

***CoSywork:
Composing Cyber-Physical Many-
Core Systems with a Holistic
Platform Governance Framework***

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Formation of project consortium:
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CoSywork

- WP1: Project management
- WP2: Standardization and reference platform integration
- WP3: HW infrastructure for many-core governance
- WP4: Predictable lightweight middleware framework
- WP5: Design environment & offline tooling
- **WP6: Leading use cases & benchmark evaluation**
- WP7: Dissemination

The Compiler Technology and Computer Architecture Group

@ University of Hertfordshire

What have we done?

- A language similar to C and a stable compiler
- More amenable to resource-aware optimizations
 - code rearrangement, flexible scheduling, better memory management, finer performance tuning
- Performance rivals commercial compilers
- Mature project – 15 years running

What do we want to do next?

- Develop a back end to the compiler for
 - multi-core, system-on-chip, or reconfigurable computing
 - load balancing
- Develop innovative dynamic optimizations/adaptations that self-adjust to varying resource constraints
- Compiler-assured robustness of embedded code

Partners sought

- To form a UK consortium, an industrial partner with an UK branch is sought
 - Case study provided by industrial partner will be a strong guidance for the planned research
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