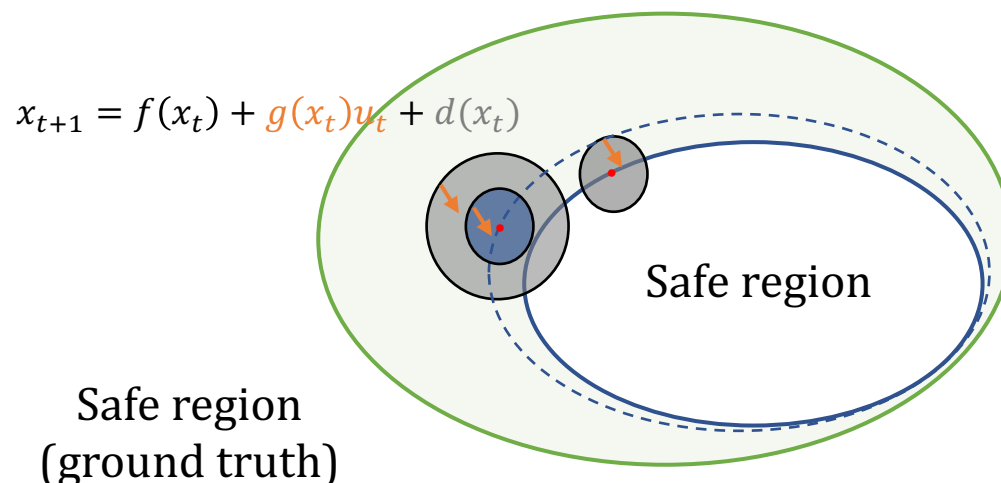


- Read a paper
 - [1] : Li Wang, Evangelos A Theodorou, and Magnus Egerstedt. "Safe learning of quadrotor dynamics using barrier certificates," *In 2018 IEEE International Conference on Robotics and Automation (ICRA)*, pages 2460-2465, 2018.
- Expand confident safe region under unknown dynamics by making gaussian process more accurate



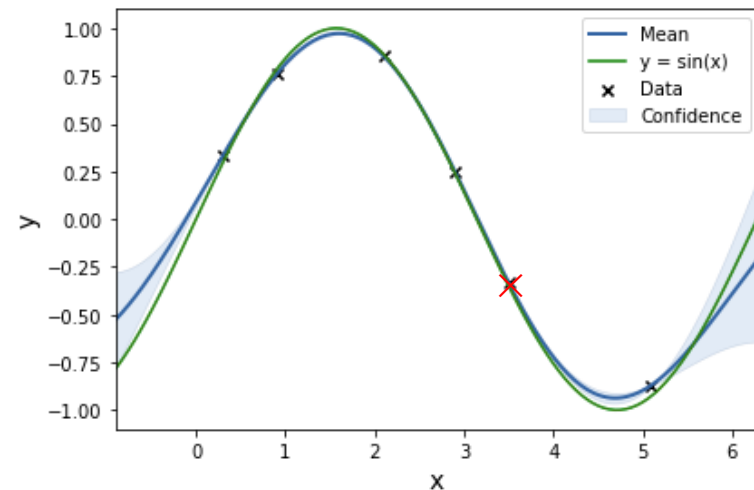
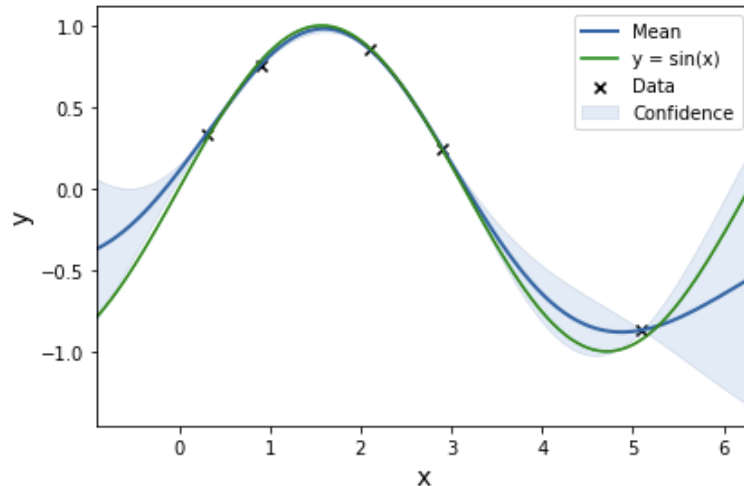
Confident safe region:

The region where there exists input $u \in \mathcal{U}$ that worst GP estimated next state can be return to the region

Weekly Report

M2 Ibuki Takeuchi

- GP can be more accurate by sampling uncertain state



- In [1], desired input such that $x_{desire} = f(x_{current}, u_{desire})$ is known
- [1] assumes the smoothness of dynamics to reduce computational difficulty
- [1] does not ensure the convergence to ground truth