Scalability

Parallel discrete event simulation progresses in alternating phases: local time advance + synchronization.

Generally, PDES would scale if model partition to processors makes each submodel advance its local time at equal rate. Difficult problem, cumulative wisdom & tricks, requires some user assistance - AI/parallelizing compilers don't work.

Idealized analytic evaluations of simulators (Fujimoto, Nicol) and model analysis give useful heuristics.

Rough heuristics and running code + good performance monitoring and load management tools = best practical approach - distribute balanced "skeleton testbeds" with S3.