

Matrix multiplication
Dot product ... Vector reduction

**High-level
programming**

High-level Expression

Algorithmic Patterns

`iterate` `split` `map`
`...` `reorder`
`join` `reduce`

*Algorithmic choices &
Hardware optimizations*

**Exploration with
rewriting rules**

Low-level Expression

Hardware Patterns

`vectorize` `map-workgroup` `...` `asLocal`
`map-warp`

Code generation

OpenCL Program

Hardware Paradigms

`workgroups` `local memory` `...` `barriers`
`vector units`