1108-60-458   **Asaf Cohen*** (`asafc@umich.edu`), University of Michigan, Department of Mathematics, 2859
East Hall, 530 Church St., Ann Arbor, MI 48109, and **Rami Atar**. *A Multiclass Queueing Model in the Moderate-Deviation Heavy-Traffic Regime.* Preliminary report.

We consider a multiclass single-server queueing control problem in the moderate-deviation heavy-traffic regime with a discounted risk-sensitive cost. In the scaling limit, an optimal control problem associated with the model is shown to be governed by a differential game that can be explicitly solved and that admits an optimal stationary feedback policy. We also present a stationary asymptotic optimal policy that satisfies a state space collapse property. (Received January 19, 2015)