

# A Smart Solution for Traffic problems - slower-is-faster strategy and metastable states -

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The slower-is-faster (SIF) strategy is one of the efficient solutions for easing various kinds of traffic jam [1]. This is a counterintuitive way to enhance the global system performance by reducing the individual ability. In the talk, some examples of the SIF strategy are clearly shown in the cases of vehicle traffic flow on highway [2], pedestrian flow at bottlenecks [3] and production flow in a factory. It is also discussed that the success of the strategy is related to the metastability of the system.

## References

- [1] C.Gershenson and D.Helbing, “When slower is faster”, arXiv:1506.06796v1[nlin.AO] (2015)
- [2] Y. Taniguchi, R. Nishi, T. Ezaki, K. Nishinari, “Jam-absorption driving with a car-following model”, Physica A, Vol. 433 (2015) pp. 304-315
- [3] T. Ezaki, D. Yanagisawa, K. Nishinari, “Pedestrian flow through multiple bottlenecks”, Phys. Rev. E, Vol. 86 (2012) 026118