Combinatorial problems in supply-chain & logistics

Where classical optimizations meet a growing case for quantum-inspired and quantum-ready methods.

Supply chain network design

- Facility location
- Multi-echelon inventory
- Supplier selection
- Transportation network
- Reverse logistics



Manufacturing & production

- Job-shop scheduling
- Flexible system scheduling
- Assembly line balancing
- Tool change optimization
- Lot-sizing and batching



Distribution & routing

- Vehicle routing (VRP)
- Last-mile delivery
- Dynamic routing



Truck loading & packing

- 3D bin packing
- Palletization
- Container loading
- Mixed-load optimization



Inventory & demand fulfillment

- Multi-period inventory
- Safety stock placement
- Demand allocation



Scheduling & workforce planning

- Employee shift scheduling
- Crew pairing and rostering
- Maintenance scheduling
- Appointment scheduling

