

Peer Review

Review of: "Selfish Routing on Transportation Networks With Supply and Demand Constraints"

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The work presents good rigor in the arguments being developed, with quite formal proofs that appear correct. However, it falls short of making a strong argument for novelty and originality. First, it appears to claim density-based traffic assignment as a novelty, which might just be due to the unfortunate wording, as I am sure the authors are familiar with works in this area where density is used instead of flow for delay functions (e.g., R. Kucharski and A. Drabicki. Estimating macroscopic volume delay functions with the traffic density derived from measured speeds and flows. *Journal of Advanced Transportation*, 2017:1–10, 2017).

My second point, which could again just be due to improvable phrasing, is the claim that selfish routing achieves suboptimal performance, which is far from being a novelty, even when considering demand below capacity, as the authors do.

It follows that the conclusions are somewhat light.

I would like to stress that this might just be due to formulating the arguments with improvable phrasing, or me not capturing the right angle, but at present, and in all honesty, this is what I can get out of it.

Also, the main case of interest is a parallel network with 1 origin and 1 destination and non-intersecting routes. I am happy to acknowledge that a numerical example is provided for a classical Wheatstone's network; however, it is very limited.

Declarations

Potential competing interests: No potential competing interests to declare.