

Workshop on Haptic Teleoperation of Mobile Robots: Theory, Applications and Perspectives

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Abstract

For several applications like surveillance, search and rescue in disaster regions, and exploration, the use of a single or a group of mobile robots is getting more and more common. Nevertheless, when the tasks become extremely complex and high-level cognitive-based decisions are required online (as, e.g., during exploration of very cluttered, dynamic and unpredictable environments for search and rescue applications), complete autonomy is still far from being reached and humans intervention/assistance is necessary. In this context, haptic teleoperation systems, where a human operator commands a remote robot through a local interface and receive an informative haptic feedback, allow to exploit humans intelligence to solve tasks too complex for nowadays robots. This full day workshop will focus on the haptic teleoperation of a single or a team of mobile robots. Its main goal is to present recent results in the field and to establish a discussion on the technological, mathematical and psychophysical aspects of this problem.