

## Conception of a Reliable Low Cost and Autonomous Explorative Hovercraft

**Authors :** S. Burgalat, L. Teilhac, A. Brand, E. Chastel, M. Jumeline

**Abstract :** The paper presents actual benefits and drawbacks of a multidirectional autonomous hovercraft conceived with limited resources and designed for indoor exploration. Recent developments in the field have led to the apparition of very powerful automotive systems capable of very high calculation and exploration in complex unknown environments. They usually propose very complex algorithms, high precision/cost sensors and sometimes have heavy calculation consumption with complex data fusion. These systems are usually powerful but have a certain price, and the benefits may not be worth the cost, especially considering their hardware limitations and their power consumption. The present approach is to build a compromise between cost, power consumption and results preciseness.

**Keywords :** hovercraft, indoor exploration, autonomous, multidirectional, wireless control

**Conference Title :** ICMCE 2014 : International Conference on Mechatronics and Control Engineering

**Conference Location :** Singapore, SG

**Conference Dates :** July 05-06, 2014