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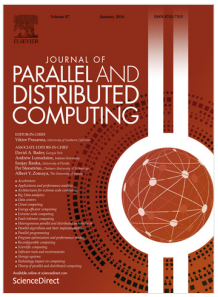

Efficient selective multicore prefetching under limited memory bandwidth

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***Highlights (for review)**

- In this paper we propose the Activation/Deactivation Prefetcher (ADP).
- ADP improves both performance and energy consumption with respect to the state-of-art HPAC prefetcher.
- Benchmarks exhibit execution phases that can be highly benefited by prefetching, and phases that can be adversely affected.
- Properly handling the memory bandwidth with adaptive prefetchers can help improve performance over aggressive prefetching.
- Further performance and energy gains can be achieved by selectively deactivating/activating individual prefetchers.

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