



Monthly Meeting of IEEE PES PSDP/PSSC Task Force on Forced Oscillations

Chairs: Kai Sun (UTK) and Jim Follum (PNNL)
Secretary: Bin Wang (ISO New England)

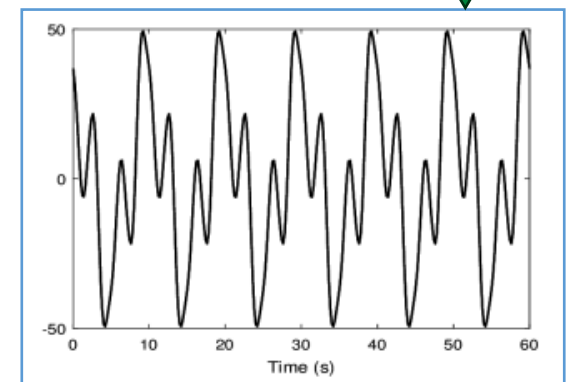
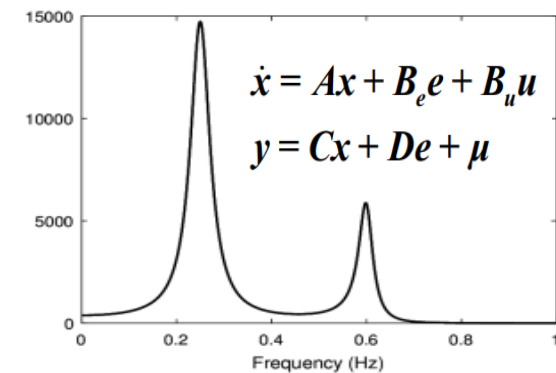
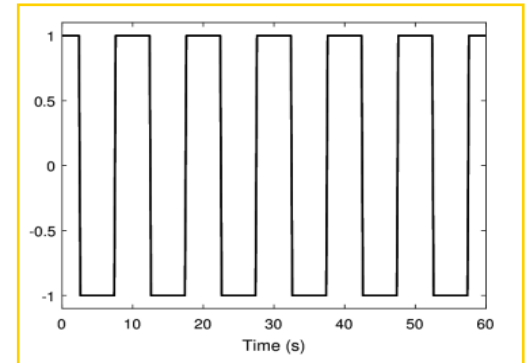
Monthly Task Force Meeting
September 20, 2024

Agenda

- Welcome and introduction
- Forced Oscillations: Causes, Issues, and Mitigation (Prof. Dan Trudnowski, Montana Tech.)
- Discussion

Forced Oscillations

- Different from natural oscillations in mechanisms and mitigation measures
 - Forced responses vs. natural responses
- Caused by an external source, which is unmodeled
 - a malfunctioning or improperly tuned controller
 - an unknown outside driving force
- Unpredictable frequencies depending on the source
 - Perhaps overlapping inter-area oscillations and SSOs
- Need to locate the source in order to take a control action.
 - May be outside your system.



Task Force Plan

- Monthly TF web meetings.
- In-person TF meetings with IEEE PES General Meetings
- Work scope
 - Summarize and categorize the approaches for locating FO sources
 - IEEE/NASPI contest winner teams and other literature
 - Document industrial practices in monitoring, locating and mitigating real-life FO events.
 - Enrich the test cases library with both simulated and real FO data.
 - Finish a survey paper in Year 3.

Resources

- Task force website
 - <https://web.eecs.utk.edu/~kaisun/FOTF/>
- Technical report in 2023 from “Oscillation Source Location” Task Force (chaired by Frankie Zhang and Udaya Annakkage)
- Test Cases Library of Forced/Natural Oscillations
 - <http://web.eecs.utk.edu/~kaisun/Oscillation/>
- Test Cases from 2021 IEEE-NASPI Oscillation Source Location Contest
 - <https://web.eecs.utk.edu/~kaisun/Oscillation/2021Contest/>

