Special Issue

From Theory to Practice: Incremental Nonlinear Control

Message from the Guest Editors

Nonlinear incremental control is a branch of control methods that utilize a data-driven incremental model. It exploits sensor measurements online and can simultaneously reduce controller model dependency and robustness. The word incremental means the controllers are designed considering the variations of state, control, and control derivatives in one incremental time step. These nonlinear incremental control methods have also found their broad applications in various practical fields including, aerospace, robotics, and mechanical systems. This Special Issue aims to welcome contributions to the theoretical and practical perspectives of incremental control, including but not limited to the following:

- Stability analysis:
- Robustness analysis;
- Novel controller design based on an incremental model:
- Novel applications of nonlinear incremental control.

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