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On optimal experiment design for identifying premise and conclusion parameters of Takagi-Sugeno models: nonlinear regression case

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Graphical abstract



Highlights:

- Optimal experiment design for Takagi-Sugeno models
- Design considers both local model and membership parameters
- 2-stage design process: space filling design followed by Fisher Information Matrix-based design
- Sequential optimal design used for robustness of model-based design
- Demonstration in 3 case studies: an industrial axial compressor characteristic map and two test functions

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