



PROGRAM

SIA POWERTRAIN 2025

International Congress & Exhibition

PORT MARLY, FRANCE
CENTRE DES CONGRÈS
LES PYRAMIDES



SIA Powertrain Congress 2025

Port Marly, France

The 37th 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 37th 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!

37TH
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



Estelle FORA-PORHAULT
estelle.fora@sia.fr
0676622487
www.sia.fr



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

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

ALLONS VOIR CE QUE
NOUS RÉSERVE L'AVENIR.



Plastic Omnium s'appelle désormais **OPmobility**. La mobilité est un enjeu majeur pour notre société. En imaginant des solutions technologiques innovantes, **OPmobility** réinvente une mobilité plus sûre, plus responsable, plus abordable, plus engagée. Nouvelles énergies, nouvelles attentes, nouvelles perspectives, les défis de demain sont essentiels. **OPmobility** est là pour les relever.

ALWAYS ON THE MOVE*

*Toujours en mouvement

Program 11 June 2025

08:00 **Registration and Welcome coffee**

OPENING PLENARY SESSION - Auditorium

08:30 **Welcome introduction**

Christophe Aufrère, 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
Thomas MÜLLER - Executive Vice President Powertrain Systems, 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 Auditorium

ELECTRIC PROPULSION SYSTEM & CONTROL: CONTROL - Tesla

ELECTRIC MOTOR & POWER ELECTRONICS: POWER ELECTRONIC Faraday

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 & Hakim EL BAHI, 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

BEV to REEV: a scalable Powertrain Platform Concept
Alexander FANDAKOV

Wide-bandgap semiconductors: the key enablers for efficient electric driving
Manuel GÄRTNER, STMicroelectronics

13:00 **LUNCH BREAK & DEMOCARS**

H2 MOBILITY DEVELOPMENTS Auditorium

ELECTRIC PROPULSION SYSTEM & CONTROL: SIMULATION & VALIDATION - Tesla

ELECTRIC MOTOR & POWER ELECTRONICS: CONTROL Faraday

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
Thomas KARASIEWICZ & Roman FELDER, IPG Automotive

Trends for Automotive Traction Inverters driven by the HV-Battery and the eMotor
Alexander RAMBETIUS, Valeo

15:30 **Major advantages of thermoplastic composites for Hydrogen pressure tank applications**
Jérémy VIALE & Thibaut MIGNOT, CETIM

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**

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

18:30 **COCKTAIL & DEMOCARS**

19:30 **END OF THE DAY**

Download Our App

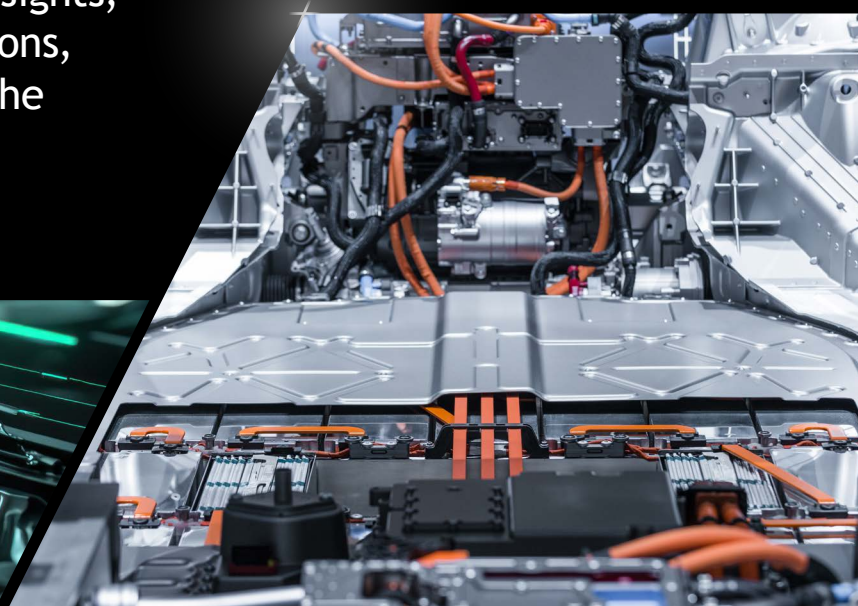
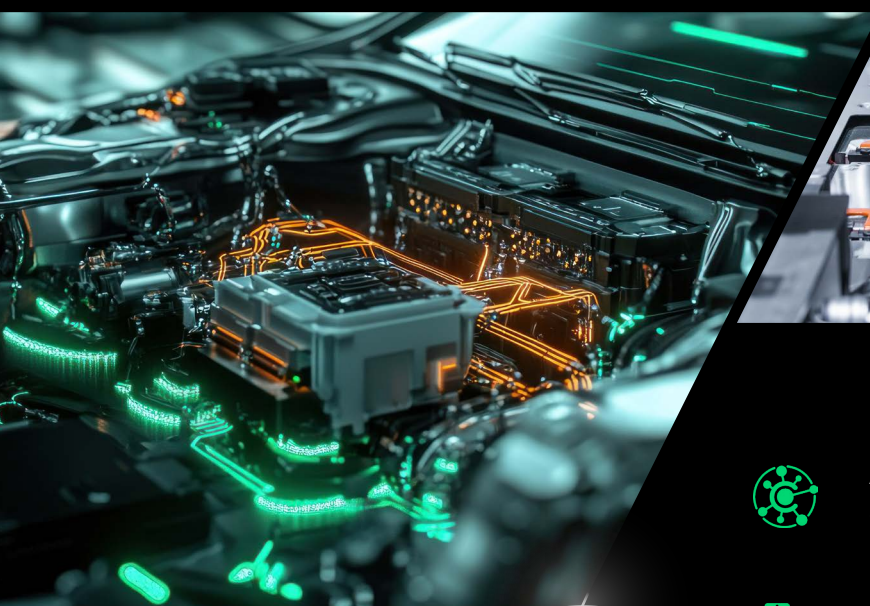
Download our latest version of the app, and get access to the program & more.

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

For more information, visit
www.A2MAC1.com



Innovating for a low-carbon and sustainable world



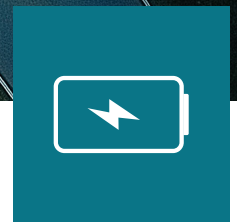
Connectivity
& digitalization



Hydrogen &
low-carbon
mobility



Electric
powertrain



Batteries

Accelerating transformation for a sustainable future

**TDK is the biggest European manufacturer and designer of
passive components with 15 factories in Europe**

Do you know our latest innovations?



▶ **CeraLink Capacitor**
1000V / 12nF / 2220



▶ **Smart AlN Substrate**
for highest power densities



▶ **Immersion
Temperature sensor
for EV cooling**



▶ **MLCC for OBC**
COG 1250V-1210-10NF



▶ **Compact gate driver
transformer**



▶ **P+T Sensor for
Heat Pump**

Discover [here](#) our latest innovations for xEV

For any questions, please contact Cécile at cecile.vanwalscappel@tdk.com

Program 12 June 2025

07:30 **WELCOME COFFEE**

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

10:00 **COFFEE BREAK & DEMOCARS**

PLENARY SESSION - Auditorium

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

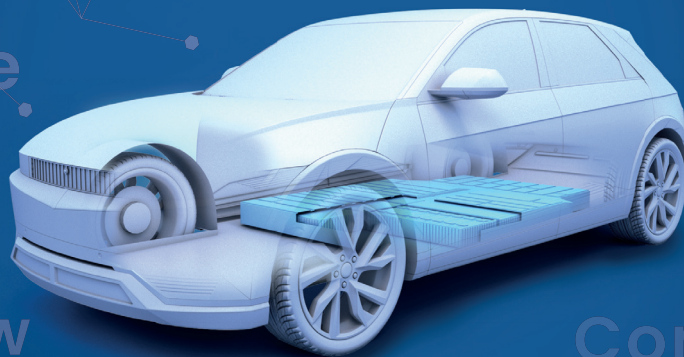
16:30 **END OF THE CONGRESS**



Expertise

R&D

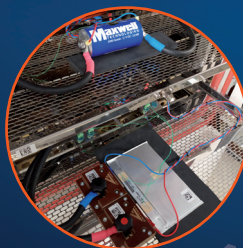
Know-how



Flexibility

Testing

Confidentiality



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

www.crittm2a.com



Advancing Sustainability Today, Powering a Cleaner Tomorrow.

We're creating a fuel-efficient, premium quality portfolio to constantly move towards greater sustainability, improving resources, and exploring alternative fuels.



phinia.com



Visit us at stand 29
June 11-12

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).

csc@serma.com | contact-energy@serma.com

Access & information

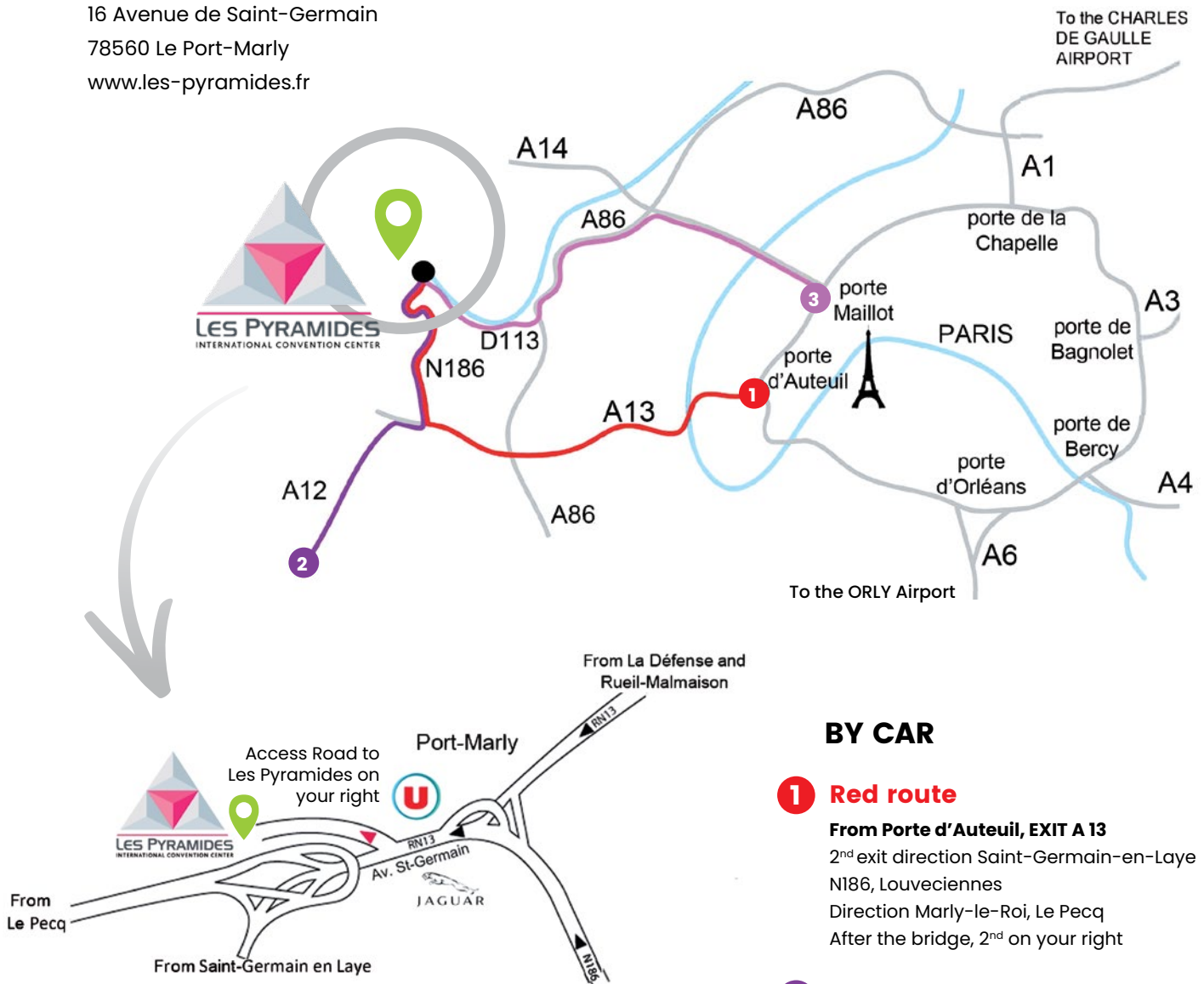
LES PYRAMIDES

International convention centre

16 Avenue de Saint-Germain

78560 Le Port-Marly

www.les-pyramides.fr



BY CAR

1 Red route

From Porte d'Auteuil, EXIT A 13

2nd exit direction Saint-Germain-en-Laye
N186, Louveciennes
Direction Marly-le-Roi, Le Pecq
After the bridge, 2nd 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, 2nd 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

RATP



BY PUBLIC TRANSPORTATION

Please find the best itinerary here:

www.ratp.fr/en/itineraires