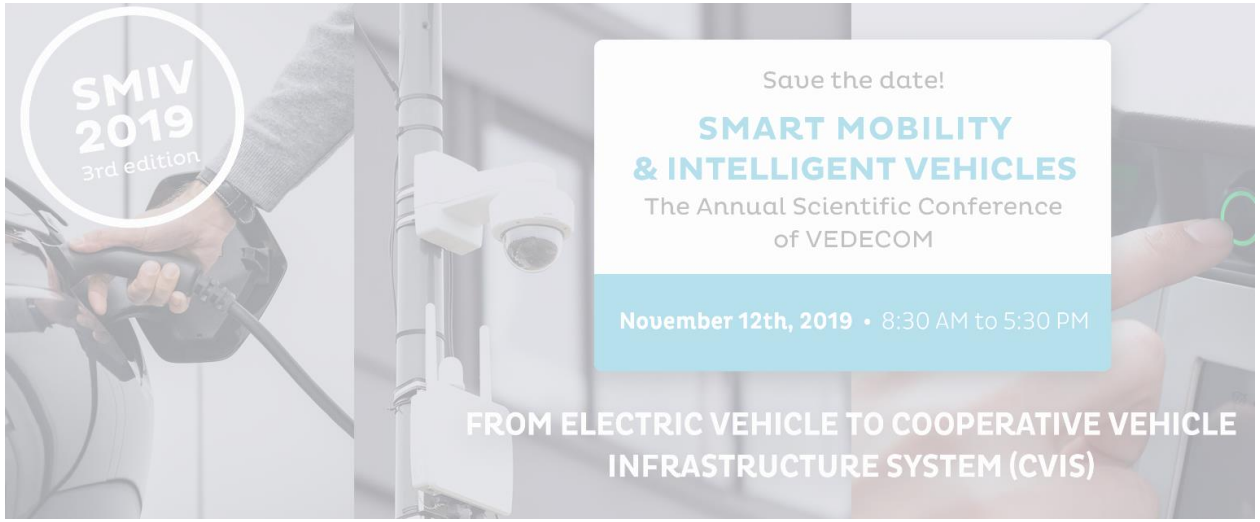
SMIV 2019

Scientific Conference
Smart Mobility & Intelligent Vehicle

November 12th, 2019



INTRODUCTION

Rémi BASTIEN, Chairman

Prof. Féthi BEN OUEZDOU, Scientific Director

INSTITUT VEDECOM

25 Nationalities

More than
50% under **30 years old**

VEDECOM: COLLABORATIVE RESEARCH HUB

VEDECOM, Institute for Energy Transition created on 2014

Foundation of the Université de Versailles Saint-Quentin-en-Yvelines (UVSQ)

Dedicated for Sustainable MOBILITY:

- **Enhanced Autonomy**
- **Green Mobility**
- **Shared Mobility**

Annual Budget: 30 millions euros

200 people (Researchers, PhD Students, Engineers, Staff) at Work

56 public & private MEMBERS

cooperating on pre-competitive
&
pre-normative Research projects

Territories

Companies

PARTNERS

SUPPORT

Academics

S&T ROADMAP – DOMAIN #2& #3 ADDRESSED BY SMIV 2019

D2.OS1	Enriched data generation for AV's validation
D2.OS2	Multi-sensory perception and decision system for AV's navigation
D2.OS3	Reliable and low latency communication for intelligent mobility
D2.OS4	Onboard and off-board intelligence for AV and Infrastructure

Driving delegation and connectivity

Shared mobility and energy

D3.OS1	Measurement, analysis, prediction and optimization of mobility solutions
D3.OS2	Adapt new mobility, promote their acceptability and improve the security of interactions for the Users
D3.OS3	Techno-economic analysis of new mobility systems
D3.OS4	Innovate in new mobility through a societal (IVM) and Legal approaches

SMIV CONFERENCE

SMIV SCOPE AND AIMS

SMIV: SMART MOBILITY & INTELLIGENT VEHICLES

Annual RDV for Scientific Exchanges related to VEDECOM Research fields

- **Workshop day " Artificial Intelligence and Autonomous Vehicles", 28th Sept. 2016: 80 participants**
- **1st edition, 8th & 9th, Nov. 2017: 120 participants**
- **2nd edition, 27th Nov. 2018: 200 participants**
- **3rd edition, 12th Nov. 2019: 350 registrations**

2 Sessions related to
- D2 : Driving Delegation & Connectivity
- D3 : Mobility & Shared Energy

2 Key Note Speakers
- Prof. Ramteen SIOSHANSI , OHIO State University, USA
- Dr. Fawzi NASHISHIBI, INRIA, FRANCE

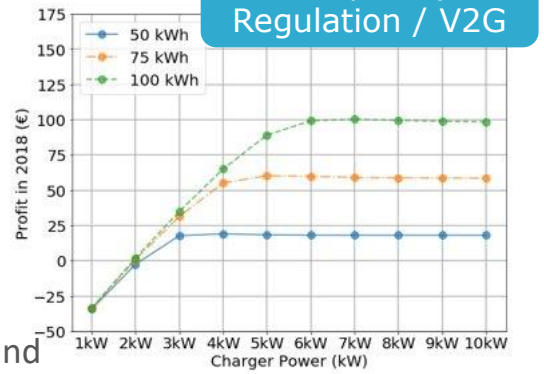
9 Scientific Presentations

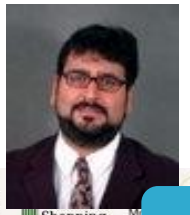
SESSION 1 : SUSTAINABLE AND ELECTRIC MOBILITY

Moderators: Dr. Emilia **SUOMALAINEIN** & Dr. Jaafar **BERRADA** - VEDECOM Researchers

D. **LAUINGER**
EPFL, Switzerland

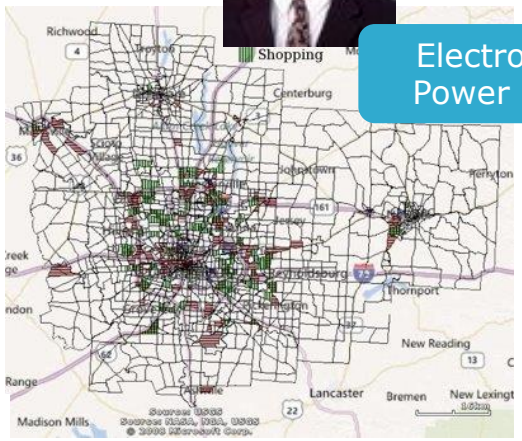
Frequency Regulation / V2G





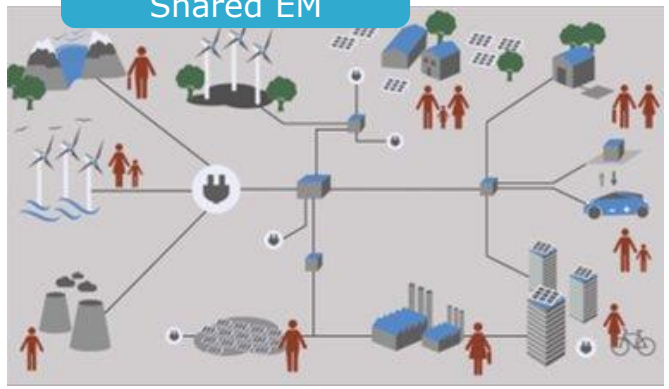
Prof. R. **SIOSHANSI**
OSU, USA

Electromobility Power Systems

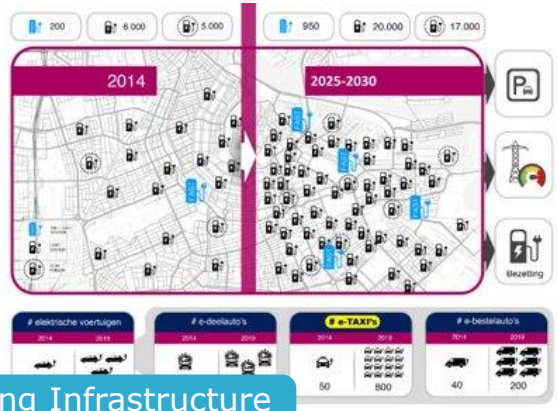


Dr. U. **BURGHARD**
ISI Fraunhofer
Germany

Market acceptance Shared EM

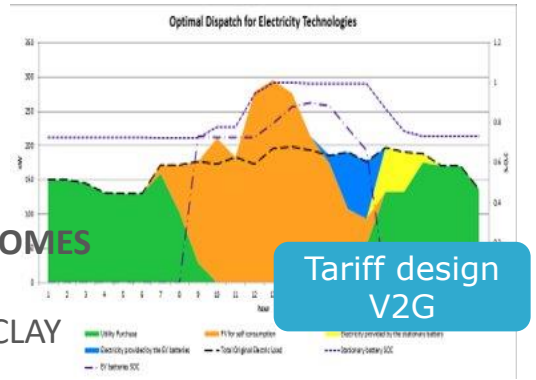


R. **WOLBERTUS**
Delft University
Netherlands



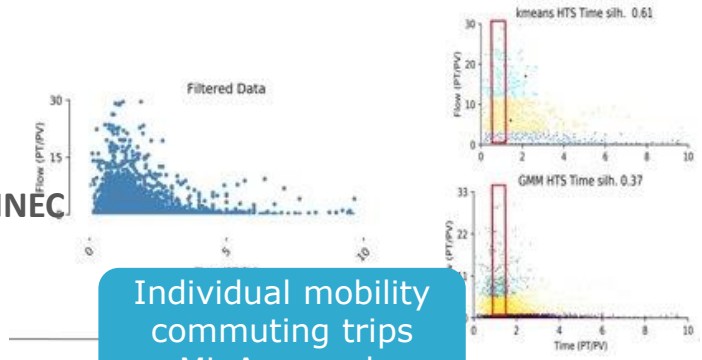
Charging Infrastructure Urban areas

I. **FREITAS GOMES**
VEDECOM
U. PARIS SACLAY



Tariff design V2G

Dr. R. **LE BOENNEC**
VEDECOM



Individual mobility commuting trips ML Approach

SESSION 1 SCHEDULE

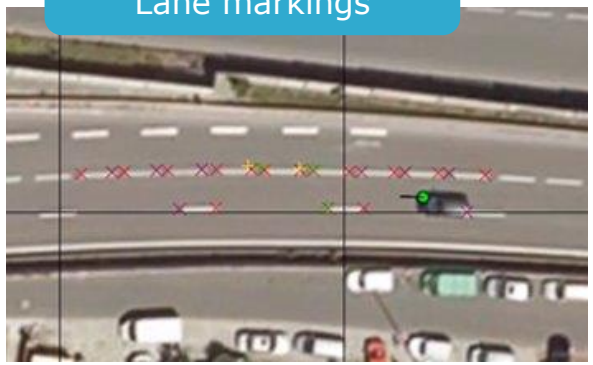
9:30	Managing the Seams Between Electromobility and Power Systems Prof. Ramteen SIOSHANSI, Keynote Speaker, Professor in Department of Integrated Systems Engineering, OHIO State University
10:30	Reliable Frequency Regulation through Vehicle-to-Grid Dirk LAUINGER,EPFL and VEDECOM PhD Student in Optimization under Uncertainty
10:55	Charging Infrastructure for Electric Vehicles in urban areas, lessons learned and an outlook Rick WOLBERTUS, Msc, Researcher in Charging Infrastructure for Electric Vehicles, Amsterdam University of Applied Sciences / TU Delft
	11:20 BREAK
11:30	Tariff design with electromobility and V2G Icaro FREITAS-GOMES, VEDECOM PhD Student in Energy Economics
11:55	Market acceptance of shared electric mobility in Germany Dr. Uta BURGHARD, Researcher in the Competence Center Energy Technology and Energy Systems - Fraunhofer ISI
12:20	Motorized individual mobility in commuting trips: modal preference or constrained mode choice? A machine learning approach Dr. Rémy LE BOENNEC, VEDECOM Researcher in Economics
	12:45 LUNCH BUFFET **Scientific presentation**

SESSION 2 : THE INTELLIGENT VEHICLE AND ITS COLLABORATION WITH THE INFRASTRUCTURE

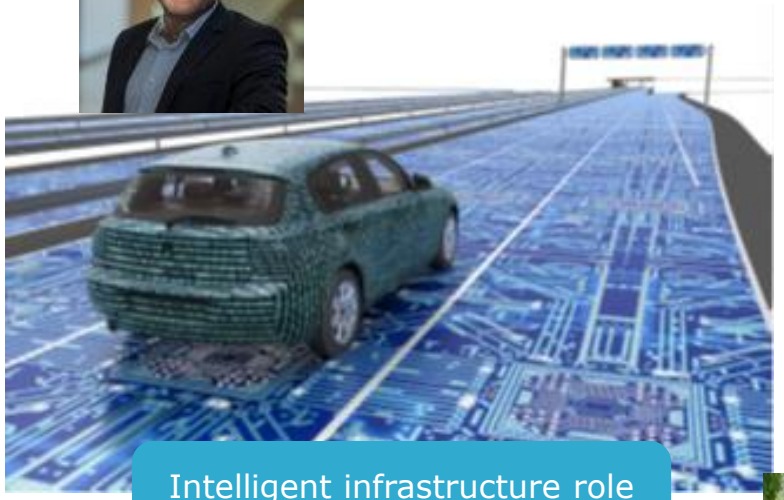
Moderators: Dr. Aziz **DZIRI** & Dr. Mercedes **BUENO GARCIA** - VEDECOM Researchers

Dr. M. **REVILLOUD**
VEDECOM

Re-localization
Lane markings



Dr. F. **NASHISHIBI**
INRIA, AutoKAB



Intelligent infrastructure role
Massive deployment of AVS

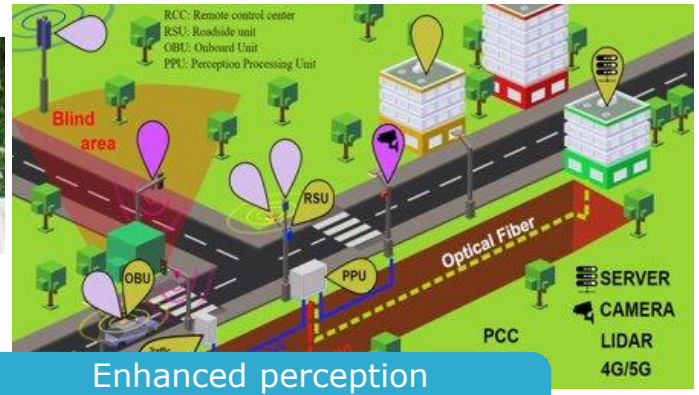
Dr. N. **METTAYER**
VEDECOM

Communication HMI for AV's pedestrian's study

Dr. R. **DAVID**
CEA

Automotive Computing
Environment
Open RT Platform

N. **FRISSA**
VEDECOM



Enhanced perception
Roadside infrastructure
Paris Sacaly EVAPS project

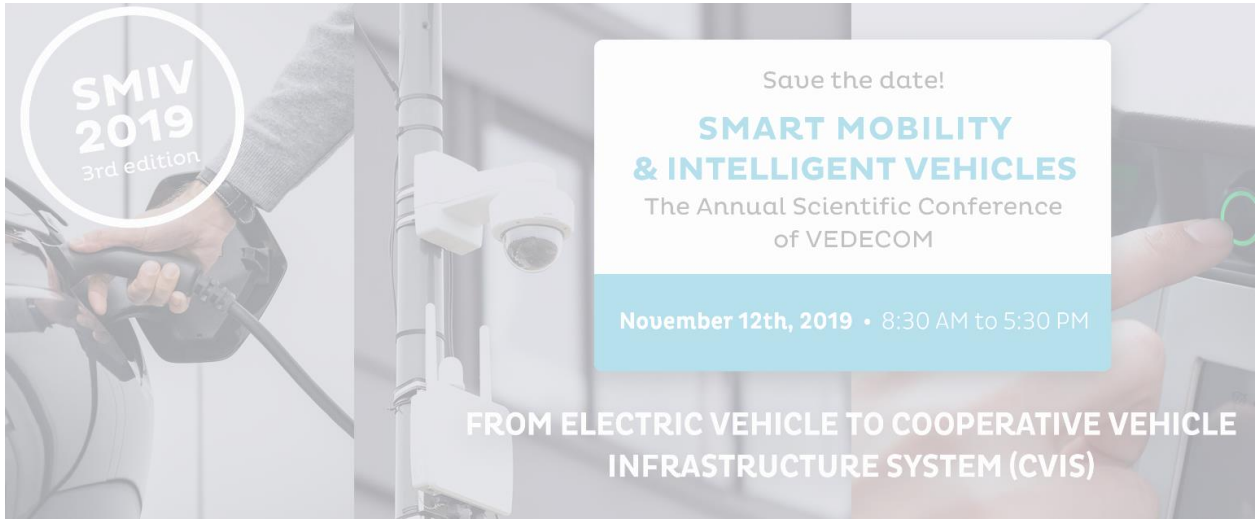
SESSION 2 SCHEDULE

2:00 pm	Introduction
2:15 pm	The role of the intelligent infrastructure in the development and deployment of autonomous vehicles Dr. Fawzi NASHASHIBI, Programme Director RITS, INRIA Paris
3:15 pm	Lane markings-based localization Dr. Marc REVILLOUD, VEDECOM researcher in perception
	3:40 pm BREAK
3:55 pm	Modular and Open Real-Time Platform for Future Automotive Computing Environment Dr. Raphaël DAVID, Strategic Program Manager, CEA
4:20 pm	Pedestrians' study: autonomous vehicles to pedestrian communication (eHMI) Dr. Natacha METAYER, VEDECOM Researcher in ergonomics
4:45 pm	Enhanced perception and roadside infrastructures for autonomous vehicles: "Paris Saclay autonomous Lab" case study Nassima FRISSA, VEDECOM Infrastructure Research Engineer for autonomous vehicles
	5:15 pm CLOSING Mr. Philippe WATTEAU, Chief Executive Officer of VEDECOM Prof. Féthi BEN OUEZDOU, Scientific Director of VEDECOM, General Chair

SMIV 2019

Scientific Conference
Smart Mobility & Intelligent Vehicle

November 12th, 2019



Merci de votre attention

Thank you for your attention