

研究室名	棚本研究室 論文発表
------	------------

発表時期	31-Mar-23
題名	Classical SPICE simulation of superconducting quantum circuits
掲載雑誌	Appl. Phys. Express 16, 034501 (2023)
著者	<u>Tetsufumi Tanamoto</u> , Toyofumi Ishikawa, Kunihiro Inomata, Shumpei Masuda, ※Tamio Onuma, and Shiro Kawabata
概要	<p>Quantum computing has been developed for many physical systems, and superconducting qubits are now in the integration phase. To efficiently design a many qubit system, an appropriate circuit simulator is necessary. Despite the existence of simulators for circuits including Josephson junctions, simpler circuit simulators are desirable when considering integrated qubits controlled by millions of transistors. This study examines the application of conventional Simulation Program with Integrated Circuit Emphasis simulators to analyze transmission signals of the system composed of transmons in the dispersive regime. Further, the influences of device parameter variations caused by the fabrication process can be taken into the model.</p>