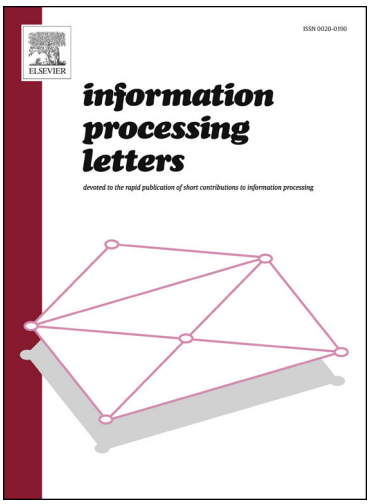
Accepted Manuscript



Faster Approximation for Maximum Independent Set on Unit Disk Graph

Subhas C. Nandy, Supantha Pandit, Sasanka Roy

PII: S0020-0190(17)30129-1
DOI: http://dx.doi.org/10.1016/j.ipl.2017.07.007
Reference: IPL 5563

To appear in: *Information Processing Letters*

Received date: 11 November 2016
Accepted date: 6 July 2017

Please cite this article in press as: S.C. Nandy et al., Faster Approximation for Maximum Independent Set on Unit Disk Graph, *Inf. Process. Lett.* (2017), http://dx.doi.org/10.1016/j.ipl.2017.07.007

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

- We consider maximum independent set of unit disks intersecting a horizontal line.
- We solve this problem in $O(n^2)$ time and space using dynamic programming.
- We also consider maximum independent set on unit disk graph.
- We design a 2 approximation for this problem which takes $O(n^2)$ time and space.
- The current best 2 approximation runs in $O(n^2 log n)$ time and $O(n^2)$ space.

Download English Version:

https://daneshyari.com/en/article/4950871

Download Persian Version:

https://daneshyari.com/article/4950871

Daneshyari.com