Accepted Manuscript

Heuristic urban transportation network design method, a multilayer coevolution approach

Rui Ding, Norsidah Ujang, Hussain bin Hamid, Mohd Shahrudin Abd Manan, Rong Li, Jianjun Wu

PII: S0378-4371(17)30207-8
DOI: http://dx.doi.org/10.1016/j.physa.2017.02.051
Reference: PHYSA 18031

To appear in: *Physica A*

Received date: 27 November 2016
Revised date: 15 February 2017

Please cite this article as: R. Ding, N. Ujang, H.b. Hamid, M.S.A. Manan, R. Li, J. Wu, Heuristic urban transportation network design method, a multilayer coevolution approach, *Physica A* (2017), http://dx.doi.org/10.1016/j.physa.2017.02.051

*Highlights (for review)

Highlights:

1. A multilayer urban network co-evolution approach is proposed.
2. The relative neighbourhood graph (RNG) and Gabriel graph (GG) are used to simulate the structure of upper and lower networks, respectively.
3. The cooperation strength and operation speed ratio are considered in depth in different layers and in impact of the user behaviour on the change of network structures.