

# **Charting the Future of Persistent Memory: Insights from OptanePMEM - Research Questions**

RQ1 : Which real-world applications of PMM get the biggest speed boost from Intel Optane DC PMM, and how do those gains change in Memory Mode, AppDirect Mode, and mixed setups?

RQ2 : How have Optane-aware databases, file systems, and HPC codes been redesigned to leverage Optane's traits, and what performance-consistency trade-offs do they expose?

RQ3 : What benchmarking methods and experimental setups are commonly used to evaluate Optane DC persistent memory systems, and what are their limitations in enabling fair and consistent comparisons?

RQ4 : How do production-like workloads impact the endurance of Optane DC PMMs, and how effective are hardware wear-leveling and software techniques in extending their service life?

RQ5 : What security risks and crash-consistency challenges are associated with Optane DC PMMs, and how effective are hardware and software countermeasures in mitigating them?