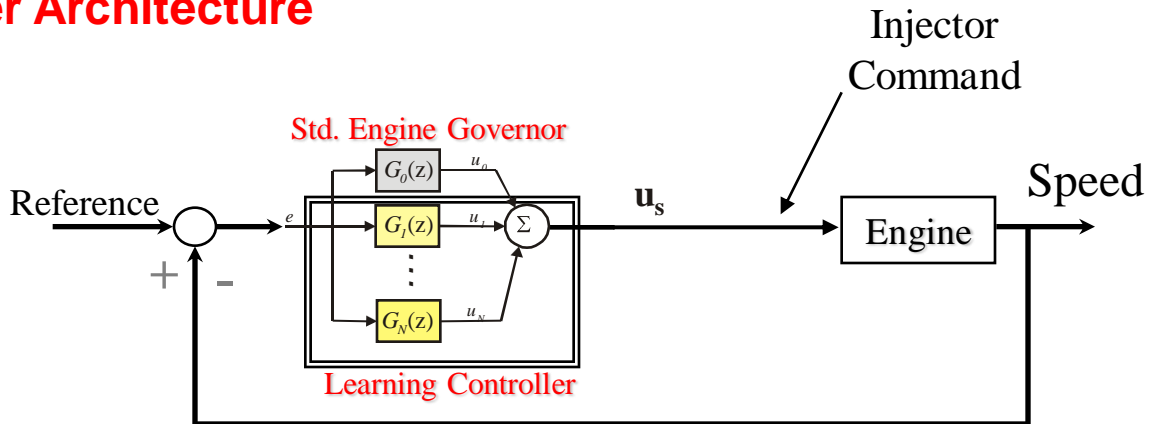


Learning Controller Based Diagnostics

Research Summary:

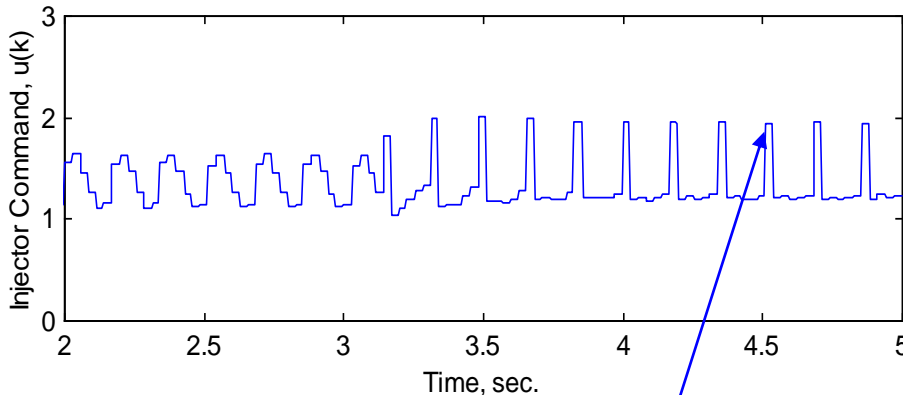
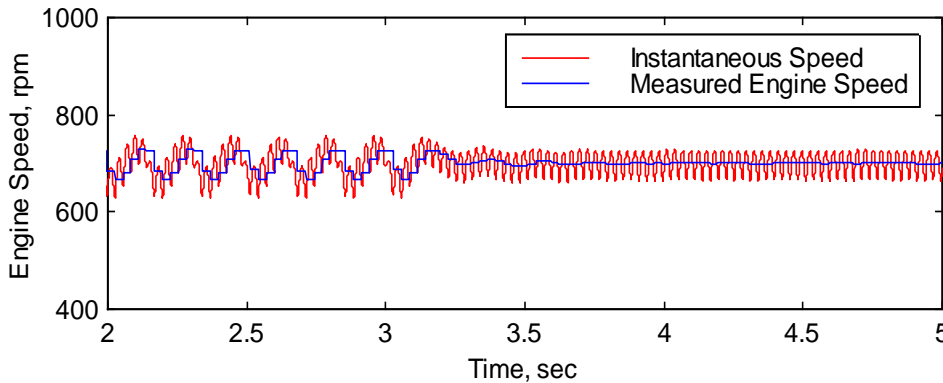
Demonstrated is the use of robust control for precision tracking applied to system subjected to periodic sequences. **The objective is to achieve robust tracking of the periodic inputs/disturbances for engine diagnostics and controller parameter tuning.** The control solution is systematic where the controller design process can be executed in a desktop environment using a data driven approach.

Controller Architecture

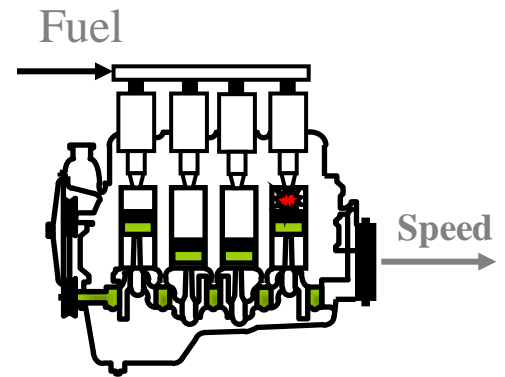


Results

Electronic Trimming of Fueling Command for Mismatched Injectors



Learned Injector Trimming



Performance Guarantees

- Failure Defeat and
- Diagnostic Information Recovery