



Connor Martin Holland

Postdoctoral Scholar, Physics

Bio

PROFESSIONAL EDUCATION

- Master of Science, Stanford University , AEPHY-MS (2019)
- Bachelor of Science, Stanford University , MATH-MIN (2018)
- Bachelor of Science, Stanford University , PHYS-BSH (2018)
- PhD, Princeton , Physics (2026)
- MS, Stanford , Applied and Engineering Physics (2019)
- BS, Stanford , Physics (2018)

STANFORD ADVISORS

- Jon Simon, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Demonstration of Measurement-Enhanced State Preparation and Erasure Conversion in a Molecular Tweezer Array** *PHYSICAL REVIEW X*
Holland, C. M., Lu, Y., Li, S. J., Welsh, C. L., Cheuk, L. W.
2025; 15 (3)
- **Blue-Detuned Magneto-optical Trap of CaF Molecules** *PHYSICAL REVIEW LETTERS*
Li, S. J., Holland, C. M., Lu, Y., Cheuk, L. W.
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- **Raman sideband cooling of molecules in an optical tweezer array** *NATURE PHYSICS*
Lu, Y., Li, S. J., Holland, C. M., Cheuk, L. W.
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- **On-demand entanglement of molecules in a reconfigurable optical tweezer array** *SCIENCE*
Holland, C. M., Lu, Y., Cheuk, L. W.
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- **Bichromatic Imaging of Single Molecules in an Optical Tweezer Array** *PHYSICAL REVIEW LETTERS*
Holland, C. M., Lu, Y., Cheuk, L. W.
2023; 131 (5)
- **Molecular Laser Cooling in a Dynamically Tunable Repulsive Optical Trap** *PHYSICAL REVIEW LETTERS*
Lu, Y., Holland, C. M., Cheuk, L. W.
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- **Observation of robust edge superconductivity in Fe(Se,Te) under strong magnetic perturbation** *SCIENCE BULLETIN*
Jiang, D., Pan, Y., Wang, S., Lin, Y., Holland, C. M., Kirtley, J. R., Chen, X., Zhao, J., Chen, L., Yin, S., Wang, Y.
2021; 66 (5): 425–32
- **Synthesizing optical spectra using computer-generated holography techniques** *NEW JOURNAL OF PHYSICS*
Holland, C. M., Lu, Y., Cheuk, L. W.
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- **Large Momentum Transfer Clock Atom Interferometry on the 689 nm Intercombination Line of Strontium** *PHYSICAL REVIEW LETTERS*
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- **Determining the vibrations between sensor and sample in SQUID microscopy** *APPLIED PHYSICS LETTERS*
Schiessl, D., Kirtley, J. R., Paulius, L., Rosenberg, A. J., Palmstrom, J. C., Ullah, R. R., Holland, C. M., Fung, Y. K., Ketchen, M. B., Gibson, G. W., Moler, K. A.
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- **The response of small SQUID pickup loops to magnetic fields** *SUPERCONDUCTOR SCIENCE & TECHNOLOGY*
Kirtley, J. R., Paulius, L., Rosenberg, A. J., Palmstrom, J. C., Schiessl, D., Jermain, C. L., Gibbons, J., Holland, C. M., Fung, Y., Huber, M. E., Ketchen, M. B., Ralph, D. C., Gibson, et al
2016; 29 (12)
- **Scanning SQUID susceptometers with sub-micron spatial resolution** *REVIEW OF SCIENTIFIC INSTRUMENTS*
Kirtley, J. R., Paulius, L., Rosenberg, A. J., Palmstrom, J. C., Holland, C. M., Spanton, E. M., Schiessl, D., Jermain, C. L., Gibbons, J., Fung, Y. K., Huber, M. E., Ralph, D. C., Ketchen, et al
2016; 87 (9)