Séminaire

Equipe « Multimédia »
Mercredi 13 mars 2024, 12h30 salle E303

Efficient Systems and Performance Evaluation for Autonomous Flying Robots in the Age of Smart Cities

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Abstract: Micro-Aerial Vehicles (MAVs), equipped with odometry and depth sensors, have become essential for a variety of challenging vision-based industrial applications, including the autonomous exploration (i.e., digital mapping) and inspection (i.e., online surface reconstruction) of unknown environments. In the context of their rising popularity in the realm of Smart Cities and Industries, we first introduce SplatPlanner, a robust end-to-end system for MAV-based autonomous exploration based on efficient bilateral filtering techniques. Next, we present FLYBO, a unified benchmark environment designed to fairly and accurately assess the performance of autonomous flying robots in terms of their (i) exploration planning and (ii) active 3D reconstruction capabilities.

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