Accepted Manuscript

Fully polynomial-time computation of maximum likelihood trajectories in Markov chains

Yuri Grinberg, Theodore J. Perkins

 PII:
 S0020-0190(16)30139-9

 DOI:
 http://dx.doi.org/10.1016/j.ipl.2016.09.012

 Reference:
 IPL 5470

To appear in: Information Processing Letters

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Received date:23 December 2015Revised date:23 September 2016Accepted date:28 September 2016

Please cite this article in press as: Y. Grinberg, T.J. Perkins, Fully polynomial-time computation of maximum likelihood trajectories in Markov chains, *Inf. Process. Lett.* (2017), http://dx.doi.org/10.1016/j.ipl.2016.09.012

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Highlights

- The problem of finding a maximum likelihood trajectory in a Markov chain of a given length is considered.
- A decomposition of the Markov chain, seen as a directed weighted graph, is proposed based on the mean-weight cycle analysis.
- The proposed decomposition makes it possible to design a polynomial-time algorithm to address the above problem.

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