NEWSLETTER

EPE'25 PARIS

EPE 25

40 years of EPE conferences
1985 > 2025

cnrs GDR Groupement de recherche
SEEDS Systèmes d'énergie électrique dans leurs dimensions sociétales

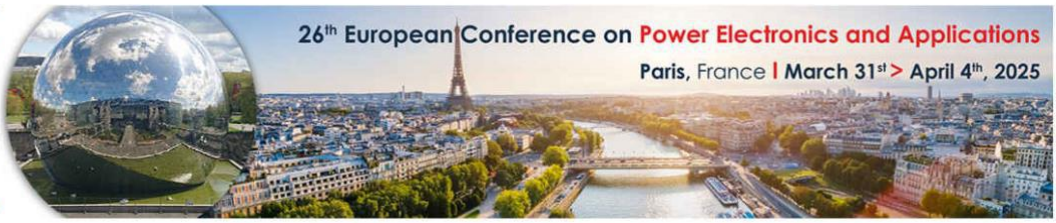
NEWSLETTER
March 2025

26TH EUROPEAN CONFERENCE ON POWER ELECTRONICS AND APPLICATIONS
Paris, France | March 31st > April 4th, 2025

Cité des sciences et de l'industrie | 30 Avenue Corentin Cariou, 75019 Paris

Email: epe2025@utc.fr

Websites: https://epe2025.com | http://epe2025-paris.com



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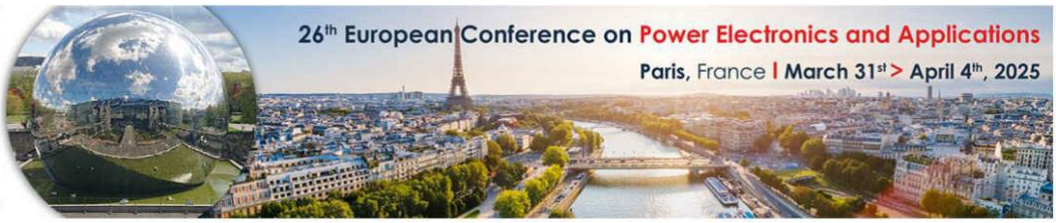


EPE'25 Conference

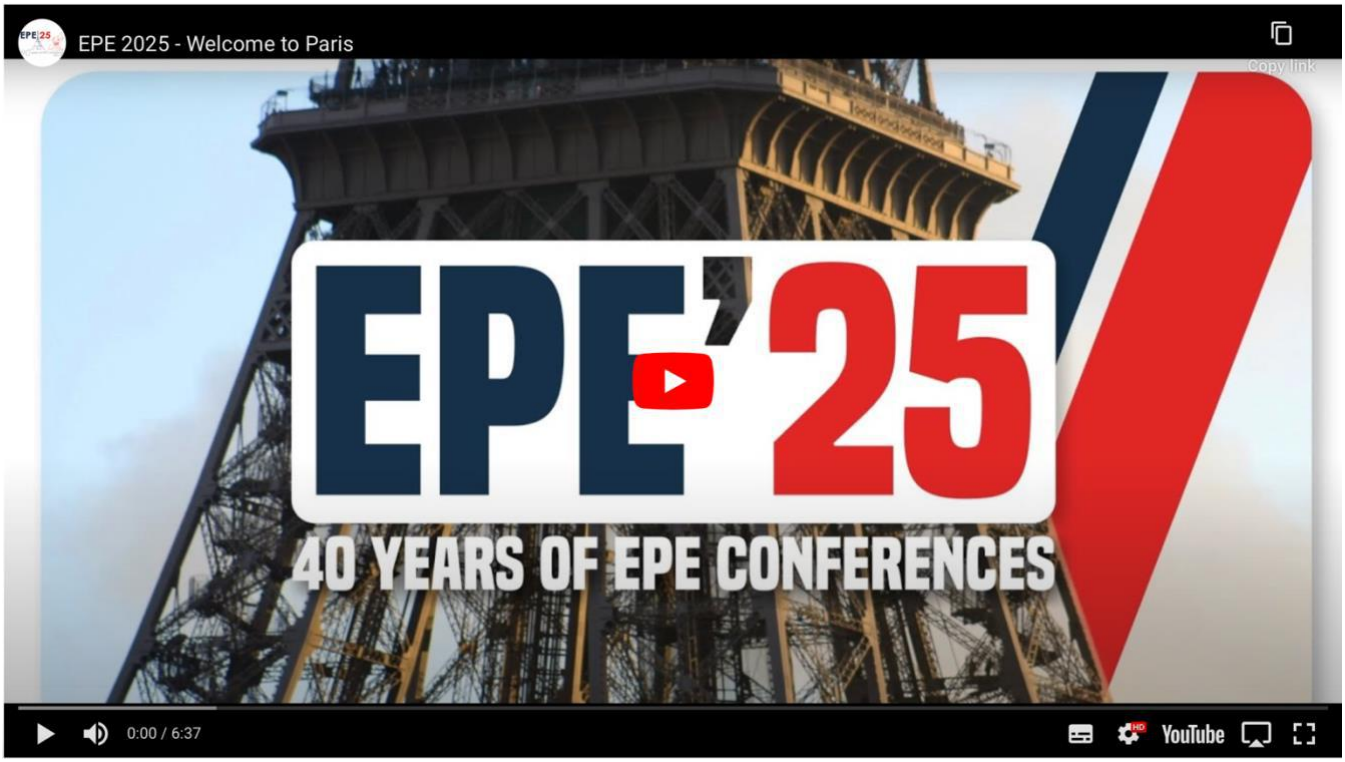
Chairwoman's Message

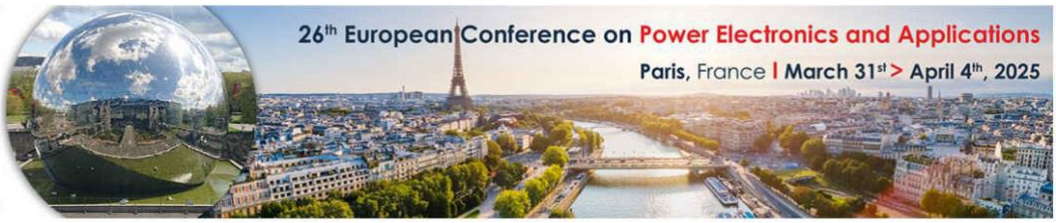
After the EPE editions Grenoble 1987, Toulouse 2003, Lille 2013 and Lyon 2020, the 26th edition of EPE, Paris 2025, is happy to welcome you back in France!
The Power Electronics community will gather in Paris, from March 31st to April 4th, 2025, to exchange views on research progress and technological developments in the various topics described elsewhere in this newsletter. Several tutorials as well as some interesting technical visits will be planned and organized. In addition, we will celebrate the 40 years of EPE conferences!

The 26th European Conference on Power Electronics and Applications (and Exhibition), EPE '25, is co-sponsored by the EPE Association and the French research CNRS group GDR SEEDS (Electrical Energy Systems in their Societal Dimensions). The conference will take place at the "La Villette Congress Centre", part of the "Cité des sciences et de l'industrie" in the "Parc de la Villette" in Paris, France.

I look forward to seeing and welcoming you ALL to Paris!

Manuela SECHILARIU
EPE'25 Conference Chairwoman





Registration

Please find the registration conditions HERE and HERE

Don't wait any longer, register today on https://it.cborg.info/EPE2025/

Programme-at-the-glance

The programme-at-the-glance is published on

https://epe2025.com/programme-at-the-glance/
http://epe2025-paris.com/programme-at-the-glance/

Detailed technical programme

The detailed programme is published on
https://wd.cborg.info/W2503EPE_PROGRAMME_WEB/UK/

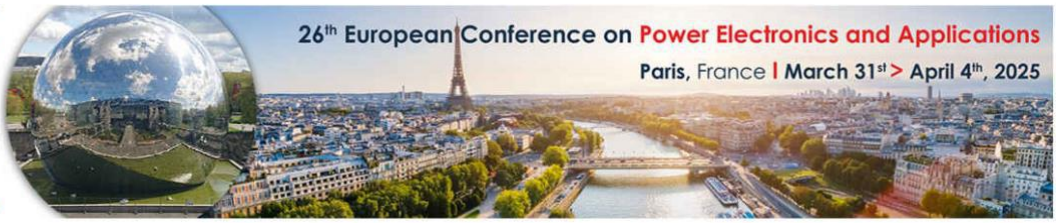
Tutorials

Monday morning

Related to Focus Topic 3 – Energy storage systems
Tutorial 4 EV Charging Technologies: Power Electronics and Quality
Zian Qin - Lu Wang (Delft University of Technology, The Netherlands)

Related to Focus Topic 2 – Smart Grids and renewable energy
Tutorial 5 DC Transformers for DC Distribution and Transmission
Binbin Li – Yingzong Jiao – Ning Wang (Harbin Institute of Technology, China)

Related to Focus Topic 2 – Smart Grids and renewable energy
Related to Focus Topic 4 – Digitalization
Tutorial 10 Power Quality and Operability of Distributed Power Generation Systems: Advanced and Intelligent Control
Nick Papanikolaou (Democritus University of Thrace, Greece)
Yongheng Yang (Zhejiang University, China)
Chi-Seng Lam (University of Macau, China)



Monday afternoon

Tutorial 8 Model Predictive Control of Power Converters and Drives
Marco Riveira (University of Nottingham, United Kingdom)
Patrick Wheeler (University of Nottingham, United Kingdom)
Javier Munoz (Universidad da Talca, Chile)

Related to Focus Topic 2 – Smart Grids and renewable energy

Tutorial 14 Pushing Boundaries in Power Conversion for Renewable Energy Systems
Varaha Satya Bharath Kurukuru (Silicon Austria Lab GmbH, Austria)
Mohammed Ali Khan (University of Southern Denmark, Denmark)

Monday full day

Related to Focus Topic 5 - Sustainable and affordable power electronics

Tutorial 13 Characterising GaN HEMTs & SiC MOSFETs – Device Characteristics and Characterisation
Benedikt Kohlhepp (TU Berlin, Germany)
Marco Jung (Bonn-Rhein-Sieg University of Applied Sciences & Fraunhofer IEE, Germany)
Christian Lottis (Bonn-Rhein-Sieg University of Applied Sciences & Fraunhofer IEE, Germany)
Hauke Lutzen (University of Bremen / IALB, Germany)

Related to Focus Topic 1 - Electromobility

Tutorial 15 Reliability and Qualification of Wide Bandgap Automotive Power Semiconductor
Layi Alatise – Jose Ortiz Gonzalez (University of Warwick, United Kingdom)

Tutorial 19 EMC simulation for Power Electronics
Jan Hansen (Silicon Austria Labs & Graz University of Technology, Austria)
Christian Riener (Silicon Austria Labs, Austria)
Patrick Gsoels (Silicon Austria Labs & Christian Doppler Laboratory for EMC Aware Robust Electronic Systems, Austria)

Friday morning

Related to Focus Topic 5 - Sustainable and affordable power electronics

Tutorial 6 Multi-objective and highly precise optimization of high performance SiC and GaN multilevel power inverters with severe constraints
Bernardo Cougo (IRT Saint-Exupery, France)

Tutorial 9 Industrial medium-voltage converters and drives: from components to systems and applications
Tobias Geyer (ABB Motion System Drives, Switzerland)

Keynotes

Keynote 1: **Tuesday, 1 April 2025 – Time 9:10-9:40** (Plenary Room Gaston Berger Amphitheatre)

CIGRE and the Energy transition

Rannveig LOKEN
Technical Council Chair, CIGRE Vice-president Technical

Keynote 2: **Tuesday, 1 April 2025 – Time 9:40-10:10** (Plenary Room Gaston Berger Amphitheatre)

Electrical system trends for future aerospace platforms

Florent NIERLICH
CTO of Safran Electrical and Power

Keynote 3: **Tuesday, 1 April 2025 – Time 15:00-15:30** (Plenary Room Gaston Berger Amphitheatre)

The role of HVDC in reducing carbon emissions

Colin DAVIDSON
Consulting Engineer, GE Vernova Grid Systems Integration, Stafford, UK

Keynote 4: **Wednesday, 2 April 2025 – Time 8:30-9:00** (Plenary Room Gaston Berger Amphitheatre)

HVDC and Power Electronics enabling the energy transition

Dr Mohamed RASHWAN
President of Transgrid Solution (TGS - Canadian engineering and consulting firm specializing in power systems) and former chair of CIGRE Study Committee B4

Keynote 5: **Wednesday, 2 April 2025 – Time 9:00-9:30** (Plenary Room Gaston Berger Amphitheatre)

Management and valorization of storage in electrical networks

Dhaker ABBES
Full Professor, Team Leader, JUNIA School of Engineering – L2EP (Laboratory of Electrical Engineering and Power Electronics), Lille, France

Keynote 6: **Thursday, April 2025 – Time 8:30-9:00** (Plenary Room Gaston Berger Amphitheatre)

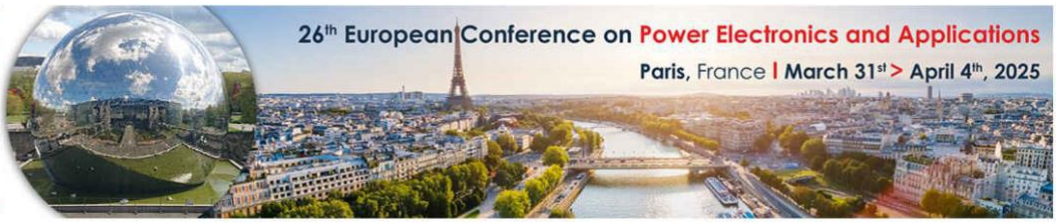
Beyond the quest for performance, let's target a sustainable power electronics technology

Jean-Christophe CREBIER
CNRS senior scientiste, G2Elab, Grenoble, France

Keynote 7: **Thursday, April 2025 – Time 9:00-9:30** (Plenary Room Gaston Berger Amphitheatre)

The role of scientific research in the energy transition. ***Uncertainties, interference with values, and the difficulties of communication with decision-makers***

Anouk BARBEROUSSE
Full Professor, Head of ITE Sorbonne University, France



Panel discussions

Smart grid and renewable energy

Chairs: *Jean-Baptiste Heyberger & Piotr Dworakowski, SuperGrid Institute*

Tuesday 1 April 2025

16:45 – 18: 30 - Room: Louis Armand East

- Benjamin Graff, CNR: "Linear Photovoltaic Powerplant: potential development in France and use cases at CNR"
- Olivier Grellier, SNCF: "Linear Photovoltaïc: use cases at SNCF"
- Thomas Lagier, ITER: "Power Converters for nuclear fusion applications at ITER"
- Sébastien Silvant, SuperGrid Institute: "InterOPERA at Crossroads: Advancing Multi-Vendor HVDC Interoperability"
- Mohamed Rashwan, Transgrid Solution, keynote summary "HVDC and Power Electronics enabling the energy transition"
- Colin Davidson, GE Vernova Grid Systems Integration: keynote summary "The role of HVDC in reducing carbon emissions"

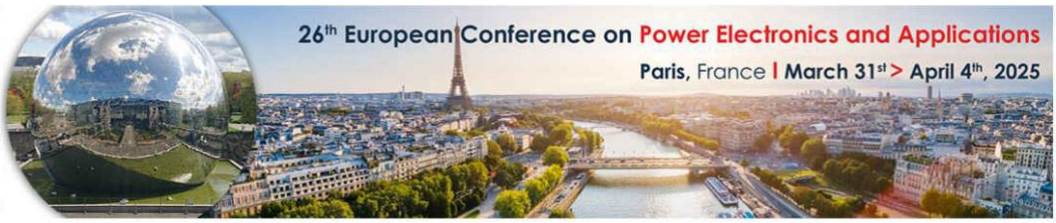
Sustainable and Affordable Power Electronics

Chairs: *Demba Diallo, Université Paris-Saclay*
Mohamed Benbouzid, Université Brest

Wednesday 2 April 2025

16:15 – 18:15 - Room: Louis Armand East

- Christine Minke, Clausthal University of Technology: "From crisis to opportunity: embedding sustainability in technology development"
- Pierre Le Métayer, SuperGrid Institute: "DC Solid State Transformer – enabling CO2 footprint reduction of PV power plants"
- Nouha Gazbour, CEA Liten: "Environmental impacts of power components in a photovoltaic system"
- Karla Lainez Amaya, Hitachi Energy: "Innovative and Sustainable Power Electronics: Pioneering Resilient and Efficient Energy Systems"
- Jonas Huber, ETH Zürich: "Resource Efficient Circular Economy Compatible Power Electronics"
- Jean-Christophe Crébier, CNRS/G2Elab: "Showcasing recent insights from national working group on sustainable power electronics"



Electromobility

Chair: *Alain Bouscayrol, Université Lille*

Thursday 3 April 2025

16:15 – 17:30 - Room: Louis Armand East

- Emelie Nilsson, Airbus UpNext: "Cryogenic and Superconducting Powertrain Development for Future Electric Aircraft Propulsion"
- Serge Loudot, AMPERE: "Power-Electronic Devices and Integration for Electromobility"
- Clément Depature Lançon, SNCF: "Decarbonization of Rolling Stock
- Christophe Viguier, SAFRAN TECH: "Electrical Machines in Aeronautic: Stakes & Challenges"

Exhibitor's sessions (vendor sessions)

Planning exhibitor's sessions – EPE'25

Timing	Tuesday 1 April
12.00 – 12.15	Mersen
13.50 – 14.05	Typhoon HIL
14.35 – 14.50	Hitachi

Timing	Wednesday 2 April
11.40 – 11.55	Tektronix
13.30 – 13.45	Volkswagen
13.50 – 14.05	Opal RT Technologies
14.35 – 14.50	Speedgoat

Tuesday, 1 April

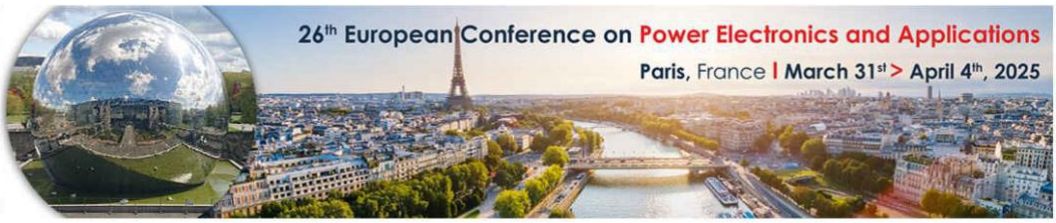
12:00 – 12:15 ***Mersen***

Solutions for Power Management
Jérome Michoux - Business Development & Marketing Manager

The megatrends around the new era of electrification are pushing back the boundaries of power distribution, and this fast-changing world is creating new constraints for passive components. Let's go through them by analysing different applications and see how MERSEN is able to support customers in meeting these new technical and industrial requirements and how the collaboration with partners helps.

13:50 – 14:05 ***Typhoon HIL***

14:35 – 14:50 ***Hitachi Energy***



Wednesday, 2 April

11:40 – 11:55 ***Tektronix***

Andy Getzman

13:30 – 13:45 ***Volkswagen***

The future of Automotive Power Electronics: Possibilities of High-Level Integration
Cornelius Rettner

13:50 – 14:05 ***Opal RT Technologies***

The fast and the furious: latest FPGA-based Hardware-in-the-Loop Testing Solver - now on NI
Timo Roesch

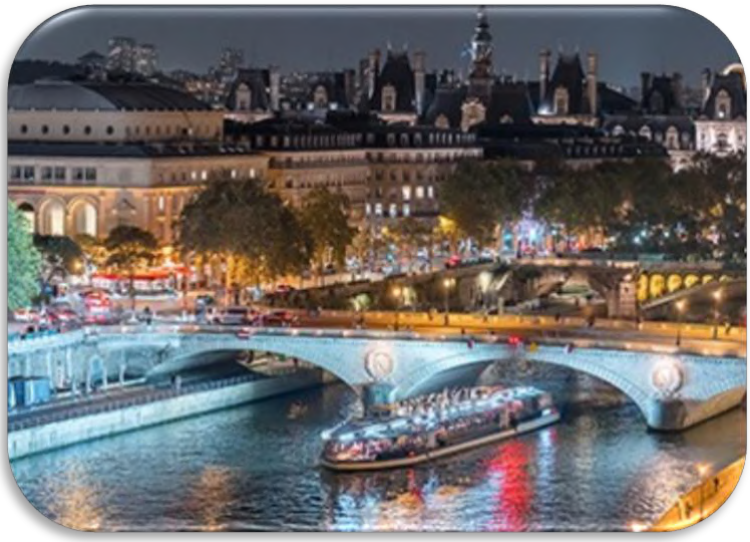
In today's rapidly evolving power electronics landscape, development timelines are becoming increasingly compressed. Hardware-in-the-Loop (HIL) simulation has become a well-established method for enabling development-parallel testing, hence accelerating innovation. In this presentation we will live-demonstrate our latest FPGA-based solver innovation, which provides a very flexible and easy-to-use workflow – recently available also with NI-based HIL Systems. It's made to achieve high accuracy with demanding topologies like DAB's, LLC's and for high switching frequencies of even 500kHz.

14:35 – 14:50 ***Speedgoat***

Gala dinner

Sponsored by: HUAWEI

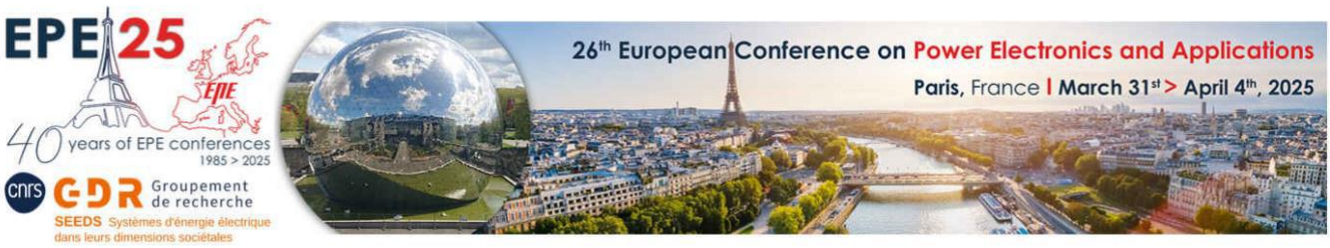
Paris by night



For this year's gala evening, the conference invites you to discover Paris by night on board the Bateaux Mouche Parisiens, for a musical cruise to the capital's most beautiful monuments !

During the cruise, while enjoying your dinner, you will be able to admire the world famous monuments in Paris: the Eiffel Tower, the restored Notre Dame cathedral, the Louvre museum.

This gala dinner is not to be missed as it is a great opportunity to enjoy the enchanting illuminations and admiring the monuments from a unique angle.



Sponsorship and Exhibition

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VOLKSWAGEN GROUP Components

Classic sponsor

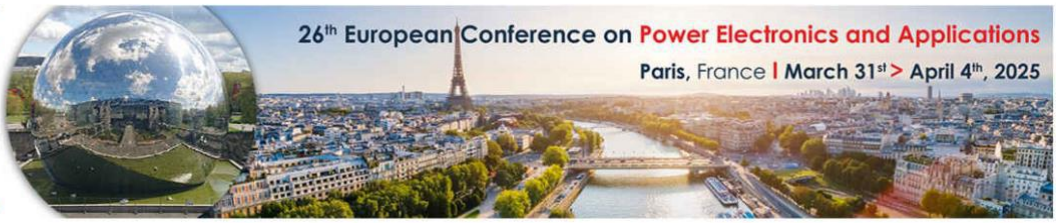
deep concept

HITACHI Inspire the Next

Hitachi Energy

Sponsor gala dinner

HUAWEI



Exhibitors

Booth 1

deep concept

Booth 21

DOWA

Booth 4-5

dSPACE

Booth 20

HITACHI
Inspire the Next

Hitachi Energy

Booth 3

imperix

Booth 8

IWATSU

Booth 9

opSens Solutions

Booth 11-12

MERSEN

Booth 10

OPAL-RT TECHNOLOGIES

Booth 7

PMK

Booth 18

REGATRON

Booth 17

ROHDE&SCHWARZ
Make ideas real

Booth 19

Typhoon HIL

Booth 13

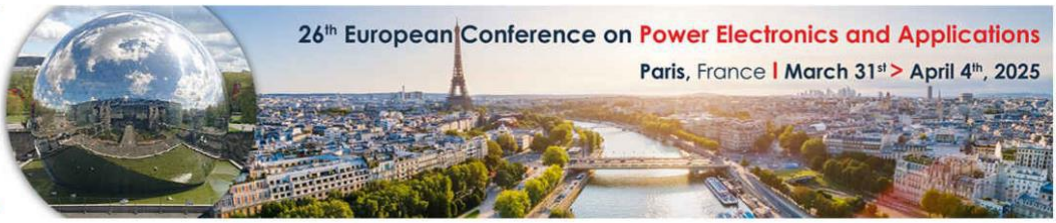
speedgoat
real-time simulation and testing

Booth 14

Tektronix

Booth 2

Wolfspeed

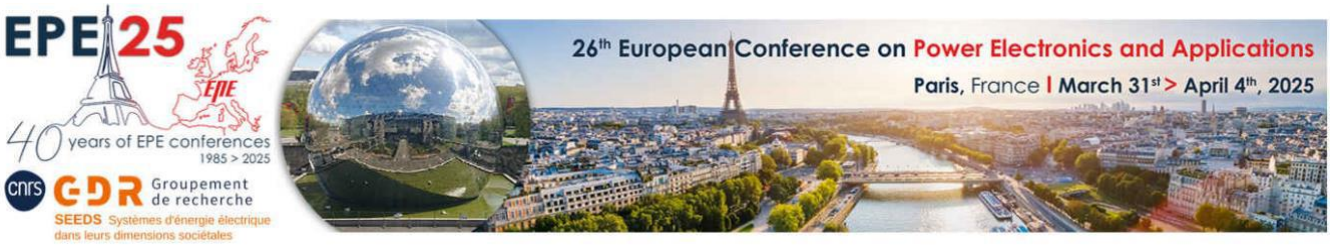


Volkswagen Vendor-Session
EPE 2025 | Paris

„The Future of Automotive Power Electronics: Possibilities of High-Level Integration"

Wednesday 2nd April 2025 –
1:30 p. m.

VOLKSWAGEN GROUP
Components



Welcome in Paris

Paris, undoubtably one of the most beautiful cities of Europe, if not of the world…

Paris is the capital of France, located in the Ile-de-France region. It has more than 2,000,000 inhabitants, suburbs not included. In the entire region, the Métropôle du Grand Paris, there are over 10 million inhabitants. Since the 17th century, Paris has been one of the world's major centres of diplomacy, finance, commerce, culture, fashion and gastronomy. For its leading role in the arts and sciences, as well as its extensive and early system of street lighting (in the 19th century), it became known as the "City of Light".

All information about the conference and about Paris can be found on the conference websites:

https://epe2025.com
http://epe2025-paris.com

Conference venue

The EPE'25 conference will take place at La Villette Congress Center, which is a part of the Cité des sciences et de l'industrie. The conference venue is located about 5 km north-east of the city centre. The nearest railway stations are Gare du Nord and Paris Est, both at about 3 km from the Cité des sciences et de l'industrie. Public transportation in Paris is excellent, and there is a métro station in front of the Cité des sciences et de l'industrie (Porte de la Villette, line 7 direction La Courneuve–8 mai 1945). The conference venue offers facilities and services of international quality meeting standards. Wi-Fi access will be free for attendees, everywhere in the congress centre.

La Villette Congress Centre is a part of the Cité des sciences et de l'industrie and is integrated on three open mezzanine levels. Europe's largest scientific and technical communications centre offers:

- The Gaston Berger Amphitheatre (900+ seats)
- The Louis Armand Modular Room (2 x 210 seats)
- Rooms ABCD Rooms (35 seats) or AB and CD (60 seats)
- Rooms 1234 (70 seats) and
- an exhibition surface of over 2 000 m²

All rooms are or will be equipped with modern AV equipment.

The Cité des Sciences et de l'Industrie ("City of Science and Industry") is Europe's largest museum devoted to Science, Technology and Industry. The building was designed by architect Adrien Fainsilber and opened in 1986. It attracts more than 5.000.000 visitors per year. The promotion of scientific and technical knowledge among the public, particularly for youth, as well as to promote public interest in science, research and industry are the goals of the Cité des Sciences et de l'Industrie.

How to get to Paris

- There are car parks near the conference centre, among others the Parking Indigo Parc de la Villette Nord – Cité des Sciences
  (Address: 61 Bd Macdonald, 75019 Paris, France).
- The nearest Metro Station is "Porte de la Villette" on line 7, direction "La Courneuve – 8 Mai 1945".
- Bus lines 150, 54 and 60 pass near the conference centre. The nearest bus stop is "Porte de la Villette".
- Tramline T3B stops at "Canal Saint-Denis", 650-700 meters (a 10 minute walk) from the Cité des Sciences et de l'Industrie.

By Plane:
There are three major airports in the area of Paris: Charles the Gaulle Airport and Le Bourget Airport to the north of the city, and Orly Airportto the south.

Paris Charles De Gaulle Airport is Paris' main international airport. In 2022, the airport handled near to 57,5 million passengers and had over 34,500 aircraft movements, making it the third busiest airport in Europe. It is located 23 km northeast of Paris.

Paris Orly Airport is the second international airport serving Paris. Orly is the busiest French airport for domestic traffic and the second busiest French airport overall in passenger traffic. It is located 13 km south of Paris.

Paris Le Bourget Airport, once Paris's principal airport, it is now used only for general aviation, including business jet operations. It also is known for the Paris Air Show. It is located 11 km north-northeast of the city.

By Train:
There are six main railway stations in Paris: Gare du Nord, Gare de l'Est, Gare de Lyon, Gare d'Austerlitz, Gare Montparnasse and Gare Saint-Lazare.

Gare du Nord
From *Gare du Nord*, one of the busiest railway stations in the world, trains leave to the north of France, as well as to Belgium, the Netherlands, Germany and Great Britain. It also an important hub in the Paris urban transportation network, including the RER and the Paris Metro. The RER train from Charles de Gaulle Airport (line B) connects at Gare du Nord.

- TGV to Lille and London
- TGV to Brussels and Amsterdam
- TGV to Brussels, Cologne and Essen

Gare de l'Est
From *Gare de l'Est*, the near neighbor of *Gare du Nord* and one of the oldest stations in Paris, trains depart in the direction of the east of France, Luxemburg and Germany, such as Strasbourg, Frankfurt, Berlin, Hamburg, and Munich.

- High-speed trains to Berlin
- High-speed trains to Innsbruck
- TGV to Reims (Champagne)
- TGV to Luxembourg

Gare de Lyon

Gare de Lyon, with a clock tower, connects Paris to the south and the east of France (Rhone Valley, Provence, and the French Riviera), as well as to destinations in Switzerland, Germany, Italy and Spain.

- TGV to Lyon
- TGV to Avignon – Marseille
- TGV to Geneva
- TGV to Milan

Gare d'Austerlitz

From *Gare d'Austerlitz*, on the border of the 13th and 5th Arrondissements, the trains leave towards the center and the south-western part of France (the Mediterranean coast). Austerlitz is currently being renovated completely, to modernize the station and the neighborhood, to make them more green, and to add tracks for high-speed trains serving southwest France.

Gare Montparnasse

From *Gare Montparnasse*, trains leave direction the west and south-west of France, including Bordeaux, Tours, Nantes and Rennes. Gare Montparnasse, a major urban terminus, is connected to Metro lines 4, 6, 12 and 13.

- Normandy: Granville
- TGV to Brittany: Rennes, St. Malo, Brest
- TGV to the Loire Valley: Nantes, Angers
- Central France: Chartres, Tours
- TGV to Poitou-Charentes
- TGV to Aquitaine: Bordeaux, Bayonne, Biarritz
- TGV to Midi-Pyrenees: Toulouse, Lourdes
- Spain: San Sebastian and Madrid
- Portugal

Gare Saint-Lazare

Gare Saint-Lazare, a major source of inspiration for impressionist painters such as Edouard Manet and Claude Monet, serves the west of France. It serves destinations like the Mont-St-Michel and the city of Dieppe. It is connected to Metro lines 3, 12, and 13.

By Car:

Paris is, of course, also the most important hub of France's motorway network. It is surrounded by three orbital freeways: the Périphérique, the A86 motorway in the inner suburbs, and finally the Francilienne motorway in the outer suburbs. Paris has an extensive road network with over 2,000 km of highways and motorways.

A1, A3, A4, A5, A6, A10, A13, A14, A15, A16 radiate clockwise from Paris, with A2, A11, and A12 branching respectively from A1, A10, and A13.

France has a considerable network of tolled motorways. Toll costs vary according to the motorway you're driving on, the distance travelled and the type of vehicle you drive. Further, to improve air quality, Paris has become a limited traffic zone. All vehicles must display a Crit'Air sticker with a number ranging from 1 to 5. This indicates the level of pollution in ascending order. In the event of high pollution levels, even vehicles with low-number stickers can be banned from circulating.

It is not (always) easy to drive in Paris, or to find a parking spot. And it is not good for the carbon footprint either. Therefore we do not recommend that you come to EPE'25 in Paris by car.

By Bus:
EPE'25 participants who wish to travel to Paris by bus, are likely to arrive at the Paris-Gallieni bus station. It is located in Bagnolet in the east of Paris. From here, they may need to take a connecting bus service to the center of Paris. There are also several large bus terminals around the city that serve the Paris area.

Gare Routière Internationale de Paris (Paris International Bus Station), 6 km east of the city center at Porte de Bagnolet where the Boulevard Péripherique meets the E-15 autoroute, is the starting and ending place for intercity and international buses operated by Eurolines and Ouibus.

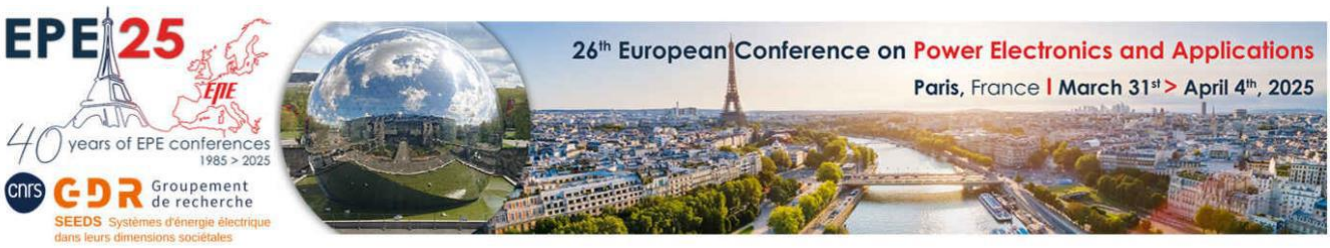
The terminus of Metro Line 3, Gallieni, is located near the bus terminal.

Flixbus stops at the station Paris Bercy Seine, in the east of the city, near Gare de Lyon. Paris Métro will take you further to Paris City Center.
BlaBlaCar Bus also stops at Paris Bercy Seine.

RER & Paris Métro:

RER:
The Réseau Express Régional (English: Regional Express Network), commonly abbreviated RER**,** is a hybrid commuter rail and rapid transit system serving Paris and its suburbs. It acts as a combined city-center underground rail system and suburbs-to-city-center commuter rail. In the city center, it acts as a faster counterpart of the Paris Métro. Click HERE for the interactive map.

Paris Métro:
The Paris Métro (French: Métro de Paris) is a rapid transit system in the Paris Metropolitan Area. The system is 226.9 kilometres (141.0 mi) long, mostly underground. It has 308 stations, of which 64 have transfers between lines. There are 16 lines in total, with 4 more being under construction. The lines are identified on maps by number and colour, with the direction of travel indicated by the terminus. It is the second busiest metro system in Europe. Click HERE for the interactive map.



See you at

EPE25
40 years of EPE conferences
1985 > 2025

in Paris