

ORI 390R.3 / ME384Q.3

Time-Series Analysis Modeling and Control

Class times: 12:30 pm to 2:00 pm, Tuesdays and Thursdays

Class Room: ETC 5.132

Course Website: UT Canvas (<https://canvas.utexas.edu/>)

Instructor: Prof. Dragan Djurdjanovic

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Text¹: S. M. Pandit and S. M. Wu, "Time-Series and System Analysis with Application", J. Wiley & Sons, 1983 (Also, Robert Krieger Publishing Company, 2001); Also, coursepack available in the coop store.

Reference¹: G. P. Box, G. M. Jenkins and G. C. Reinsel, "Time Series Analysis - forecasting and control", 3rd edition, Prentice Hall, 1994.

Topics:

1. Modeling physical systems/processes from operational data
2. Time series models as tools for system analysis
3. Forecasting the system behavior based on system dynamics
4. Continuous stochastic systems
5. Forecasting control to alter a system's performance
6. Trends and seasonality
7. Multiple series
8. Applications of time series analysis

Grading:

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| Homework | 15% |
| Term project | 30% |
| Mid Term Exam | 25% |
| Final Exam | 30% |

Note: Students with disabilities may request appropriate academic accommodations from the Division of Diversity and community Engagement, Services for Students with Disabilities. Their phone number is (512) 471-6259.

¹ Placed on reserves in the McKinney Engineering Library