

RQ1: How should databases, file systems, and HPC applications be rearchitected to make the most efficient use of Intel Optane DC persistent memory?

- How do Optane-specific microarchitectural characteristics (e.g., write latency, bandwidth asymmetry) influence the data structures
- What strategies do Optane-aware file systems use to balance performance and reliability?
- How have databases (including in-memory) been re-architected (e.g. logging and recovery) for Optane DC PMMs to optimize their performance?
- 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: Under real world application workloads, how quickly does Optane DC PMM wear out—and what insights have Optane-specific studies revealed about its wear-levelling, endurance, long-term reliability, and the effectiveness of hardware/software mitigation techniques?