

Syracuse University

College of Arts & Sciences

Britton Plourde



Professor

Physics Department

✉ bplourde@syr.edu

📍 219 Physics Building

☎ 315.443.8967

[CV \(.pdf\)](#)

[Research Page](#)

Research Interests

- Experimental investigation of topics in quantum information science with superconducting circuits.
- Measurements of vortex dynamics in nanofabricated superconducting structures.
- Nanofabrication of superconducting devices at Syracuse and the [Cornell NanoScale Facility](#).
- Low-temperature physics.

News Articles

[A New Way to Count Qubits](#)

[Britton Plourde Works to Develop Tools for Quantum Computer](#)

[Syracuse Physicist Awarded IBM Grant to Develop Quantum Computing](#)

[Syracuse's New Cooling System Heats up Physics Research](#)

[SU Physicist's Proposal Receives \\$2.25 Million in Funding](#)

[Physicist Awarded Grant for Quantum Computing Efforts](#)

[A New Way to Count Qubits](#)

Education

	Ph.D. Physics
2000	University of Illinois, Champaign-Urbana
1995	Master of Science, Physics University of Illinois
1993	Bachelor of Science, Physics with Honors University of Michigan

Awards & Professional Honors

- IBM Faculty Award, 2011

- NSF CAREER Award, 2006
- Editor-in-Chief, IEEE Transactions on Applied Superconductivity, since 2013

Selected Publications

"Trapping a Single Vortex and Reducing Quasiparticles in a Superconducting Resonator" I.

Nsanzineza and B. L. T. Plourde -- Physical Review Letters 113, 117002 (2014).

"High-fidelity qubit measurement with a microwave-photon counter" L.C.G. Govia, Emily J. Pritchett,

Canran Xu, B. L. T. Plourde, Maxim G. Vavilov, Frank K. Wilhelm, and R. McDermott-- Physical Review A 90, 062307 (2014).

"First-order sideband transitions with flux-driven asymmetric transmon qubits", J.D. Strand, Matthew

Ware, Felix Beaudoin, T.A. Ohki, B.R. Johnson, Alexandre Blais, B.L.T. Plourde - Physical Review B **87**, 220505(R) (2013).

"Microwave response of vortices in superconducting thin films of Re and Al" C. Song, T.W. Heitmann,

M.P. DeFeo, K. Yu, R. McDermott, M. Neeley, John M. Martinis, B.L.T. Plourde, Physical Review B 79, 174512 (2009).

"Asymmetric weak-pinning superconducting channels: vortex ratchets" K. Yu, T.W. Heitmann, C.

Song, M.P. DeFeo, B.L.T. Plourde, M.B.S. Hesselberth, P.H. Kes, Physical Review B 76, 220507(R) (2007).

"Solid-State Qubits with Current-Controlled Coupling" T. Hime, P.A. Reichardt, B.L.T. Plourde, T.L.

Robertson, C.-E. Wu, A.V. Ustinov, John Clarke -- Science 314, 1427 (2006).

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College of Arts and Sciences, 301 Hall of Languages. Phone: 315.443.3150

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