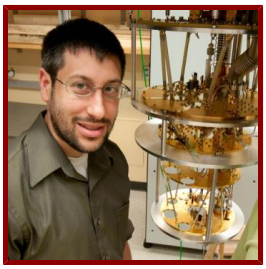
Stanford



David Schuster

Joan Reinhart Professor

Applied Physics

Bio

ACADEMIC APPOINTMENTS

- Professor, Applied Physics

PROGRAM AFFILIATIONS

- Stanford SystemX Alliance

Teaching

COURSES

2025-26

- Quantum Hardware: APPPHYS 228 (Win)

2024-25

- Introduction to Superconducting Circuits: APPPHYS 284 (Spr)
- Quantum Hardware: APPPHYS 228 (Win)

2023-24

- Introduction to Superconducting Circuits: APPPHYS 284 (Spr)
- Quantum Hardware: APPPHYS 228 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Debadri Das, Chaitrali Duse, Sandesh Kalantre, Takuma Makihara, Jyotirmai Singh, Erik Szakiel, Zelong Yin, Cady van Assendelft

Postdoctoral Faculty Sponsor

David Garcia, Hwanchul Jung, Sebastien Leger, Yoshiki Sunada, Chuyao Tong, Guanzhong Wang

Doctoral Dissertation Advisor (AC)

Jadyn Anczarski, Matthew Chalk, Chunyang Ding, Eesh Gupta, Hannah Magoon, Connie Miao, Yueheng Shi, Aviv Simchony, Paul Varosy, Wendy Wan, Victor Wei

Master's Program Advisor

Raphael Low

Doctoral Dissertation Co-Advisor (AC)

Kaveh Pezeshki, Zoe Smith

Doctoral (Program)

Daniel Campos, Nikitha Chalgeri, Matthew Chalk, Bobby Shi

Publications

PUBLICATIONS

- **Tunable Inductive Coupler for High-Fidelity Gates Between Fluxonium Qubits** *PRX QUANTUM*
  Zhang, H., Ding, C., Weiss, D. K., Huang, Z., Ma, Y., Guinn, C., Sussman, S., Chitta, S., Chen, D., Houck, A. A., Koch, J., Schuster, D. I.
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- **Stimulated Emission of Signal Photons from Dark Matter Waves.** *Physical review letters*
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- **Experimental advances with the QICK (Quantum Instrumentation Control Kit) for superconducting quantum hardware** *PHYSICAL REVIEW RESEARCH*
  Ding, C., Di Federico, M., Hatridge, M., Houck, A., Leger, S., Martinez, J., Miao, C., Schuster, D., Stefanazzi, L., Stoughton, C., Sussman, S., Treptow, K., Uemura, et al
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- **Autonomous error correction of a single logical qubit using two transmons.** *Nature communications*
  Li, Z., Roy, T., Rodríguez Pérez, D., Lee, K. H., Kapit, E., Schuster, D. I.
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- **Improved coherence in optically defined niobium trilayer-junction qubits** *PHYSICAL REVIEW APPLIED*
  Anferov, A., Lee, K., Zhao, F., Simon, J., Schuster, D. I.
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- **Hardware-efficient autonomous error correction with linear couplers in superconducting circuits** *PHYSICAL REVIEW RESEARCH*
  Li, Z., Roy, T., Perez, D., Schuster, D. I., Kapit, E.
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- **Exploring ququart computation on a transmon using optimal control** *PHYSICAL REVIEW A*
  Seifert, L., Li, Z., Roy, T., Schuster, D. I., Chong, F. T., Baker, J. M.
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- **Quantum-enabled millimetre wave to optical transduction using neutral atoms.** *Nature*
  Kumar, A., Suleymanzade, A., Stone, M., Taneja, L., Anferov, A., Schuster, D. I., Simon, J.
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- **Dancing the Quantum Waltz: Compiling Three-Qubit Gates on Four Level Architectures**
  Litteken, A., Seifert, L., Chadwick, J. D., Nottingham, N., Roy, T., Li, Z., Schuster, D., Chong, F. T., Baker, J. M., ACM
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- **Disorder-assisted assembly of strongly correlated fluids of light.** *Nature*
  Saxberg, B., Vrajitoarea, A., Roberts, G., Panetta, M. G., Simon, J., Schuster, D. I.
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