

« **ENERGITIC MACROSCOPIC REPRESENTATION AND OTHER GRAPHICAL DESCRIPTIONS** »

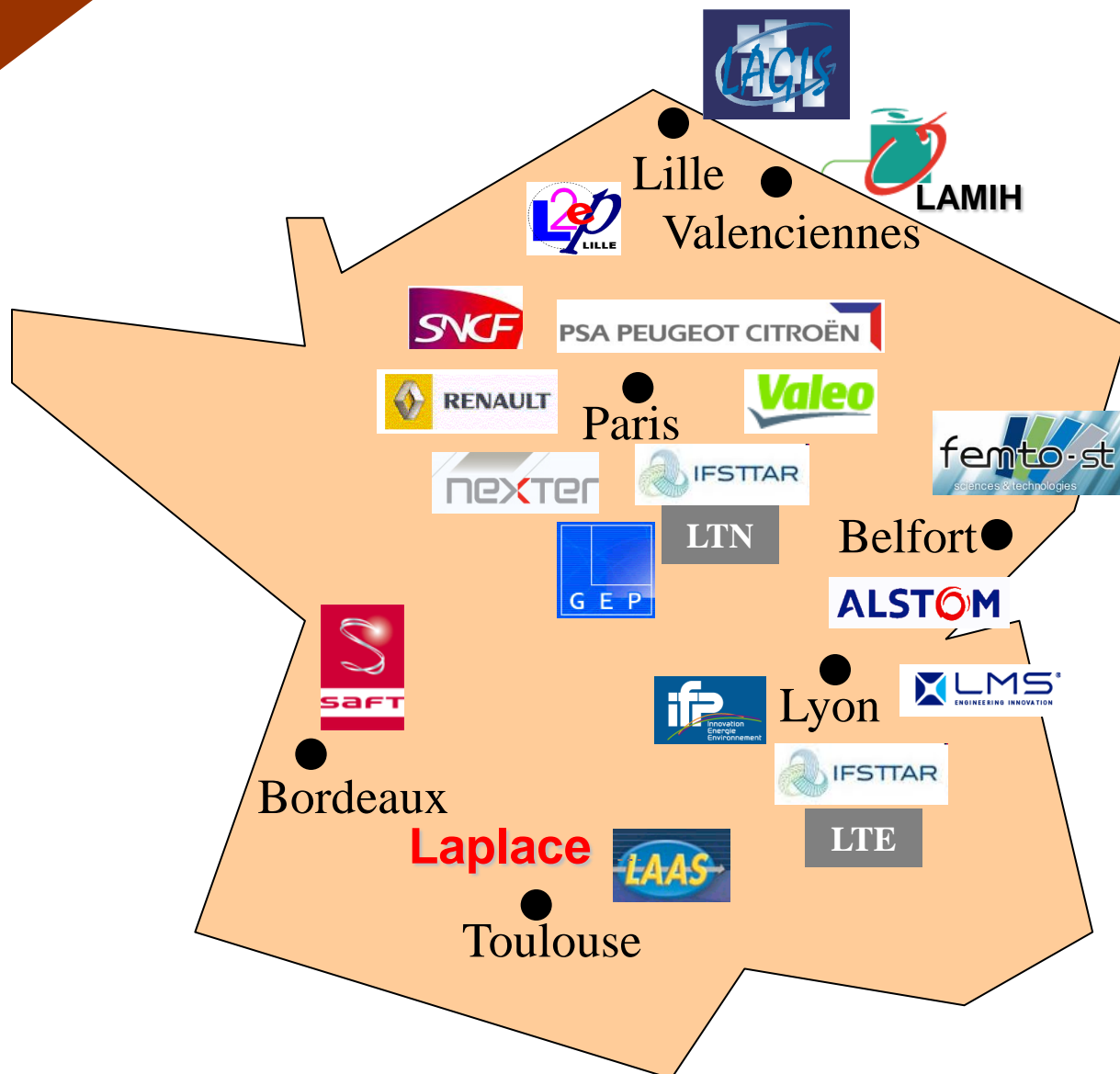
Invited session organized by MEGEVH
(French scientific network on EVs and HEVs)

Co-chairs

Prof. A. BOUSCAYROL (Université Lille1, MEGEVH, France)

Prof. K. AGBOSSOU (Institut Recherche en Hydrogène, Canada)

- MEGEVH network -



MEGEVH
French network on HEV's

(Energy management of Hybrid Electric Vehicles)

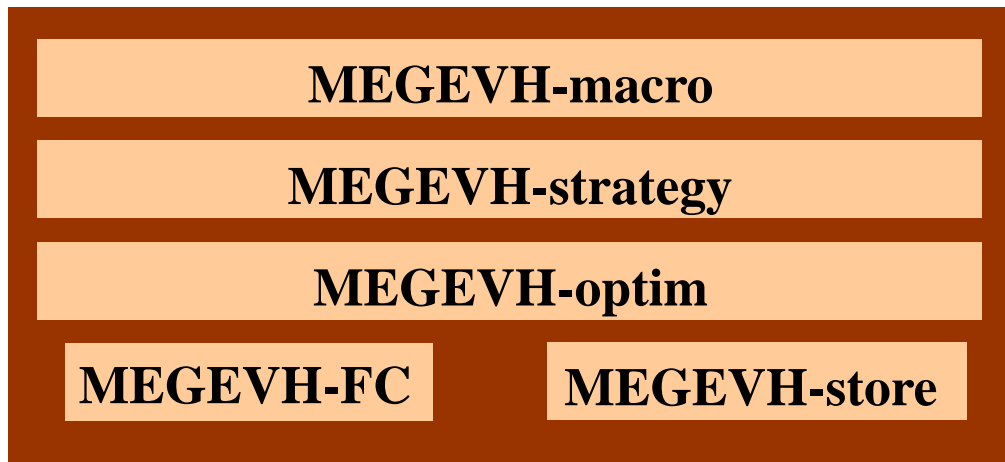
Coordination:
 Prof. A. Bouscayrol

6 projects
 6 PhDs in progress
 7 PhDs defended

8 industrial partners
 10 academic Labs

- MEGEVH philosophy -

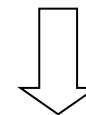
Theoretical level



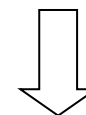
Vehicle level

Development of methodologies of modelling and energy management

independently of the kinds of vehicles



- co-supervised PhD
- collaborative projects



- EMR as common tool
- generic model of HEV (Prize)



Paper Prize Award of IEEE-VPPC'08

- Experimental platforms, and vehicles -

plate-form « eV »

Real-time energy management



Toyota Prius II



plate-form

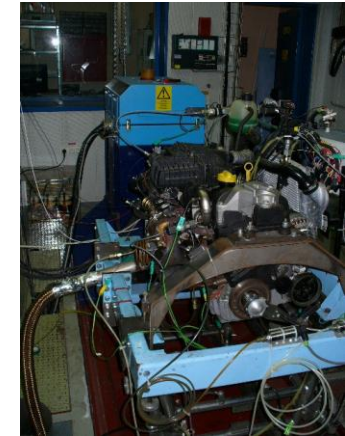
« storage devices »



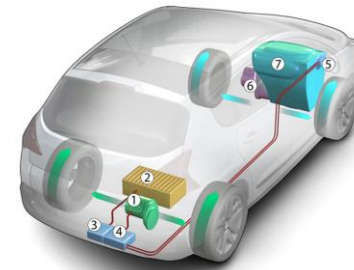
DPE 6x6



plate-form « propulsion »



3008 HY4



PSA PEUGEOT CITROËN

- EVs and HEVs (and other vehicles) are more and more complex
- High dynamic performances and high efficiency are required



powerful tools for modeling, control and energy management
EMR (Energetic Macroscopic Representation) is a new tool in that aim

1. EMR and Bond Graph of an EV
(Univ Rio Cuarto, Argentina, Univ Lille1, France)
2. EMR of an IC Engine
(Univ. Lille1, PSA Peugeot Citroën, MEGEVH, France)
3. EMR of a subway traction drive
(Univ. SouthEast, China, Univ. Lille1, France)
4. EMR of an hybrid locomotive
(Univ F. Comte, Alstom, MEGEVH, France)

Other EMR papers have been moved to other sessions

MEGEVH has organized 2 other special sessions in VPPC'12
“Energy Storage Systems” and “Energy Management of HEVs”