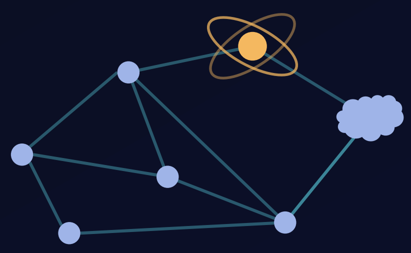
qCLOUDS



Quantum Cloud Computing and Distributed Systems Laboratory

Research and Innovation on cloud, edge, fog and quantum computing systems and the resource-management methods that make distributed infrastructure efficient, sustainable and reliable.

RESEARCH PROBES

- **Cloud, Edge & Fog Computing**

  Architectures and middleware for large-scale distributed infrastructure.

- **Resource Management & Scheduling**

  SLA-aware, energy- and cost-efficient orchestration of workloads.

- **AI-Centric Systems**

  Data-driven and learning-based management of clouds.

- **Quantum Cloud Computing**

  Frameworks and tools for quantum and hybrid systems.

- **Sustainable Computing**

  Energy efficiency and emissions reduction in data centres.

OPEN-SOURCE SOFTWARE

CloudSim · iFogSim · Gridbus · Cloudbus · iQuantum · qFaaS · + more

Toolkits used by researchers and industry worldwide for modelling, simulation and management of distributed systems.

RECOGNITION

#1

Citation impact in Distributed Computing — Stanford top-2% scientists list (2023 & career-long).

5/5

Distributed Computing at Melbourne rated “well above world standard” — ERA 2018.

69

Publications in 2025 (43 journal, 15 conference); ARC Discovery Project.

DIRECTOR

Prof. Rajkumar Buyya

Redmond Barry Distinguished Professor · Fellow of ACM, IEEE and Academia Europaea

Join us — PhD & collaborations

clouds.cis.unimelb.edu.au
github.com/cloudslab