

DOI: 10.1109/ICCUBEA.2016.7860137 • Corpus ID: 17295080

## Robust uncertainty compensation in MagLev by using extended state observer

Kalioras A. Mahapatro, M. Rane, Prasheel V. Suryawanshi • Published 2016 • Computer Science • 2016 International Conference on Computing Communication Control and automation (ICCUBEA)

The magnetic levitation (MagLev) system control is one of the most complex problems due to open-loop instability, nonlinear dynamics and uncertain parameters. The 3rd order differential model of MagLev is linearized by using input-output linearization. The control law is designed using feedback linearization (FL) augmented by uncertainty estimates. The states and uncertainties are estimated using extended state observer (ESO). This paper addresses the issue of robustification of FL control law... Expand

Share This Paper

### 2 Citations

Background Citations 1  
Methods Citations 1

View All

View on IEEE doi.org Save to Library Create Alert Cite Launch Research Feed

Abstract

Figures, Tables, and Topics

2 Citations

34 References

Related Papers

### Figures, Tables, and Topics from this paper

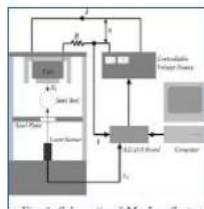


Figure 1

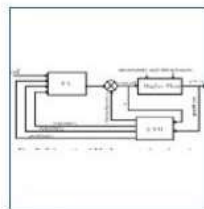


Figure 2

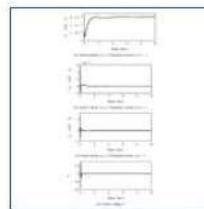


Figure 3

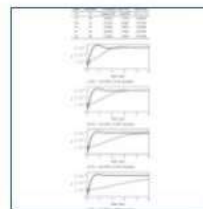


Figure 4

- Robustification
- Optimal control
- Nonlinear system
- Estimated
- Instability
- Brainwave Biofeedback
- Feedback

View All 5 Figures & Tables