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Threshold load balancing with weighted tasks

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#### **ACCEPTED MANUSCRIPT**

### \*Highlights (for review)

- 1. We study threshold-based load balancing protocols for weighted tasks in graphs.
- 2. We consider two models.
  - The resource-based model where one where the nodes decide which tasks are sent to neighbours
  - $\bullet$  The user-based model where the tasks decide whether and where to move.
- 3. We show that the required time to balance depends on the mixing time and hitting time
- 4. Our bounds for the resourced-based case are tight and, surprisingly, they are independent of the weights of the tasks

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