Workshop on Long-term Autonomy II

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Abstract

The problem of long-term autonomy is attracting increased attention in the robotics research community. State-of-the-art robotic mapping and localization systems have demonstrated the ability to operate in increasingly large-scale environmentsthe DARPA Grand Challenge, Mars Exploration Rovers, Willow Garage PR2 demos, long-range visual-teach-and-repeat systems, and Atlantic-Ocean crossing AUVs are only some of the examples of the maturity of the field. However, it remains to be seen how to extend the operation time of autonomous robotic systems from days to months or years. This goal poses new challenges related to robust long-term operation and life-long learning. What valuable lessons have we learnt from large-scale robotic experiments? What challenges need to be addressed to ensure robust and continual operation? We invite authors to share their experience and insight at this full-day workshop.