

RANDOMIZATION APPROACHES FOR NETWORK RM WITH CHOICE BEHAVIOR

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We present new approximation methods for the network RM problem with customer choice. Our methods are sampling-based and so can handle fairly general customer choice models. We only assume that customers are endowed with an ordered list of preferences among the products and choose the most preferred alternative among the available ones. The starting point for our methods is a dynamic program that allows randomization. An attractive feature of this dynamic program is that the size of its action space is linear in the number of itineraries. We present two approximation methods that build on this dynamic program and use ideas from the independent demands setting.