Brief Announcement: 
Distributed Almost Stable Marriage
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Given: bipartite communication graph, 2-coloured nodes, matching preferences
(1 = most preferred partner)

Task: find a matching without unstable edges
(both endpoints prefer each other to their current partners)

Fast distributed algorithms?
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Unfortunately:

• Stable matchings are unstable — minor local changes in input may require global changes in output
• Any algorithm requires $\Omega(n)$ rounds

Good news:

• It is possible to find almost stable matchings very fast!
• Matching with fraction $\epsilon$ of unstable edges in $O(\Delta^2/\epsilon)$ rounds
• Strictly local algorithm: running time independent of $n$