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- IBM Research at T. J. Watson Research Center
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- Superconducting qubits for fault-tolerant quantum computing
 - Fault-tolerant demonstrations of error correction
 - A single error is detectable
 - Improved physical qubits
 - Construct qubits in networks for integration
 - Improved two qubit gates
 - Logical encoding demonstrations
 - 9 qubit code using either the surface code or Bacon-Shor code



- **World-class fabrication facilities**
 - Micro-electronics Research Laboratory: Industry-leading 200mm silicon line
- **Premier multi-disciplinary quantum team**
 - Quantum algorithms and codes
 - Physics of superconducting qubits and circuits
 - Proven integration of the most complex superconducting qubit networks
 - Experts in control, readout, and materials
- **Field defining results by IBM**
 - Top superconducting qubit coherence times (50-90 microseconds in planar architecture, quality factors > 2M)
 - High-fidelity all-microwave gates
 - Defining benchmarking and characterization protocols and terminology proliferated within broader quantum community

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- Electronics support: microwave hardware, readout hardware
- Materials studies: surface science and loss
- Cryogenic expertise
- Alternative superconducting qubit designs
- New codes beyond surface code

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