



# Applied probability, statistics, and optimization

## Stochastic optimal control and optimal stopping

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**Keywords:** Applied probability, statistics, stochastic processes. Martingales, Markov processes, Lévy processes, random measures. Optimal stopping, stochastic optimal control.

- Sequential Analysis problems for making inference from sequential data
- Change detection problems for continuous and discrete time processes
- Detecting a change in the local characteristics of a stochastic process
- Hypothesis testing problems for continuous and discrete time process
- Testing the properties of the observed stochastic processes
- Effects of parameter misspecification in sequential analysis problems
- Revenue management from an optimal stopping and stochastic control perspective
- Finding optimal closing times of fares in airline revenue management
- Optimal dynamic exit times in spare parts management
- Comparison of static and dynamic exit decisions
- Parameter estimation and control for some inventory policies