



Barış Balcioğlu

Faculty Member
Industrial Engineering

PhD: Rutgers University

Website:
<https://people.sabanciuniv.edu/balcioglu/>

Email:
balcioglu@sabanciuniv.edu

Keywords:
Queueing systems,
Production/Inventory systems
Spare parts provisioning,
Stochastic modeling

Analysis of Stochastic Delay Systems

Queueing Systems



- Modeling systems where jobs, customers wait for service
- Approximations for autocorrelated interarrival and service times
- Preemptive policies for finite size populations served in the $M/G/1$ queue.

Call Centers



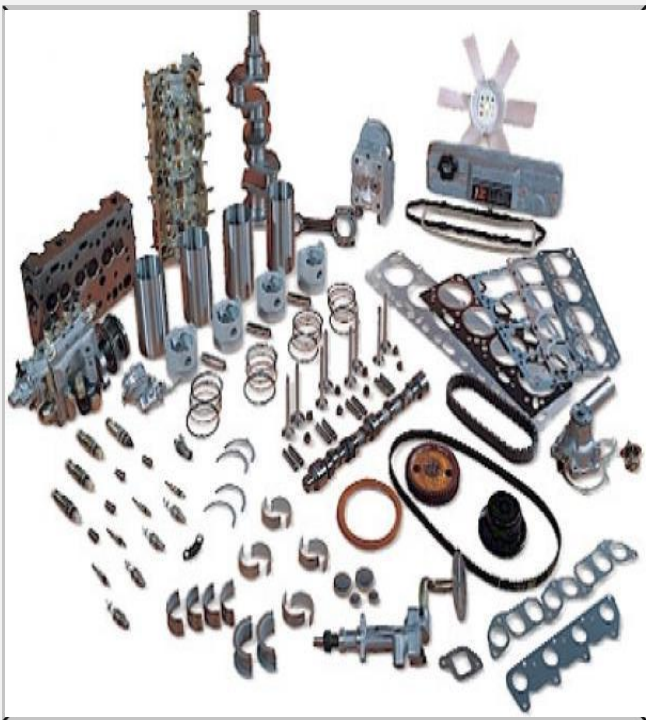
- Approximations for complex call centers with general service time with impatient customers
- Offering call-back option to better increase customer agent efficiency
- Capturing state-dependent service and reneging rates in call centers

Production/Inventory Systems



- Inventory rationing for cost minimization
- Scheduling policies for different products produced at the same resource
- Dynamic pricing and lead-time quotation to ensure profitability and fairness

Spare Parts Provisioning



- Inventory policies for serving different priority fleets needing the same spare part
- Reflecting the impact of transportation delay on repairshop pooling