Eulerian filter and Eulerian

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Résumé

Eulerian state estimation can be seen as a problem of estimating trajectories in the case where temporal logic constraints are combined with state equations. Typical constraints are :
- "the robot A has met the robot B before the collision with robot C".
- "After the robot crossed the river, its speed was always lower than 1m/s"
In the presentation, it will be shown that Eulerian state estimation can be solved efficiently using, as a basic stone, the concept of largest positive invariant set associated to a nonlinear state equation. As a result, a new filter and a new smoother will be introduced to estimate efficiently a trajectory in an Eulerian context.

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