



INTERNATIONAL CONFERENCE  
AND EXHIBITION

OCTOBER  
**6-7**  
2010

Versailles  
**Satory**  
France

# V.I.S.I.O.N

VEHICLE AND INFRASTRUCTURE  
SAFETY IMPROVEMENT IN  
ADVERSE CONDITIONS AND NIGHT DRIVING



V.I.S.I.O.N  
CONGRESS  
2010

# PROGRAMME



Yvelines  
Conseil général

île de France



mov'eo  
Pôle de compétitivité

Lighting  
Research Center  
Rensselaer

## OVERVIEW AND OBJECTIVES

In the light of the successes of the V.I.S.I.O.N. Congresses en 2002, 2004, 2006 and 2008, SIA (French Society of Automotive Engineers) will host this event again in 2010. 2010 will see the progress of many innovations in lighting systems (LEDs / OLED, AFS, night vision, adaptive lighting, ARS...) and detection systems (camera, Radar, Lidar, ultrasonic...). The 2010 congress will highlight affordable technologies in order to improve worldwide safety. This event will bring together the major players in this field to address key topics for vision and road safety, especially lighting systems and driving assistance. In addition, an exhibition and night drive tests with 20 expected prototype vehicles will take place to demonstrate many recent innovations in lighting and detection systems.

**Conference Chairman: Hector FRATTY**

## ORGANISING COMMITTEE

*Jean-Marc BLOSSEVILLE - INRETS/LIVIC*  
*Jean-François BOISSOU - PSA PEUGEOT CITROËN*  
*Jean-Paul CHARRET - VALEO*  
*Hector FRATTY - DRIVING VISION NEWS*  
*Nathalie LARRIBEAU - PSA PEUGEOT CITROËN*

*Paul-Henri MATHA - RENAULT*  
*Joachim MATHES - VALEO*  
*Daniel PFRIMMER - SIA*  
*Didier WAUTIER - RENAULT*

## SCIENTIFIC COMMITTEE

### Accident Research and Human Factors

*Yves PAGE - LAB, France*

### Driver Assistance Systems

*Didier AUBERT - INRETS, France*  
*Uwe BEUTNAGEL-BUCHNER - BOSCH, Germany*  
*Jean Marc BLOSSEVILLE - INRETS, France*  
*Alberto BROGGI - VisLab & University of Parma, Italy*  
*Jean-François BOISSOU - PSA PEUGEOT CITROËN, France*  
*Arnaud DE LA FORTELLE - MINES PARISTECH, France*  
*Lali GHOSH - DELPHI, Germany*  
*Matti KUTILA - VTT, Finland*  
*Patrice REILHAC - VALEO, Germany*  
*Magnus RILBE - VOLVO, Sweden*  
*Gideon STEIN - MOBILEYE, Israel*  
*Bo WASS - AUTOLIV, Sweden*  
*Didier WAUTIER - RENAULT, France*

### Lighting Systems

*John D. BULLOUGH - LRC RENNELAER POLYTECHNIC INSTITUTE, USA*  
*Jean-Paul CHARRET - VALEO, France*  
*Hans-Theo DORISSEN - HELLA, Germany*  
*Hector FRATTY - DRIVING VISION NEWS, France*  
*Michael HAMM - AUTOMOTIVE LIGHTING, Germany*  
*Wolfgang HUHN - AUDI, Germany*  
*Pr. KHANH - TUD Darmstadt, Germany*  
*Nathalie LARRIBEAU - PSA PEUGEOT CITROËN, France*  
*Paul-Henri MATHA - RENAULT, France*  
*Rainer NEUMANN - VISTEON, Germany*  
*Ralf SCHÄFFER - PHILIPS, Nederland's*  
*Ingolf SCHNEIDER - OPEL, Germany*  
*Masaru SASAKI - KOITO, Japan*

## ORGANISING COMMITTEE

The Société des Ingénieurs de l'Automobile (the French Society of Automobile Engineers) is a society officially considered as serving the public interest. Its purpose is to represent technical excellence in the automobile industry through its expert and knowledge sharing networks. The SIA draws its members from the ranks of automobile engineers and technicians and all those active in promoting automotive engineering. SIA has 2 000 members and a network of over 8 000 engineers, technicians and research workers behind it.



**SIA**

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## VISION PROGRAMME - OCTOBER 6, 2010

- 8:00 Participants registration  
 9:00 Opening Speeches  
*Martin HAUB – Valeo, France*

### SESSION 1 : XENON

Chair : Kamislav FADEL - AL

- 9:10 The affordable, green and superior head-lighting solution for mid segments: Xenon 12V  
*J-S. STRAETMANS - Philips Technologie, Germany*  
 9:30 25 W BiXenon Systems and LED Technology to face the changing requirements in OEM's Low Energy Lighting Portfolio  
*M. HAMM - Automotive Lighting, Germany*  
 9:50 Low Power Bi-Xenon Headlamps  
*R. NEUMANN - Visteon Corporation, Germany*  
 10:10 A way to address future AFS challenges: integrated mechatronics solutions  
*C. HABEGGER - SONCEBOZ, Switzerland*  
 10:30 General discussion on Xenon  
**10:40 Break and exhibition visit**

### SESSION 2 : LED

Chair : Wolfgang HUHN - Audi

- 11:10 Fascination LED Headlamp – Dynamics through Technology and Design  
*M. KLEINKES - Hella KGaA Hueck & Co., Germany*  
 11:30 Adaptive Driving Beam with LED  
*V. SANCHEZ, B. REISS - Valeo Lighting Systems, France*  
 11:50 Enabling Maximum Design Diversity and Optimized Illumination in Vehicle Lighting using Customized LEDs  
*T. MANTH, B. WALDMANN - Odelo LED GmbH, Germany*  
 12:10 Requirements for the next Generation LED for Signalling- and DRL Functions  
*M. BRANDL, U. STREPPPEL, K-J. LANG - OSRAM Opto Semiconductors GmbH, Germany*  
 12:30 OLEDs - Potential and challenges for automotive lighting  
*K. DÜRKOPP, W. POHLMANN, T. RUTHS - Hella KGaA Hueck & Co., Germany*  
 12:50 General discussion on LED  
**13:00 Lunch and exhibition visit**

### SESSION 3 : LED

Chair : Hans-Theo DORISSEN - Hella

- 15:00 Regulatory Amendments for application of LEDs in Automotive lighting  
*W. VAN LAARHOVEN - KEMA Quality B.V., The Netherlands*  
 15:20 Optimization of new thermal management system for LED head Lamp  
*S-M. KIM, K-S. KIM, Y-G. JANG - Hyundai MOBIS, Korea*  
*H-W. NO - Hyundai Motors, Korea*  
 15: 40 Cost-effective solutions with LEDs for automotive lighting  
*J. SCHUG - Philips Technologie GmbH, Germany*  
 16:00 Compact Low Cost LED Headlamp  
*L. M. RICE - OSRAM Sylvania, USA*  
 16:20 LEDS headlamp on the Nissan leaf  
*O. BARTHOMEUF - ICHIKOH, France*  
 16:40: General discussion on LED  
**16:50 Break**

### SESSION 4 : VISIBILITY AND GLARE

Chair : Rainer NEUMANN - Visteon

- 17:10 Reflection properties of road surfaces for assessing visibility conditions  
*S. KÖHLER - L-LAB, Germany*  
 17:30 On the impact of the lamp spectra on the detection and Conspicuity of Road Markings at night time driving  
*C. SCHILLER, T. QUOC KHANH - Technische Universität Darmstadt, Germany*  
 17:50 Study on spot lamps for early detection of pedestrians and obstacles  
*Y. KASAI, M. KOMATSU - Koito Manufacturing Co., Japan*  
 18:10 Optimized dynamic levelling system  
*P-H. MATHA, Renault, France*  
 18:30 Field Study: Photometrical Measurements of Headlamps - Efficacy of Headlamp Cleaning Systems  
*S. SÖLLNER, N. HAFERKEMPER, D. POLIN, T. QUOC KHANH - Technische Universität Darmstadt, Germany*  
 18:50 General discussion on visibility and glare  
 19:00 Presentation night drive  
 19:10 Shuttle service to the Night Drive Tests Circuit in Satory.

## VISION PROGRAMME - OCTOBER 7, 2010

### SESSION 5 : DA FUNCTION

Chair : Jean-Paul CHARRET - Valeo

- 08:30 Assessing Safety Outcomes Related to Driver Visibility and Behavior  
*J. D. BULLOUGH - Rensselaer Polytechnic Institute, USA*
- 08:50 Lighting based Driver Assistance Systems as a Key Pillar for future Safety Functions  
*A. TEWES, K. TALMI – Hella Aglaia Mobile Vision GmbH, Germany*  
*C. AMSEL - Hella KGaA Hueck & Co., Germany*
- 09:10 Lighting assistance as part of the Integrated Safety  
*S. BERLITZ - AUDI AG, Germany*
- 09:30 Driver assistance in construction areas  
*M. STRAUSS - Continental Division Chassis & Safety /Advanced Engineering, Germany*
- 09:50 A trip from Italy to China using autonomous vehicles: behavior and testing  
*P. GRISLERI, S. CATTANI, M. FELISA - VisLab, University of Parma, Italy*
- 10:10 Cooperative Vehicles to Facilitate the Crossing of Intersections by Emergency Service Vehicles  
*J. IBANEZ-GUZMAN, A. MOKADDEM, S. LEFEVRE - Renault S.A.S., France*  
*S. RODHAIM - Viveris Technologies, France*
- 10 :30 General discussion on DA function

**10:40 Break**

### SESSION 6 : DA TECHNOLOGY

Chair : Jean-François BOISSOU - PSA

- 11:00 Predicting the Vehicle Path in a Night Vision System  
*J. ELBORNSSON SKOGSTJÄRNA, P. CRONVALL - Autoliv Electronics AB, Sweden*
- 11:20 Video-based driver assistant systems with the TRW Scalable Camera  
*G. SCHNEIDER - TRW Automotive, Germany*
- 11:40 Multi-application designed to cost 76/79 GHz radar network  
*A. SERVEL, B. DELORD – PSA Peugeot Citroën, France*  
*P. MALLEJAC - TRW Autocruise, France*
- 12:00 Integrated design and functional solution for a driver assistance camera with imager based rain-sensing capability  
*F. BLÄSING - Leopold Kostal GmbH & Co. KG, Germany*
- 12:20 Low cost next generation multi sensor Night Vision system  
*R. SCHWEIGER, S. FRANZ, O. LÖHLEIN, W. RITTER - Daimler AG, Germany*  
*J-E KÄLLHAMMER, Autoliv Development AB, Sweden*
- 12:40 General discussion on DA technology

**12:50 Break and Exhibition Visit**

### SESSION 7 : DA TOOLS

Chair : Didier WAUTIER - Renault

- 14:20 Effective Assessment of Pedestrian Visibility in the Nighttime by using Driving Simulator  
*Y. HORII – Denso Corporation, Japan*  
*S. FUJIYOSHI – Toyota Motor Corporation, Japan*  
*T. MIKAMI, K. MORIKAWA, T. WADA, S. DOI – Kagawa Univ., Japan*
- 14:40 Human detection from mobile work machines with far-infrared camera and sensor data fusion  
*P. PYYKÖNEN, J. LAITINEN, J. AHTIAINEN - VTT Technical Research, Finland*
- 15:00 Continuous evaluation of methods for sensor data fusion of video based driver assistance systems by using virtual test driving  
*M. ZIEGENMEYER, D. NIENHÜSER, T. SCHAMM, T. GUMPP, T. BÄR, J.M. ZÖLLNER - FZI Research Center of Information Technologies, Germany*  
*J. HENNING, B. SCHICK - IPG Automotive GmbH, Germany*
- 15:20 A new generic virtual platform for cameras modeling  
*D. GRUYER - LIVIC, France*  
*N. HIBLOT, B. MONNIER - CIVITEC, France*  
*P. DE SOUZA, G. LE BOUDEEC – Institut d'Optique, France*
- 15:40 New advanced data analysis for road interpretation using mobile mapping system  
*J. NINOT, L. SMADJA, T. GAVRILOVIC – VIAMETRIS, France*
- 16:00 General discussion on DA tools

**16:10 Conclusion speech**

**16:20 End of Conference**

## NIGHT DRIVE TESTS ON OCTOBER 6<sup>TH</sup>

The tests will be carried out on the Satory Circuit, in Versailles.  
A shuttle bus will take the attendees there and back to the conference venue.  
You'll have the opportunity to test all the demo cars and discover new technologies..

### Demo Cars expected

Audi, Autoliv, Automotive Lighting, Bosch,  
Continental Automotive, Hella, IAV, INRETS, Koito,  
Livic, Mercedes, Nissan, Osram, Philips, PMD Technologie,  
PSA Peugeot Citroën, Renault, TRW, Visteon, Valeo, Volvo, ZKW.



## POSTERS SESSION

A poster area will be especially dedicated to the posters exhibition of more than 20 companies, laboratories and other industries specialized in the Conference field.

## COMPANIES REPRESENTED

AUDI AG, Germany  
Autoliv Electronics, Sweden  
Automotive Lighting, Germany  
CIVITEC, France  
Continental Corporation, Germany  
Delphi, Germany  
Denso Corporation, Japan  
FrattyConsulting, France  
FZI Research Center of Information Technologies, Germany  
Hella KGaA Hueck & Co., Germany  
Hyundai MOBIS, Korea  
ICHIKOH, France  
INRETS / LIVIC, France  
Institut d'Optique, France  
IPG Automotive GmbH, Germany  
Kagawa University, Japan  
KEMA Quality B.V., The Netherlands  
Koito Manufacturing Co. Ltd, Japan  
L-LAB, Germany  
Leopold Kostal GmbH & Co. KG, Germany

LIVIC, France  
MobileEye Vision Technologies Ltd, Israel  
Odelo LED GmbH, Germany  
OSRAM Opto Semiconductors GmbH, Germany  
Parma University, Italy  
Philips Technology, Germany  
PSA Peugeot Citroën, France  
Renault, France  
Rensselaer Polytechnic Institute, USA  
Robert Bosch GmbH, Germany  
Sonceboz, Switzerland  
Technical University Darmstadt, Germany  
Toyota Motor Corporation, Japan  
TRW Automotive, Germany  
Valeo, France  
VIAMETRIS, France  
VisLab, University of Parma, Italy  
Visteon Corporation, Germany  
VTT Technical Research, Finland  
Viveris Technologies, France

## EXHIBITION AND ADVERTISING OPPORTUNITIES

An EXHIBITION will also take place during the two days of the Conference.  
For further information, please do not hesitate to contact us.

Your contact:  
**Emilie BONNET**  
emilie.bonnet@sia.fr  
Tel: +33 (0)1 41 44 93 75  
Email: emilie.bonnet@sia.fr

## GENERAL INFORMATION



### OFFICIAL LANGUAGE

English: no simultaneous translation

### VENUE / ACCESS

La Ferme du Manet • 61 avenue du Manet  
78 180 Montigny le Bretonneux  
Phone +33 (0)1 30 12 30 30  
www.ferme-du-manet.com



### Public transportation

- RER C direction St Quentin en Yvelines  
→ Stop at Station “Trappes”
- Bus 414 (bus stop beside the station)  
→ Bus Stop “College St François d’Assises”  
(100m from the premises)



### By car:

#### • From Paris Porte de St Cloud: A13 to A12

- Direction Trappes, Rambouillet till the junction between A12 and RN10.
- After 300 meters, turn right just before the petrol station and follow Montigny, Guyancourt, ZA de Trappes.
- At the first light turn right then follow the sign Ferme du Manet.

#### • From Velizy, Créteil, Paris Pont de Sèvre through A86

- After the tunnel, take the exit « Guyancourt, Voisin le Bretonneux, Montigny ».
- Follow the D127 ahead, till the end of the road.
- At the last light, turn right on the D36, direction Montigny, then follow the sign Ferme du Manet.



### HOTEL ACCOMMODATION

We have selected a list of the most convenient hotels situated near the “Ferme du Manet”.  
Delegates are encouraged to make their own hotel reservations early, directly with the hotels of their choice

Just aside from the Conference place

#### AUBERGE DU MANET\*\*\*

61, Avenue du Manet  
78 180 MONTIGNY LE BRETONNEUX  
Phone: +33 (0)1 30 64 89 00  
Fax: +33 (0)1 30 64 55 10

Less than 5 km

A shuttle service will be organised from the 2 following hotels to take you to the conference venue

#### MERCURE\*\*\*

9 place E.F Choiseul  
78180 MONTIGNY LE BRETONNEUX - FRANCE  
Phone: +33(1)39 30 18 00  
Fax : +33 (1)30 57 15 22  
H1983@accor.com

#### CAMPANIL\*\*

CENTRE COMMERCIAL REGIONAL 2 PLACE GEORGES POMPIDOU  
78180 ST QUENTIN EN YVELINES  
Phone : +33 (1) 30 57 49 50  
Fax : +33 (1)1 30 44 27 37  
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# REGISTRATION FORM

VISION CONFERENCE 2010  
October 6 & 7, 2010 – Versailles, France

Ref: 2010-04

Please complete and return this form to:  
SIA – 79, rue Jean-Jacques Rousseau – F-92158 Suresnes Cedex  
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REGISTER DIRECTLY ON LINE: [www.sia.fr](http://www.sia.fr)

## ■ Please use BLOCK CAPITALS when filling in this form

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## ■ Registration fees (*Tick as appropriate*)

1028,56 € VAT Incl. (860 € VAT Excl.) SIA Members

1160,12 € VAT Incl. (970 € VAT Excl.) Non Members

580,06 € VAT Incl. (485 € VAT Excl.) Researchers, Labs and Small Firms (< 100 people).

FREE . Speakers (1 per conference) Session Chairmen

Preferential rates for students and retired – For further information, contact us

## ■ Payment

By check in Euros made payable to: “Société des Ingénieurs de l’Automobile”

By bank transfer in Euros made payable to: “**Société des Ingénieurs de l’Automobile**” in Euros made payable to: “Société des Ingénieurs de l’Automobile”

(please attach a copy and precise name and ref: **VISION 2010-04**)

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I hereby authorise the organisers to charge my credit card to the amount of.....€

On my Card n : ..... Expiration date : .... / .....

3 or 4 digit CVV or CVC number (on back of credit card): \_\_\_ Cardholder’s name: .....

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Date and signature:

Company stamp:

## REGISTRATION CONDITIONS

- Registration fees include participation in the conference, CD of proceedings, book of abstracts, refreshment breaks, lunches, and cocktail.
- Where it is not possible to send the payment together with the form, each registration should be accompanied by an official purchase order. Failing reception of an official purchase order or payment on the day of the symposium, we regret that you will not be allowed entry to the symposium.
- When we have received the registration form, we will send you a confirmation letter and an invoice. Please indicate the accounts department address where necessary.
- In case of cancellation before September 6, 2010 30% of the registration fees will be retained by the organisers. After this date, the entire registration fee will be retained. Registered participants not able to attend may nominate a substitute. Written notice must be provided.



Créateur d'optiques

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