

[Download full report...](#)

## About the sessions

The main lectures which we selected in this report can be classified in 2 categories

### Innovation

- LED headlamps: Lawrence Rice from Osram Sylvania and Rainer Neumann from Visteon presented prototypes and concepts. Lawrence demonstrated a hold-in-the-hand sized with one LED module producing the same performance as a larger halogen headlamp and Rainer showed an LED headlamp with low beam frontal area of 135 mm x 50mm, giving performances not too far off the Xenon benchmark.

- Xenon 25W: Jean-Sebastien Straetmans from Philips presented the possibilities of a compact, unitised bulb-ignitor-ballast module with benefit on size, weight, packaging and power saving.

- Front end structure: Ankit Garg from GE India presented a novel energy absorber concept to improve the pedestrian safety, low speed vehicle damageability and repair cost.

### Studies and Surveys

- DUT Darmstadt was very present at Detroit with 2 lectures:

One on the evaluation of headlamp cleaning system performance from lab and field measurements. Stefan Soellner showed the first part of this evaluation with very interesting information on soiling and cleaning; the second part will be presented at VISION congress, this October in France). The second lecture was from Nils Haferkemper which emphasizes the positive influence of LED DRL feature on the conspicuity of motorcycles.

- John Bullough from Rensselaer Polytechnic Institute presented 2 lectures, one about the development of a system that can be mounted along an intersection, curve or parking facility to efficiently gather relevant data about headlamp patterns and aim that might relate to glare or visibility. The result suggests that if vehicle headlamps were better aimed, that the amount of light reaching oncoming driver's eyes would be more consistent.

John's second lecture showed the large influence of ambient illuminance from urban areas on the visibility of relevant targets, and show advantages of different headlamp for different target locations where pedestrians might be encountered.

**In driver assistance**, despite so many technologies arriving in high beam assistant or adaptive lighting, we had only one lecture from Honda R&D, Haruhiko Nishiguchi about Blind

Spot Detection and a novel image processing method for more accurate perception of speed of adjacent vehicles seen in the side-view camera image.

All these lectures are detailed with a lot of explanations, snapshots and figures.

## **Interviews**

For the first time in this report, at the end of each lecture, we feature an exclusive Q&A with the presenter about some points of his lecture or about analysis of his vision of the future.

## **Exhibition and awards**

Few systems detected on presented close the report with awards of companies and award for experts.

