

Abstract

## Unmanned aerial vehicles as tools for forest-fire fighting

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This paper reviews the possibilities of UAV applications to forest-fire fighting in the typical before–during–after scheme. Before-fire they can be used for monitoring of the vegetation and the estimation of hydric stress and risk index. UAVs can also be applied for forest-fire detection, confirmation, localization and monitoring. Finally, the UAVs are also useful for the evaluation of the fire effects and particularly for the

estimation of the burnt area. The paper also shows how UAV with different characteristics can cooperate in forest-fire fighting. Some of the concepts and applications presented in the paper are illustrated by means of recent experimental results carried out in the COMETS project. In this project, a fleet of heterogenous UAVs was applied for forest-fires detection, confirmation, localization and monitoring.