

**11 > 12**  
**JUNE 2025**



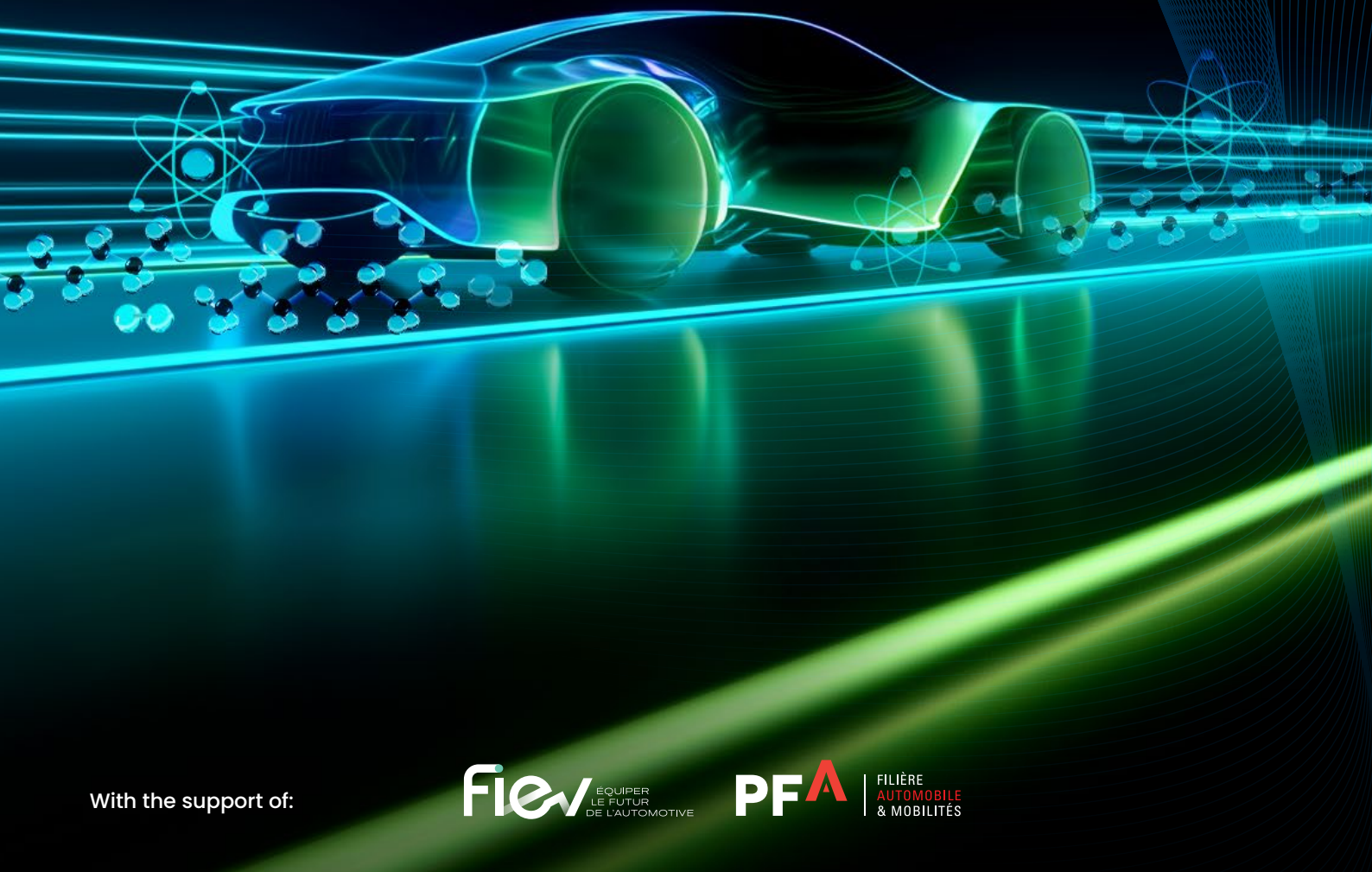
**37<sup>TH</sup>**  
**EDITION**

PROGRAM

# **SIA POWERTRAIN 2025**

**International Congress & Exhibition**

**PORT MARLY, FRANCE**  
CENTRE DES CONGRÈS  
LES PYRAMIDES



With the support of:

**fiev** EQUIPER  
LE FUTUR  
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**PFA** FILÈRE  
AUTOMOBILE  
& MOBILITÉS

# SIA Powertrain Congress 2025

## Port Marly, France

**The 37<sup>th</sup> SIA Powertrain Congress 2025, is a pivotal event in the automotive industry that brings together engineers, innovators, and thought leaders.** As we stand at the crossroads of a transformative era in the powertrain industry, this congress offers an unparalleled opportunity to shape the future of sustainable and technologically advanced mobility.

The powertrain industry is undergoing a profound transition, with the emergence of new competitive players, driven by the urgent need to address several critical challenges:

**Reducing Greenhouse Gas Emissions:** As climate change continues to be a pressing global issue, our industry must prioritize the development of low-emission and zero-emission technologies.

**Controlling Development and Production Costs:** Innovation must be balanced with economic viability to ensure that advanced powertrain solutions are accessible and affordable.

**Expanding Infrastructure:** To support the widespread adoption of electric vehicles and hydrogen technologies, we need robust and extensive charging and refueling infrastructure.

**Ensuring the Supply of Critical Materials:** The production of batteries, electric machines, power electronics, relies on a steady supply of critical materials, which must be secured through sustainable and ethical means.

These challenges are compounded by an increasingly complex and evolving geopolitical and regulatory environment. The 37<sup>th</sup> SIA Powertrain Congress provides a unique platform to address these issues head-on, fostering collaboration and innovation among industry professionals.

But our focus extends beyond these challenges. We must also ensure that our technological advancements align with the needs and expectations of our customers. The future of mobility is not just about efficiency and sustainability; it is about creating solutions that enhance the user experience, providing seamless, convenient, and enjoyable transportation options while keeping costs under control.

We are excited to have you join us on this journey towards a more sustainable and technologically advanced future. Together, we can drive the powertrain industry forward, creating efficient, clean, and customer-centric mobility solutions.

**Looking forward to seeing you  
at the SIA Powertrain Congress  
2025 in Port Marly!**

**37<sup>TH</sup>  
EDITION**

## COMITEES

### Conference Chairmen

Jean-Philippe Lelièvre, RENAULT  
Dominique Martineau, VITESCO

### Steering Committee

Frédéric Charon, SIA  
Noureddine Guerrassi, ESTACA  
Joël Op de Beeck, OPMOBILITY  
Philippe China, TOTAL ENERGIES  
Emmanuel Jean, FORVIA  
Gaëtan Monnier, IFPEN  
Olivier Pola, VITESCO  
Bertrand Largy, SIA  
Estelle FORA-PORHAULT, SIA



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A futuristic car, possibly a concept car, is shown from a front-three-quarter view. The car's body is dark and reflective, with glowing light trails in shades of orange, red, and blue streaking across the background, suggesting high speed and advanced technology. The car's headlights and side mirrors are visible.

# We pioneer technology for mobility experiences that matter to people.

FORVIA, a global leader in automotive technology, brings together the complementary technological and industrial strengths of Faurecia and HELLA. With 150,000 employees, including more than 15,000 R&D engineers across over 40 countries, FORVIA offers a unique and comprehensive approach to the challenges of today's and tomorrow's automotive industry. Comprised of six business groups and supported by a robust intellectual property portfolio of around 13,000 patents, FORVIA aims to become the preferred innovation and integration partner for automakers worldwide. FORVIA is a driving force for change, committed to supporting the transformation of mobility.

[www.forvia.com](http://www.forvia.com)

**FORVIA**  
Inspiring mobility



# Automotive Intelligence. **More than AI.**



Join us at our booth and find out more about  
state-of-the-art technologies to create  
solutions for the mobility of tomorrow

Booth 37



# Program 11 june 2025

08:00 **Registration and Welcome coffee**

## OPENING PLENARY SESSION

08:30 **Welcome introduction**

Frédéric Charon, SIA

08:35 **Opening address**

Jean-Philippe LELIEVRE, Renault  
Dominique MARTINEAU, Schaeffler

08:45 **Keynote Renault Group: How to support the transition to electric?**

Philippe BRUNET – SVP EV & Powertrain Engineering / ACDC managing director (Shanghai), Ampere

09:15 **Opening panel discussion: “The powertrain technologies complexity challenge: Getting a dazed customer back on-board”**

Stephen MARVIN, PFA (moderator)  
Olivier LESCHIERA - VP - Head of Propulsion Systems West Europe - STELLANTIS  
Sebastian SINNING – CTO, IAV  
Philippe BRUNET – SVP EV & Powertrain Engineering / ACDC managing director (Shanghai), Ampere  
Clément DUPONT-ROC - Strategy Director, C-WAYS

10:30 **COFFEE BREAK & DEMOCARS**

### H2 ENGINE DESIGN

### ELECTRIC PROPULSION SYSTEM & CONTROL: CONTROL

### ELECTRIC MOTOR & POWER ELECTRONICS: POWER ELECTRONIC

11:30 **Technology pathways for maximizing the efficiency and power output of the 2nd generation of hydrogen engine**

Thomas KÖRFER, FEV

**Performance optimization of eDrive systems through advanced Pulse Width Modulation (PWM) strategies**

Fabien VIDAL-NAQUET, IFP Energies nouvelles

**High-Power-Density Inverter with Innovative Immersion Cooling Solution**

Alexandre BATTISTON, IFP Energies nouvelles

12:00 **Development and testing of a hydrogen direct injection internal combustion engine for off-road applications**

Andrea SCALAMBRO, Politecnico di Torino

**Improve the e-drive efficiency – state of the art & advanced methods review**

Chouaib AFRI & Andreas SCHNELL, Schaeffler

**Benefits of fusion switch for EREV architectures**

Martin GLEICH, Infineon

12:30 **Numerical assessment and optimization of a Compression Ignition Internal Combustion Engine platform for hydrogen operation**

Paul LUCA, IFP Energies nouvelles

**Break**

**Wide-bandgap semiconductors: the key enablers for efficient electric driving**

Manuel GÄRTNER, STMicroelectronics

13:00 **LUNCH BREAK & DEMOCARS**

### H2 MOBILITY DEVELOPMENTS

### ELECTRIC PROPULSION SYSTEM & CONTROL: SIMULATION & VALIDATION

### ELECTRIC MOTOR & POWER ELECTRONICS: CONTROL

14:30 **Reversible phenomena within Low Temperature PEM fuel cells: state of the art, feedback, reflections and suggestions**

Christophe TURPIN, Université Laplace de Toulouse

**Multi virtual ECUs platform setup on propulsion system domain**

Julien ALLARD, Stellantis

**Rotor Temperature Sensor: An Enabler for Performance Improvement and Cost Reduction in Electric Vehicles**

Franck NIECERON, Continental

15:00 **Cryogenic hydrogen storage system for motorsport as enabler for heavy duty segment**

Pierre TIPNER, Faurecia Hydrogen Solutions

**New Solutions for Validation, Homologation and Safe Deployment of Connected Powertrains and ADAS Functions**

Guillaume MILLER, IPG Automotive

**Trends for Automotive Traction Inverters driven by the HV-Battery and the eMotor**

Alexander RAMBETIUS, Valeo

15:30 **Break**

**Electric drive inverter engineering workflow – Project presentation**

Jonathan BRUNEL, Siemens

**EV fault tolerant motor control**

Erik SANTIAGO, NXP

# Program 11 June 2025

16:00 **COFFEE BREAK & DEMOCARS**

	<b>ELECTRIC MOTOR &amp; POWER ELECTRONICS: E-MACHINE</b>	<b>ELECTRIC PROPULSION SYSTEM &amp; CONTROL: SYSTEM</b>	<b>BATTERY: CONTROL AND SIMULATION</b>
17:00	<b>High performance EESM with innovative cooling and transmitter solution</b> Andreas LANGHECK, Schaeffler	<b>Innovative Solutions for Entry-Level EV Cost Challenges</b> Benoit GAREIL, Valeo	<b>Online impedance identification using pseudo-EIS excitation on self-reconfigurable batteries</b> Antoine LAURIN, CEA & Jérôme LACHAIZE, Schaeffler
17:30	<b>Integrated Electronics for Electric Vehicles: Advancing Efficiency, Scalability, and Sustainability with the N-in-1 Concept</b> Alexander HOFFMANN, IAV	<b>Optimizing electric vehicle cold condition autonomy with thermal management</b> Nicolas FREMEAU, Ampere	<b>Modeling Thermal Runaway in Li-ion Batteries and its Propagation Within the Battery Pack</b> Sara ABADA, IFP Energies Nouvelles
18:00	<b>Optimizing E-Motor with AI method</b> Patrick LOMBARD, Altair	<b>Ensuring reliable charging process: Protocols, Conformance, and Interoperability</b> Ayoub EL FAHLI, Vector	<b>Automotive Embedded Platform for real implementation of Electrochemical Impedance Spectroscopy</b> Akshay MISRA, STMicroelectronics

18:30 **COCKTAIL & DEMOCARS**

19:30 **END OF THE DAY**

## Download Our App

Download our latest version of the app, and get access to the program & more.

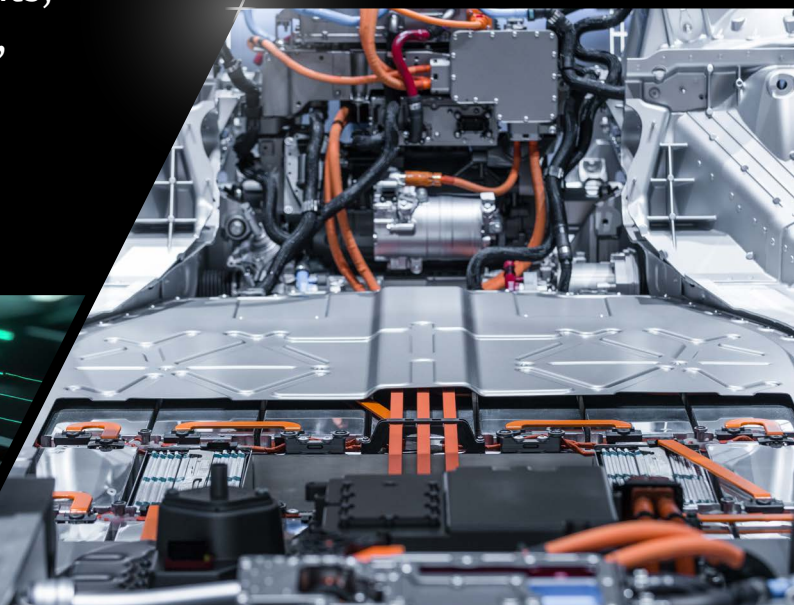
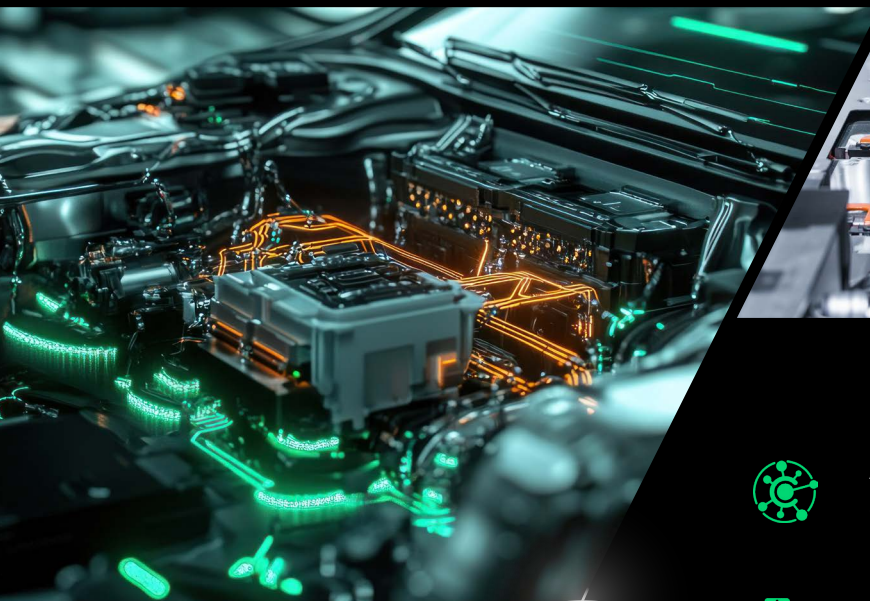
**The app will be accessible 10 days before the congress opening.**





# Empowering Innovation

Global Presence. Proven Experts.  
With the broadest global automotive  
database, we provide in-depth insights,  
benchmarking and tailored solutions,  
enabling our client to dominate the  
industry.



Access precise data and insights  
to improve powertrain efficiency



Understand control strategies, performance  
& consumption of the latest EV systems



Reduce carbon emissions and costs through  
material and process optimization

Come visit us at booth 38





# Innovating for a low-carbon and sustainable world



Connectivity  
& digitalization



Hydrogen &  
low-carbon  
mobility



Electric  
powertrain



Batteries



# Program 12 june 2025

07:30 **WELCOME COFFEE**

	<b>H2 ICE: VEHICLE SYNTHESIS, CONTROL STRATEGIES AND ADVANCED EXHAUST AFTER-TREATMENT</b>	<b>ECO-DESIGN, LCA, RECYCLING &amp; REPAIRABILITY</b>	<b>BATTERY: SYSTEM AND ARCHITECTURES</b>
08:00	<b>HyMot: H2 Democar optimized for Light Commercial Vehicle Applications with Near-Zero Emissions</b> Olivier COUREAU, Ampere	<b>LCA of Light- and Heavy-duty Vehicles – Focus on GHG Emissions and Primary energy</b> Joachim DEMUYNCK, AECC	<b>Blue Solutions – Solid-State Batteries: game-changers for the Next Generation of Electric Vehicles</b> Camille DE SOUZA, Blue-Solutions
08:30	<b>Dedicated Control and Operation Strategies for Hydrogen Internal Combustion Engines</b> Carole QUEREL, FEV	<b>Quantifying the Impact of Recycled Materials on the Performance of Electrical Machines</b> Abdelli ABDENOUR, IFP Energies Nouvelles	<b>Cell to pack battery efficiency heating and cooling comparison</b> Emma TAFFIN, Ampere
09:00	<b>Advanced aftertreatment catalyst and canning technologies for future engines running on H2 and complying with ultra-low NOx requirements</b> Evangelos GEORGIADIS, Dinex	<b>Sustainable solutions: green method for carbon fiber recycling</b> Louis MEUNIER, Expleo	<b>Evaluating Sodium-Ion for Low-Voltage Battery Applications</b> Brahim SOLTANI, IAV
09:30	<b>H2 ICE LCV, from concept to certification and open road customer drive</b> Mathieu DA GRACA, Phinia	<b>Eco-design approach for dedicated fluids for E-drives: boosting efficiency and durability with lower carbon emissions</b> David SENARD, Total Energies	Break

10:00 **COFFEE BREAK & DEMOCARS**

## PLENARY SESSION

11:00	<b>Keynote ADEME: “Carbon challenges and pathway for transport compared with other sectors in France and abroad”</b> Bertrand-Olivier DUCREUX – Engineer, ADEME
11:30	<b>Keynote</b> Sophie SCHMIDTLIN – CTO, The Future is Neutral
12:00	<b>Keynote “Towards circularity: Is the automotive industry up to the challenge ?”</b> Stephen MARVIN – R&D Director, PFA & Kai Frederik ZASTROW, Senior Fellow Regulation Certification Standards, Stellantis
12:30	<b>LUNCH BREAK &amp; DEMOCARS</b>
14:00	<b>Student posters awards</b>
14:15	<b>Keynote FEV: Passenger car propulsion technology post 2035</b> Dr Norbert ALT – FEV
14:45	<b>Keynote: “Ultra-low emission internal combustion engines: Global trend, local blends”</b> Julien FAURE – CTO, Horse Powertrains Solutions
15:15	<b>Panel discussion: Powertrain segmentation for different markets – pure thermal, hybrid and BEV offerings</b> <ul style="list-style-type: none"> <li>• Frédéric CHARON, SIA / Forvia (moderator)</li> <li>• Lukas WALTER – Chief Operating Officer, AVL</li> <li>• Remy TRIOULEYRE – CEO, Schaeffler</li> <li>• Julien FAURE – CTO, Horse Powertrains Solutions</li> <li>• Claudine ROCHETTE – Valeo Power Division Strategy &amp; Communication VP, Valeo</li> <li>• Nicolas SECHET – VP Hydrogen planning, Stellantis</li> </ul>
16:15	<b>Closing remarks</b> Jean-Philippe LELIEVRE, Renault Dominique MARTINEAU, Schaeffler

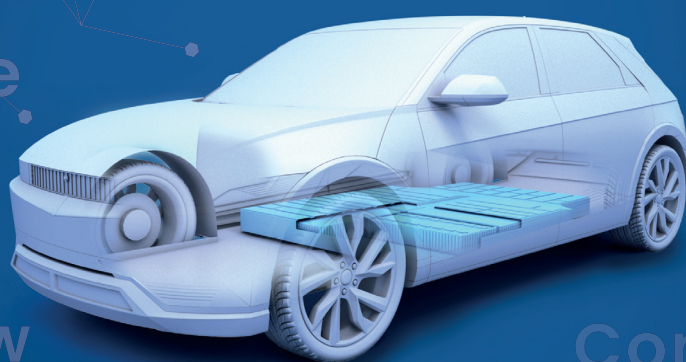
16:30 **END OF THE CONGRESS**



Expertise

R&D

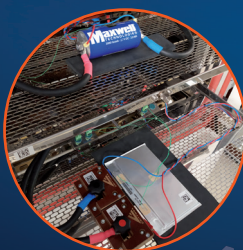
Know-how



Flexibility

Testing

Confidentiality



SP3AACH.fr

Since 25 years, **CRITT M2A** has been a testing and R&D center offering its expertise to mobility stakeholders through state-of-the-art testing facilities. At the forefront of energy management optimization, **CRITT M2A's** skills revolve around the following activities:

- From chem to pack
- Benchmark
- Safety Testing
- Performance & Endurance Testing
- Thermal Characterization
- Thermal Propagation
- Internal / External Short Circuit

CONTACT US  
[crittm2a@crittm2a.com](mailto:crittm2a@crittm2a.com)

[www.crittm2a.com](http://www.crittm2a.com)



# Battery engineering and testing services



More than 15 years' experience conducting battery projects as well as a large partner panel to offer the best solutions to our customers.



## ENGINEERING

- ▶ Battery concept and design
- ▶ BMS development
- ▶ Multiphysics simulation
- ▶ Health monitoring and Prognostic health management



## TESTING – CELLS, MODULES & PACKS

- ▶ **Electrical** tests: performance and endurance with climatic chambers and cooling systems
- ▶ **Mechanical** tests: vibration, shock
- ▶ **Environmental** tests : IP, corrosion, thermal, humidity
- ▶ **Abuse** tests : overcharge, short circuit, crush, nail penetration, thermal propagation, gas analysis
- ▶ Support to certification: UN38.3, ECE R100, SAE, IEC, GB and other standards
- ▶ 8 testing platforms



## CONSULTING AND LABORATORY EXPERTISE

- ▶ Manufacturing process audit
- ▶ Teardown, benchmarking, comparative and failure analysis

AUTOMOTIVE | MARINE | RAILWAY | AEROSPACE | STATIONARY



SERMA Technologies has been accredited by **COFRAC** for the R100 battery tests carried out by the Energy & Renewables business unit (scope no. 1-7191 available at [www.cofrac.fr](http://www.cofrac.fr)).

[csc@serma.com](mailto:csc@serma.com) | [contact-energy@serma.com](mailto:contact-energy@serma.com)

# Access & information

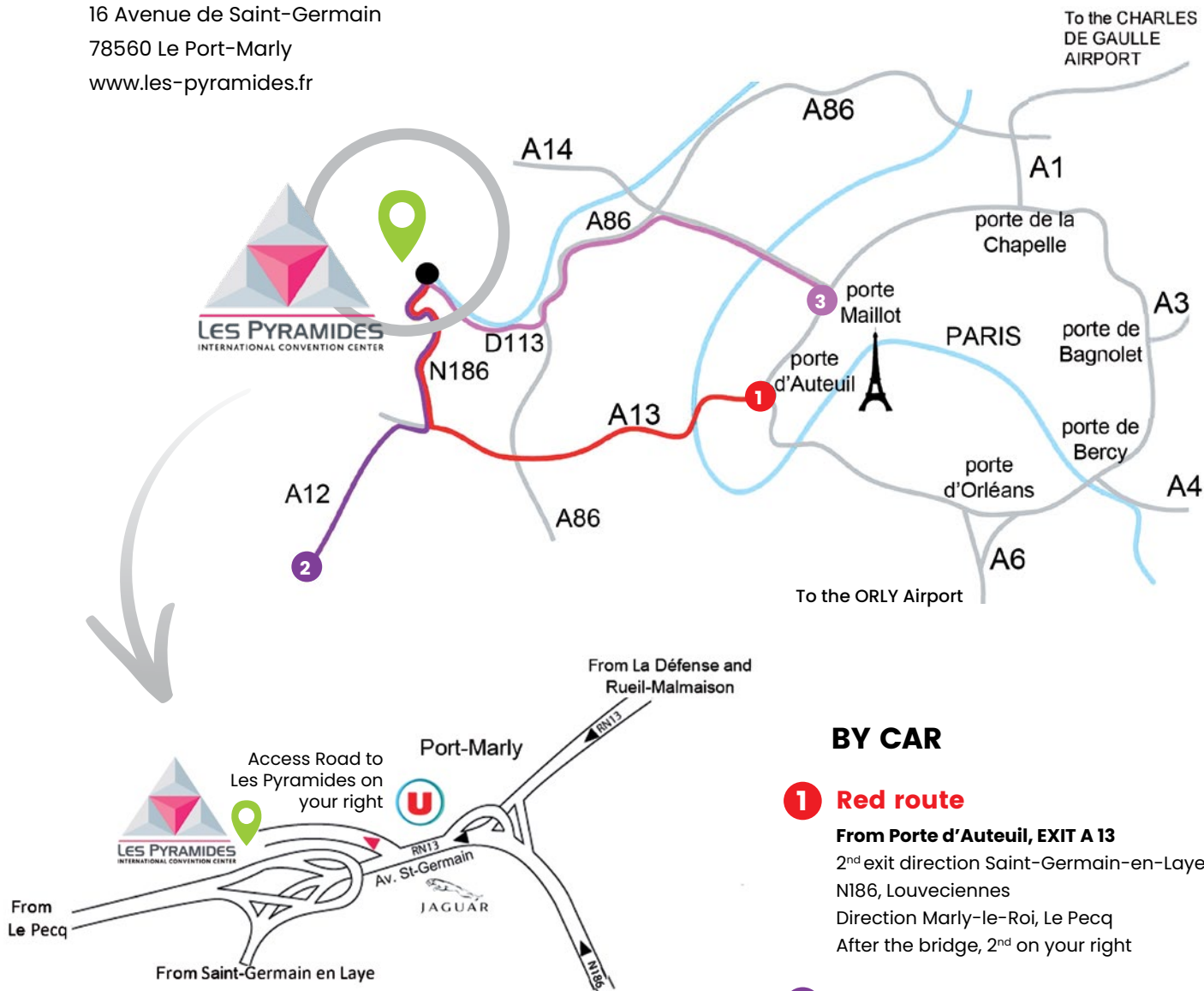
## LES PYRAMIDES

### International convention centre

16 Avenue de Saint-Germain

78560 Le Port-Marly

[www.les-pyramides.fr](http://www.les-pyramides.fr)



## BY CAR

### 1 Red route

#### From Porte d'Auteuil, EXIT A 13

2<sup>nd</sup> exit direction Saint-Germain-en-Laye  
N186, Louveciennes  
Direction Marly-le-Roi, Le Pecq  
After the bridge, 2<sup>nd</sup> on your right

### 2 Purple route

#### From A 12 direction Paris

EXIT Saint-Germain-en-Laye  
N186, Louveciennes  
Direction Marly-le-Roi, Le Pecq  
After the bridge, 2<sup>nd</sup> on your right

### 3 Pink route

#### From Porte Maillot

Direction La Défense  
A 14/A86 direction Nanterre, Versailles  
EXIT at Rueil Malmaison  
0113 Le Port Marly, Bougival  
Direction Le Pecq

### P Parking on site



## BY PUBLIC TRANSPORTATION

Please find the best itinerary  
here:

[www.ratp.fr/en/itineraires](http://www.ratp.fr/en/itineraires)