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**Towards Design Space Exploration of
Industrial Distributed Cyber-Physical Systems**

1. To enable system-level design space exploration of industrial distributed cyber-physical systems, the application workload, platform, and mapping models should be defined as separate concerns, providing a sufficient level of abstraction to explore large design spaces while preserving the accuracy needed for meaningful performance analysis. (Chapter 3)
2. The models needed for design space exploration of large industrial distributed cyber-physical systems must be derived automatically because these systems include many interacting processes whose behavior changes across operation modes, and neither manual modeling nor static source-code analysis can reliably manage such complexity and variability. (Chapter 4)
3. Effective design space exploration of industrial distributed cyber-physical systems requires simulation-based performance analysis, because simulation can capture mode-dependent execution behavior, event-driven interactions, and timing effects with fewer simplifying assumptions than purely analytical approaches. (Chapter 5)
4. To identify performance improvement opportunities in the design space exploration of industrial distributed cyber-physical systems, both inter-process and intra-process parallelism must be represented in the application workload model, as they are essential for evaluating multi-core architectures effectively. (Chapter 6)
5. Design space exploration of industrial distributed cyber-physical systems requires dedicated modeling and simulation frameworks because many existing embedded system DSE tools do not scale to the size, distribution, and heterogeneity of such systems.
6. Design space exploration of industrial distributed cyber-physical systems requires models that capture both computational behavior and the relevant effects of the physical environment because the overall system performance depends on the interaction between these two domains.
7. In design space exploration, the abstraction level of the models should match the design decisions being explored; components outside the design space can be modeled more abstractly to preserve scalability and efficiency.
8. Exhaustive exploration of design spaces in industrial distributed cyber-physical systems is computationally infeasible. Therefore, practical DSE approaches must rely on heuristic or metaheuristic search techniques, often in a multi-objective setting, rather than brute-force exploration.
9. Perfectionism can become a waste of time and effort when the marginal value of further improvement no longer justifies the resources spent on it.
10. A meaningful life is shaped not only by personal achievements; the positive influence one has on others through empathy, encouragement, listening, and support can be more valuable and longer lasting than individual accomplishments.