ParaPhrase: Parallel Patterns for Adaptive Heterogeneous Multicore Systems

- New structured design and implementation process for heterogeneous parallel architectures
- A variety of parallel patterns to develop component based applications
- Map, and dynamically re-map, components to meet application needs and availability of hardware resources

Analysis
- Static analysis (RefactorErl)
- Skeleton candidates
- Combinations of skeletons
- Farm of (pipe of (farm and farm))

Benchmarking
- Enwrap expression (RefactorErl)
- Infer type (Typer)
- Generate data (QuickCheck)
- Measure sequential execution time

Costing and Estimation
- Cost model (pluggable)
- Calibration: spawn, communication
- Estimate parallel execution time

Deliver results
- Ranking by heuristics
- Assist in decision making

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