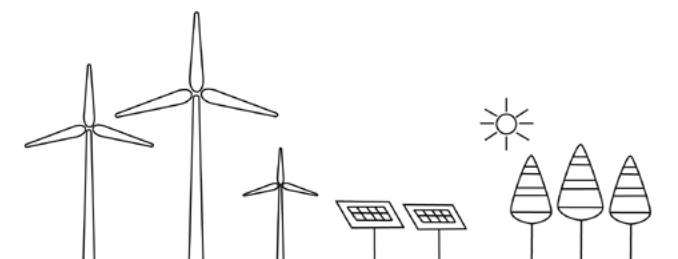## TUESDAY 27TH 11:15–12:45 POSTERS 1 – 22, FOYER – HOTEL SPLENDID
Chair: **MARION SCHROEDTER-HOMSCHEIDT, DLR**

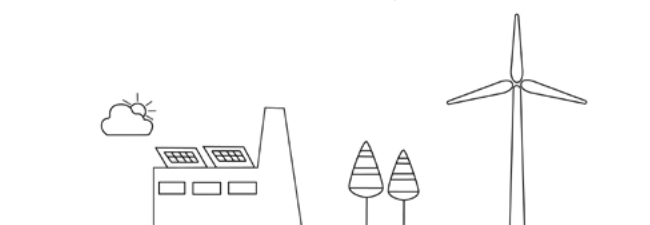## WEDNESDAY 28TH 11:15–12:30 POSTERS 23 – 51, FOYER –HOTEL SPLENDID
Chair: **JAKE BADGER, DTU**

POSTER	POSTER TITLE	AUTHOR
1	**POSTERS 1–5 Energy Planning & Financing** An initial assessment of wind measurements in Qatar	**DUNIA BACHOUR**
2	Complementarity of Iberian offshore wind farm potential sites using COSMO-REA6 high-resolution reanalysis	**MIGUEL ANGEL GAERTNER**
3	Solar energy resource assessment in the South China Sea based on FY-4A Surface Solar Irradiance product	**YUEMING HU**
4	Train2Wind – An overview of the Lollex experiment	**GREGOR GIEBEL**
5	Solar energy assessment and forecasting in insular regions: the Tahiti case study	**GUILLAUME TREMOY**
6	**POSTERS 6 –11 Energy Operations & Maintenance** Advanced meteorological forecast model and applications in energy market	**ALESSANDRO CEPPI**
7	Daily global aerosol and radiation forecasts including aerosol–radiation–cloud interaction	**VANESSA BACHMANN**
8	Effect of Satellite Imagery and Machine Learning In An Open-Source Solar Power Forecasting Project	**JACOB BIEKER**
9	Energy Forecasting at Great Britain's Electricity System Operator	**DIRK CANNON**
10	Evaluation of neural networks performance for regional-scale day-ahead wind power forecasting in Germany	**NICOLAS SEBASTIEN**
11	Impact of synoptic circulation patterns on renewable energy-related variables over China	**MUYUAN LI**

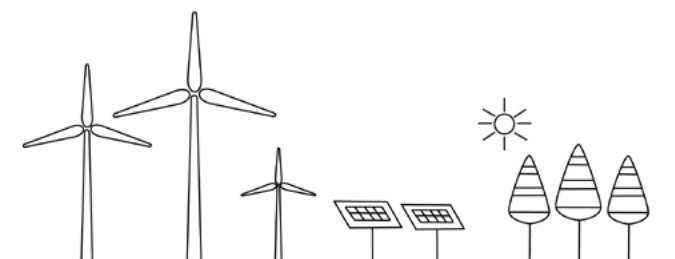| POSTER	POSTERS 12-19 Energy Operations & Maintenance	AUTHOR
12	Improving probabilistic wind power forecasting: A novel nonlinear and online combination method	GEORGES KARINIOTAKIS
13	Meteorological Sservioce for Renewable and TSO	FEDERICO BOTTARO
14	RES-oriented improvements in numerical weather prediction in the Smart4RES project	MARIE CASSAS
15	Research on the Nowcasting Method of Solar Energy Resources Base on FY-4A Ground Radiation Products	DONG YE
16	Study on Doppler Weather Radar Quality Control Using U-net Model	XINTONG ZHAO
17	Vertical distribution of near-surface aerosol extinction over North China and its impacts on tower photothermal power generation	BEIXI JIA
18	Week-Ahead Electrical Load Forecasting Based on Convolutional Neural Network with Two-Dimensional Image Mapping of Time Series Load and Weather Data	JEONG-DO PARK
19	Testing grid restoration with wind power plants – FCR provision and distributed power forecasts	MARCUS LETZEL
	POSTERS 20-22 Energy Resource Management	
20	An Innovative Bias Correction Method for Extreme Events for Seasonal Energy Management	MARCELLO PETITTA
21	Day-ahead prediction of wind power production with multiple numerical weather prediction data and machine learning algorithms	GANG HUANG
22	Deep-S2SWind: A data-driven approach for improving Sub-seasonal wind predictions	NOELIA OTERO FELIPE
	POSTERS 23-25 Energy Systems Risk Assessment & Investment	
23	A methodology for Climate change impacts on wind energy resource over Europe for future electricity mixes analysis	BOUTHEINA OUESLATI
24	Climate change impacts on solar power systems	LILIAN FEJES
25	Climate model performances in assessing air temperature – humidity relationship: a critical framework for stream temperature assessment	BOUTHEINA OUESLATI

POSTER	POSTERS 26–31 Energy Systems Risk Assessment & Investment	AUTHOR
26	Future Climate Change Impact Assessment on Extreme Low Wind Events for Offshore Wind Turbines within the UK Exclusive Economic Zone	SARA ABDELAZIZ
27	Impacts of climate change on temporal fragmentation of energy demand in Europe	HAJAR FILAHI
28	Potential climate change impacts on solar photovoltaic energy in West Africa	SANDRINE ANQUETIN
29	Sampling representative years for a TSO in a climate simulation of 200 years	JEAN THOREY
30	Spatial distribution of residential building energy demand in France for the XXIth Century: impact of temperature and population projections	SYLVAIN CROS
31	The role of multidecadal climate variability and climate change in designing future highly renewable power systems	JAN WOHLAND
32	**POSTERS 32-42 CLIMATE & ENERGY MODELLING** A metastatistical approach for the assessment of frequency and duration of low-wind-power events	NATHALIA CORREA-SÁNCHEZ
33	Challenges in validating regional PV methods: a discussion on geometry assumptions and other elements.	RODRIGO AMARO E SILVA
34	Climate change influence on cold dark lull events in Europe	MARION SCHROED-TER-HOMSCHEIDT
35	Effects of future climate scenarios on solar and wind energy generation in Chile	GUILLERMO VALENZUELA-VENEGAS
36	Evaluating the Sensitivity of the Total system cost and Installed capacity of Technologies of Electricity System to The Perturbation of the Onshore Wind and PV Capacity Factor	MARYAM KADKHODAEI
37	Extreme high temperature in France by 2050 for the distribution network	SYLVIE PAREY
38	FAIR Data in Energy Systems Analysis	CARSTEN HOYER-KLICK
39	Future calculation of wind and solar energy capacity factors over Europe using CMIP6 model projections	IDUNN AAMNES MOSTUE
40	Future photovoltaic power at the Atacama and Sonora deserts under climate change	JUAN AÑEL
41	Historical analysis of global distribution of and trends in wind droughts	ENRICO ANTONINI
42	Improving hydropower constraints modeling for a national power grid	LAURE BARATGIN

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POSTER	POSTERS 42 –46 CLIMATE & ENERGY MODELLING	AUTHOR
43	Solar resource climate scenarios	KRISTIAN PAGH NIELSEN
44	Spatial correlation structures of wind speed and irradiance in Europe as modelled in regional climate models and the ERA5 reanalysis	MARION SCHROETER-HOMSCHEID
45	Temporal downscaling wind climate data using machine learning	JOANA MENDES
46	Temporally compounding high-impact events in hydropower-dominated renewable electricity systems in Europe	LIEKE VAN DER MOST
47	**POSTERS 47–48 ENVIRONMENTAL IMPACTS OF ENERGY SYSTEMS** Weather and Climate Services in Support of the German Energy Transition: Use cases of Germany's national meteorological service (Deutscher Wetterdienst, DWD)	FRANK KASPAR
48	West African Mineral Dust: a key in the NExus ClimaTe – WATer – Energy	SANDRINE AN-QUETIN
49	**POSTERS 49–52 WEATHER & CLIMATE SERVICES FOR ENERGY** Adapting Energy Systems to a changing Climate - A Destination Earth Use Case	MARION SCHROETER-HOMSCHEID
50	Selecting CMIP6 models to assess the impact of climate change on energy demand over Europe	HAJAR FILAHI
51	Teal: a visualisation tool to explore climate data and related indicators	PENNY BOORMAN
52	Cosmic-Rays Neutron Sensing as a novel approach to measure Snow Water Equivalent, key to hydroelectric power	ENRICO GAZZOLA
53	**POSTERS 53 ENERGY POLICY, PROGRAMMES & CROSS-SECTORAL ISSUES** The Royal Meteorological Society (UK)'s engagement with the energy sector	MATTHEW WRIGHT

THE PROGRAMME MAY BE SUBJECT TO CHANGES

7TH INTERNATIONAL CONFERENCE
ENERGY AND METEOROLOGY

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REGISTRATION DESK

The registration desk for ICEM 2023 will be open at following times during the conference and the pre-conference seminar:

Monday, 26th June from 14:00 to 19:30

Tuesday, 27th June from 08:00 to 18:30

Wednesday, 28th June from 08:00 to 09:00

Thursday, 29th June from 08:00 to 09:00

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CATERING

All the following catering are included with the registration: two coffee breaks a day each day (27-29 June 2023), lunch each day (27-29 June 2023), welcome drinks (evening of Monday 26 June 2023), ice-breaker (evening of Tuesday 27 June 2023), gala dinner (evening of Wednesday 28 June 2023).
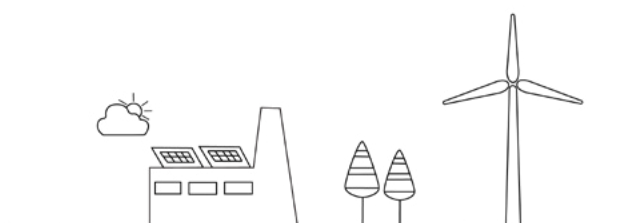
CREDIT CARDS

All major credit cards are accepted at the registration desk, including American Express. Most hotels, restaurants and shops will accept all major credit cards.

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In registering for this conference relevant details will be incorporated into a delegate list (name and organization only) and may be made available to parties directly related to the conference, including the Organising Committee and key sponsors.

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