InCEPTT 2024

***Journey into Quantum**: Hands-on workshop conducted by Keysight for design of Superconducting Quantum Circuits*

***Date:** Wednesday, 4 December 2024*

***Venue:** Radisson Blu Plaza, Delhi Airport, New Delhi.*

Empowering Superconducting Systems with Keysight EDA Solutions

In an era marked by unprecedented advancements in quantum computing, the demand for efficient design and optimization tools has never been greater. At this workshop, we aim to address this need by showcasing Keysight's state-of-the-art EDA solutions tailored specifically for superconducting quantum systems.

Join us for an enlightening workshop on "Exploring Quantum EDA Solutions at Keysight for Superconducting Quantum Systems."

Throughout the workshop, participants will have the opportunity to gain valuable insights into Keysight's cutting-edge Quantum EDA solutions, designed to accelerate the design, tuning, and optimization workflow for quantum circuits.

Don't miss this chance to explore the forefront of quantum technology and learn from industry experts.

Software used: Keysight Pathwave ADS v2025

Venue: Radisson Blu Plaza, Delhi Airport, New Delhi.

Date & Timings: Wednesday, 4 Dec 2024
8:30 AM to 11:30 AM

Laptop: Participants to bring their own laptop. Training license will be provided by us.

Registration Fees: Free

Duration: 3 hours

Registration Link:

REGISTER HERE

Audience

Quantum circuit Designers, Technical Staff, Engineers, Research Scholars, Startup Companies, Faculty, Students, Industry Professionals, who are :

- specializing in quantum computing, superconducting qubits and related fields would benefit from learning about advanced EDA solutions to streamline their research and development processes.

Prerequisites

Basic Understanding of Quantum Computing: Participants should have a fundamental understanding of quantum computing principles, including qubits, quantum gates, and quantum algorithms.

Familiarity with Electronic Design Automation (EDA) Tools: A basic knowledge of EDA tools and software, such as Keysight's PathWave ADS, RFPro, and EMPro, would be beneficial (but not must).

Expérience with semiconductor devices, circuit design, layout design, simulation would be an added advantage.

Topics covered:

- Learn how to Keysight ADS helps with faster development of superconducting qubits
- Circuit design of superconducting qubits – build simple quantum computing circuits
- Generate quantum Layout design
- EM simulation – learn how to carry out a full-wave EM simulation to analyze a superconducting circuit.
- Modeling of the kinetic inductance in the EM flow
- Extract quantum parameters.
- Learn to generate GDS file - an industry-standard for layout fabrication.
- Use cases

Speakers/Trainers:

A highly experienced RF and microwave engineer with nearly two decades of expertise in various domains including antenna design, electromagnetic analysis, Quantum and project leadership. Anil is passionate about innovation and committed to driving advancements in Quantum EDA solutions, contributing to the forefront of quantum computing.

Anil K. Pandey
R&D, Keysight Technologies

Research interests: Antenna design, MIMO antennas, wideband decoupling networks, and mutual coupling reduction. Skilled in HFSS, CST, antenna fabrication, testing in anechoic chambers. Immediate past chair, IEEE APS Student Branch Chapter, IIT Kanpur.

Payel Mondal
R&D, Keysight Technologies