

Yuyuan Yuan

Systems Engineer — Robotics Middleware

[Check my portfolio yuyuan.dev](#)

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Rust-native, low-latency infrastructure that replaces DDS in ROS 2. Committer on [Eclipse Zenoh](#) and [rmw_zenoh](#).

EXPERIENCE

Committer — Eclipse Foundation & Open Robotics

Aug 2024 — present

Committer for [Eclipse Zenoh](#) and [rmw_zenoh](#).

Senior Software Engineer — ZettaScale Technology

Full-time · Mar 2023 — present

Rust-native robotics middleware: migrating Zenoh's async runtime from async-std to Tokio; building the Zenoh RMW layer for ROS 2 with QoS-compatible reliability/durability over a real-time-capable pub/sub transport; and [hiroz](#) (formerly ros-z), a pure-Rust ROS 2 stack on Zenoh with no CycloneDDS/FastDDS in the loop.

Software Engineer — ADLINK Technology

Internship · Oct 2021 — Mar 2023

Designed and ran a benchmark suite comparing Zenoh against MQTT, Kafka, and DDS, later featured in [Zenoh vs. MQTT, Kafka, DDS](#). Measured up to **67 Gbps** single-machine peer-to-peer throughput (payloads to 512 KB) and **10μs** round-trip latency (64-byte payload) — 65× MQTT's and 10× Kafka's throughput at comparable sizes.

Research Assistant — National Taiwan University

Sep 2021 — Mar 2023

Built sensor-fusion pipelines for automotive perception on ROS.

Research / Teaching Assistant — National Taiwan University

Sep 2018 — Feb 2021

Medical-image auto-segmentation research; calculus TA (2018–21); numerical computing TA (2019–20).

Software Engineer, Summer Intern — IBM

Yorktown Heights, NY · Jul — Aug 2018

Optimized a deep-learning training pipeline.

Embedded Software Engineer — CAVEDU

Part-time, Taipei · Sep 2014 — Sep 2021

Maintained server infrastructure; authored *LattePanda v.s. IoT* and *Challenge IoT with LinkIt Smart 7688 Duo*; taught embedded/IoT workshops, including Intel VPU deployment.

EDUCATION

MS, Applied Mathematics

National Taiwan University

Sep 2018 — Feb 2021

BS, Mathematics & Mechanical Eng.

National Taiwan University

Sep 2013 — Sep 2018

SKILLS

LANGUAGES

Rust · C++ · Python

MIDDLEWARE

Zenoh · DDS · ROS 2 · Tokio

SYSTEMS

Distributed Systems · Embedded · Linux Kernel · NixOS · Git

FOUNDATIONS

Applied Mathematics · Deep Learning

PROJECTS

● [hiroz](#)

Pure-Rust ROS 2 on Zenoh — one cargo build, no DDS.

● [rmw_zenoh](#)

ROS 2 RMW replacing DDS: zero-copy IPC, multi-host, security.

● [zenoh](#)

Zero-overhead pub/sub & compute for IoT, robotics, edge.

● [zenoh-dissector](#)

Wireshark dissector for the Zenoh wire protocol.

● [balancing-robot](#)

Self-balancing 2-wheel robot — IMU fusion, PID, RL.

TALKS

No ROS 2 installed. Still ROS 2. — ROSCon Global & Taiwan Robotics '26

From ROS to Rust: Hiroz & Zenoh — COSCUP '26

An Introduction to Lean — COSCUP '25

+2 more talks at [talks.yuyuan.dev](#)