

Trust me - I am a robot

(Invited Talk)

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Developing advanced robotics and autonomous applications is now facing the confidence issue for their acceptability in everyday life. This confidence could be justified by the use of dependability techniques as it is done in other safety-critical applications. However, due to specific robotic properties (such as continuous physical interaction or non-deterministic decisional layer), many techniques need to be adapted or revised. This presentation will introduce these major issues for autonomous systems, and focus on current research work at LAAS in France, on model-based risk analysis for physical human-robot interactions, active safety monitoring for autonomous systems, and testing in simulation of mobile robot navigation.