

Autonomous Vehicles Technologies for Perception and Decision-Making

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*Tutorial @ Institut d'Automne en Intelligence Artificielle 2018 (IA2 2018)
Campus ISAE-Supaero, Toulouse, Oct 15-19 2018*

New technologies for Autonomous Vehicles will be presented, with an emphasis on multi-sensors Embedded Perception, Situation Awareness, Collision Risk Assessment, and Decision-making for safe navigation in Dynamic Human Environments. It will be shown that Bayesian approaches are mandatory for developing these technologies and for obtaining the required robustness in presence of uncertainty and complex dynamic situations. The tutorial will be illustrated by some interesting results obtained in the scope of several collaborative projects involving either national research and development institutes such as CEA-LETI and IRT (Technological Research Institute) Nanoelec, or international industrial companies such as Toyota or Renault-Nissan.