Robot Bayesian Brain: Bayesian Learning for Robot Control

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Abstract:

In this talk, I will introduce 'Robot Bayesian Brain,' a primary research focus of my group. This method incorporates control theory concepts as prior distributions within a Bayesian framework to enhance efficiency and ensure the stability, safety, and security of robotic control while reducing computational load. I will illustrate the effectiveness of our method with real-world control tasks across various robotic platforms, including automated cars, multiple unmanned ground vehicles, quadrotors, and spacecraft.