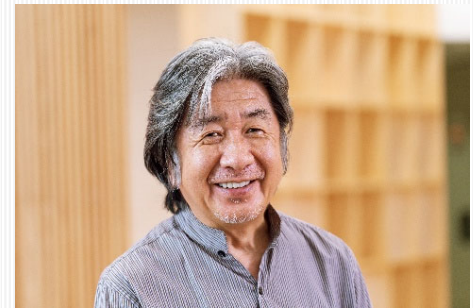


# Science and Technology of Superconducting Macroscopic Quantum States - A journey around Josephson qubits

## Dr. Jaw-Shen Tsai

RIKEN Center for Quantum Computing (RQC)



**March 11, 2026**<sub>(Wed)</sub> **16:00–17:00**<sub>(JST)</sub>

This colloquium will be held in **HYBRID format**.

**On-site Venue:** [Wako S01](#) Bioscience Bldg./ Suzuki Umetaro Hall

**Online Venue:** Zoom. To receive the link, register in advance at  
[https://krs2.riken.jp/m/rqc\\_registration\\_form](https://krs2.riken.jp/m/rqc_registration_form)

As my Riken laboratory, that has existed for the past 26 years, will be closed down in March 2026, I would like to give a retrospective talk covering major topics of the field after the discovery of Josephson effect. The topics include Josephson junction, SQUID, macroscopic quantum tunnelling/level quantization, Coulomb blockade, high-temperature superconductivity, superconducting qubit, quantum phase slip and more. Our recent results concerning the bosonic qubit will also be discussed. The rich field has produced three Nobel physics prizes so far. I have been conducting research in the field of superconducting macroscopic quantum systems for about half a century, so in the talk, my personal journey around the topics will also be disclosed.