Dependency-Driven Disk-based Graph Processing

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Lumos: Out-of-order + Out-of-core

Traditional Processing

Iteration $k$

Iteration $k+1$

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Lumos: Out-of-order + Out-of-core

- **Dependency-driven** value propagation
- **Bulk Synchronous Parallel** semantics

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Lumos: Challenges & Overview

- Disk I/O & Locality constraints
- Graph structure constraints for future value computation
- Beyond BSP semantics for asynchronous algorithms
- Interplay with DynamicShards [ATC’16] and other techniques

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Thursday, July 11 at 11:35 am in Graph Processing Frameworks session

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