Fluid Approach in Stability Analysis of Multiclass Communication Networks

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Abstract

This work is a survey of recent development achieved in the stability analysis of queuieing networks that is based on the so-called *fluid approach*. Our main aim is to introduce both applied mathematicians and experts in computer science to this very inspiring and intensively developing area of stochastic network modeling. At that we try to demonstrate in necessary details the main mathematical tools which are applied in the stability analysis and in fact have a much broader area of applications in network modeling.

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