

Research Questions

RQ1: How has Intel Optane DC Persistent Memory influenced the architectural design and performance of databases, file systems, and data structures?

- How have file systems been redesigned to accommodate Intel Optane DC Persistent Memory, and what performance and reliability gains have these changes delivered?
- How have databases (including in-memory systems) been re-architected (e.g., logging and recovery) to integrate Optane DC PMMs, and what insights have been gained from these efforts??
- How do Optane-specific microarchitectural characteristics (e.g., write latency, bandwidth asymmetry) influence the data structures?
- Which operational modes (AppDirect, Memory, Mixed) are most preferred in the rearchitected systems, and why?

RQ2: What are the most common methodologies and benchmark suites that have been used to produce a fair and reproducible evaluation of Optane DC persistent memory, and what are their limitations?

RQ3: What are the existing and potential application scenarios for byte-addressable PMM, particularly Intel Optane?