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A Comprehensive Bibliography of Distributed Shared Memory

by

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Abstract

Shared memory is an attractive programming model for designing parallel and distributed applications. In the past decade, a popular research topic has been the design of systems to provide the shared memory abstraction on physically distributed memory machines. This abstraction is commonly known as *Distributed Shared Memory (DSM)*. DSM has been implemented both in software (e.g., to provide the shared memory programming model on networks of workstations) and in hardware (e.g., using cache consistency protocols to support shared memory across physically distributed main memories). This bibliography identifies the results of research on DSM and related topics.

In this bibliography, we broadly classify papers describing previous DSM research into the following categories:

1. Concepts and origins,
2. Consistency models,
3. Memory coherence protocols and algorithms,
4. Hardware implementations,
5. Software implementations,
6. Language support for DSM (including support for distributed shared objects),
7. Performance evaluation and analysis,
8. Related issues (e.g., synchronization, fault tolerance, heterogeneity, and persistence),
9. Miscellaneous (papers that do not fall into the previous categories, e.g., surveys.)

Determining the most appropriate classification for existing DSM research was a difficult task and placing papers into a single category sometimes required making seemingly arbitrary decisions. Each paper was placed into the category which the author felt was most relevant to the work described in that paper—the author apologizes in advance to researchers who feel that their work was incorrectly categorized or omitted entirely. Any feedback is greatly appreciated.

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Currently, there are 1327 entries in this bibliography.

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