

Analysis and control of dissonances: the case of automation surprises

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Abstract: Automation surprises are particular dissonances related to conflicts of intention between human and machine. It is extended to affordances, i.e. conflicts of use, to contradictions, i.e. conflicts between individual knowledge, and to interferences, i.e. conflicts between human and machine. It is applied to the car driving domain related to the possible side effect of use of automated tools such as a navigation support system, an automated collision avoidance system and an automated cruise control system. The talk will present the concept of dissonance and these case studies by proposing different challenges for analyzing and controlling automation surprises.