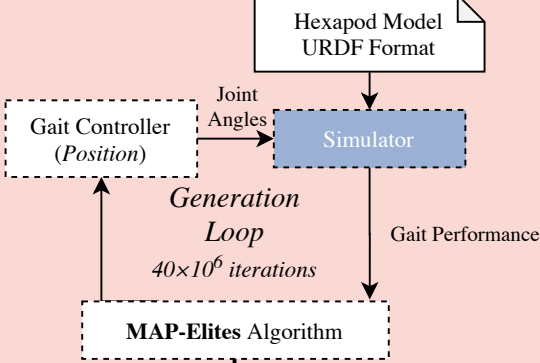


Gait Generation

The gait generation loop produces a collection of both diverse and high performing gaits using the MAP-Elites algorithm

Computer Cluster

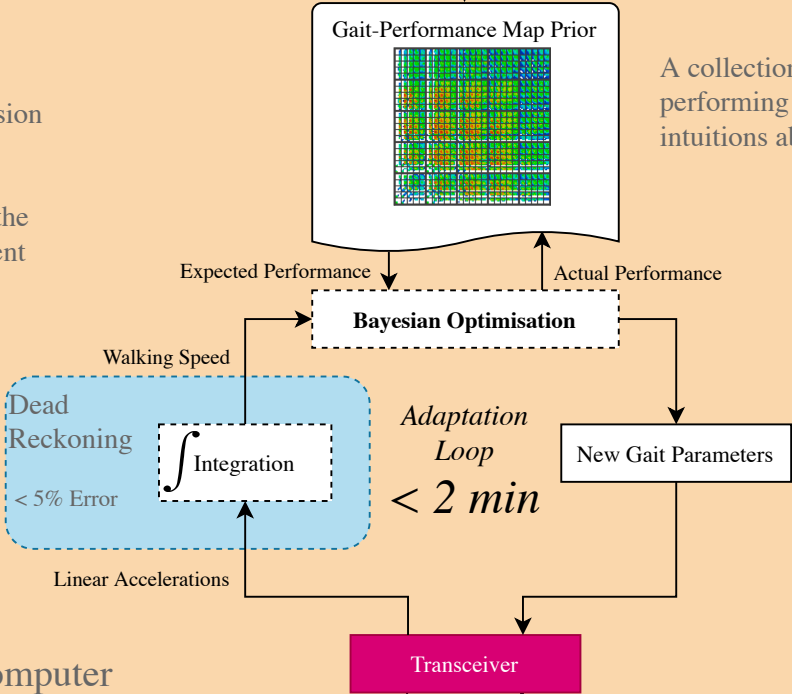


Simulator

- PyBullet Physics Engine
- 3x real-time speed
- Collision detection

Adaptation

The adaptation loop is performed during the mission. It evaluates gaits which performed well in prior simulation and settles on the fastest one given the current failure using the Bayesian Optimisation algorithm



A collection of diverse high performing gaits serving as the robots intuitions about the ways it can walk

Gait Parameters
Periodic gaits are described by a collection of parameters. A wide variety of gaits can be produced by varying these parameters. Adaptation to failure will be achieved by finding the new optimal gait parameters for fast walking.

Hexapod control computer

