

INVARIANT STATES FOR FLUID MODELS OF EDF NETWORKS:
NONLINEAR LIFTING MAP

Łukasz Kruk

Abstract: We study fluid models of an open, subcritical multiclass queueing network with the earliest-deadline-first (EDF) service discipline and we provide a characterization of the corresponding invariant manifold. We show that the invariant states exhibit nonlinear state space collapse. Consequences of these findings for diffusion limits for EDF queueing networks are also discussed.

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