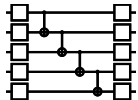


Quantum program

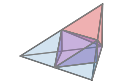


Logical-level  
optimization  
(Qiskit/TKet/Staq)

CX-based qubit  
mapping/routing  
(Qiskit/TKet/Staq)

Logical-level optimization;  
Rebase to Canonical (TKet)

Canonical-optimized  
mapping/routing



$\text{Can}(a, b, c)$

Canonical synth  
Cost model

Synthesizer;  
Gate scheduling

CX ISA



Synthesizer;  
Gate scheduling

SQiSW ISA



Synthesizer;  
Gate scheduling

CPhase ISA



Synthesizer;  
Gate scheduling

xxx ISA

Synthesizer;  
Gate scheduling

xxx ISA

...

...

Heterogeneous



*Canopus: ISA-aware, deep co-optimized, low-overhead*

