

USING ESTIMATED PATIENCE LEVELS TO OPTIMALLY SCHEDULE CUSTOMERS

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Customer impatience has become an integral component of analyzing queueing systems in extant literature, especially in the context of call centers. A common model of impatience is to assume that customers are endowed with a patience clock and that they abandon when this clock runs out and they are still waiting for service. Further, the heterogeneity in the customer's patience clocks are represented using a common distribution, the impatience or abandonment distribution. That is, customers patience times are i.i.d. draws from this distribution. So, as customers wait in the queue, an update can be formed on their willingness to wait, or patience, as time progresses. So, even though all customers may be identical when they just join the queue, as time progresses, they become differentiated on their further willingness to wait. The main research question in this paper is: What is the optimal way to schedule customers given that as the customers wait in the queue, they reveal additional information about their willingness to wait?