Accepted Manuscript

Quantum Kernels for Unattributed Graphs using Discrete-time Quantum Walks

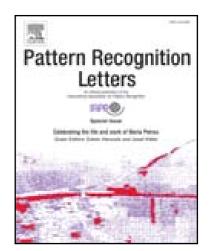
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PII: S0167-8655(16)30232-X DOI: 10.1016/j.patrec.2016.08.019

Reference: PATREC 6633

To appear in: Pattern Recognition Letters

Received date: 30 November 2015 Accepted date: 19 August 2016



Please cite this article as: Lu Bai, Luca Rossi, Lixin Cui, Zhihong Zhang, Peng Ren, Xiao Bai, Edwin Hancock, Quantum Kernels for Unattributed Graphs using Discrete-time Quantum Walks, *Pattern Recognition Letters* (2016), doi: 10.1016/j.patrec.2016.08.019

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Highlights

- We propose a new family of quantum kernels using discrete-time quantum walks.
- We let a quantum walk evolve on each graph and compute a density matrix.
- We compute the quantum Jensen-Shannon divergence for graph density matrices.
- The kernel is defined as the negative exponential of the quantum JSD.
- We also compute the kernel between spanning trees on the orginal graphs.

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