**Swap spectroscope of qubit states**

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Two-qubit gates serve as the foundational components of a universal quantum computer, with the swap operation being the fundamental operation within these gates. In this presentation, I will share our recent experimental investigations into the swap spectroscope of two superconducting X-mon qubits, where they are coupled via a transmon qubit. We achieved swaps between the (0, 1)-(1, 0) and (1, 1)-(0, 2) two-qubit states, enabling the implementation of a CZ gate operation.