

## **COSMO-SIVIC: a first step towards a virtual platform for Human Centred Design of driving assistances**

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**Abstract:** This paper presents the first step of research work implemented by INRETS in the frame of the ISi-PADAS European project, in order to develop a simulation platform able to support a Human Centred Design (HCD) method for virtual design of driving assistances. This HCD tool (called COSMO-SiVIC) integrates a cognitive simulation model of the Driver (called COSMODRIVE) on a virtual Vehicle-Environment platform (SiVIC). From this future tool, it is expected to compare since the earlier stages of the technological design, virtual simulation of driving performances with and without driving assistance, and thus to appreciate the potential benefits, interests and risks of vehicle automation on road safety.

*Keywords:* Driver modelling, Cognitive simulation, Virtual Human Centred Design, Vehicle automation.

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