

## Bibliography of Publications

1. Lee Y, Bersin E, Dahlberg A, Wehner S, Englund D. *A Quantum Router Architecture for High-Fidelity Entanglement Flows in Quantum Networks*. arXiv [quant-ph] 2005.01852. 2020. Available: <http://arxiv.org/abs/2005.01852>
2. Meiksin J. *Quantum materials R&D forges ahead*. MRS Bull. 2020;45: 885–888. doi:[10.1557/mrs.2020.288](https://doi.org/10.1557/mrs.2020.288)
3. Moody G, Sorger VJ, Blumenthal DJ, Juodawlakis PW, Loh W, Sorace-Agaskar C, et al. *Roadmap on Integrated Quantum Photonics*. arXiv [quant-ph] 2102.03323. 2021. Available: <http://arxiv.org/abs/2102.03323>
4. Chen KC, Dai W, Errando-Herranz C, Lloyd S, Englund D. *Scalable and High-Fidelity Quantum Random Access Memory in Spin-Photon Networks*. arXiv [quant-ph] 2103.07623. 2021. Available: <http://arxiv.org/abs/2103.07623>
5. Shi H, Hsieh M-H, Guha S, Zhang Z, Zhuang Q. *Entanglement-assisted capacity regions and protocol designs for quantum multiple-access channels*. npj Quantum Information. 2021;7: 1–9. doi:[10.1038/s41534-021-00412-3](https://doi.org/10.1038/s41534-021-00412-3)
6. Li L, Choi H, Heuck M, Englund D. *Field-based design of a resonant dielectric antenna for coherent spin-photon interfaces*. Opt Express. 2021;29: 16469–16476. doi:[10.1364/OE.419773](https://doi.org/10.1364/OE.419773)
7. Xia Y, Li W, Zhuang Q, Zhang Z. *Quantum-Enhanced Data Classification with a Variational Entangled Sensor Network*. Phys Rev X. 2021;11: 021047. doi:[10.1103/PhysRevX.11.021047](https://doi.org/10.1103/PhysRevX.11.021047)
8. Aiello CD, Awschalom DD, Bernien H, Brower T, Brown KR, Brun TA, et al. *Achieving a quantum smart workforce*. Quantum Sci Technol. 2021;6: 030501. doi:[10.1088/2058-9565/abfa64](https://doi.org/10.1088/2058-9565/abfa64)
9. Hao S, Shi H, Li W, Shapiro JH, Zhuang Q, Zhang Z. *Entanglement-Assisted Communication Surpassing the Ultimate Classical Capacity*. Phys Rev Lett. 2021;126: 250501. doi:[10.1103/PhysRevLett.126.250501](https://doi.org/10.1103/PhysRevLett.126.250501)
10. Carver C, Boaks M, Kim J, Larson K, Nordin GP, Camacho RM. *Automated photonic tuning of silicon microring resonators using a 3D-printed microfluidic mixer*. OSA Continuum. 2021;4: 2075. doi:[10.1364/osac.425058](https://doi.org/10.1364/osac.425058)
11. Zhang B, Zhuang Q. *Quantum internet under random breakdowns and intentional attacks*. Quantum Sci Technol. 2021;6: 045007. doi:[10.1088/2058-9565/ac1041](https://doi.org/10.1088/2058-9565/ac1041)
12. Zhuang Q, Zhang B. *Quantum communication capacity transition of complex quantum networks*. Phys Rev A. 2021;104: 022608. doi:[10.1103/PhysRevA.104.022608](https://doi.org/10.1103/PhysRevA.104.022608)
13. Dai W, Rinaldi A, Towsley D. *Entanglement Swapping in Quantum Switches: Protocol Design and Stability Analysis*. arXiv [quant-ph] 2110.04116. 2021. Available: <http://arxiv.org/abs/2110.04116>
14. Raveendran N, Vasić B. *Trapping sets of quantum LDPC codes*. Quantum. 2021;5: 562. doi:[10.22331/q-2021-10-14-562](https://doi.org/10.22331/q-2021-10-14-562)
15. Kuruma K, Piracha AH, Renaud D, Chia C, Sinclair N, Nadarajah A, et al. *Telecommunication-wavelength two-dimensional photonic crystal cavities in a thin single-crystal diamond membrane*. Appl Phys Lett. 2021;119: 171106. doi:[10.1063/5.0061778](https://doi.org/10.1063/5.0061778)
16. Dai W, Towsley D. *Entanglement Swapping for Repeater Chains with Finite Memory Sizes*. arXiv [quant-ph] 2111.10994. 2021. Available: <http://arxiv.org/abs/2111.10994>

17. Debrox R, Michaels CP, Purser CM, Wan N, Trusheim ME, Arjona Martínez J, et al. *Quantum Control of the Tin-Vacancy Spin Qubit in Diamond*. Phys Rev X. 2021;**11**: 041041. doi:[10.1103/PhysRevX.11.041041](https://doi.org/10.1103/PhysRevX.11.041041)
18. Sayem AA, Wang Y, Lu J, Liu X, Bruch AW, Tang HX. *Efficient and tunable blue light generation using lithium niobate nonlinear photonics*. Appl Phys Lett. 2021;**119**: 231104. doi:[10.1063/5.0071769](https://doi.org/10.1063/5.0071769)
19. Zhu D, Chen C, Yu M, Shao L, Hu Y, Xin CJ, et al. *Spectral control of nonclassical light using an integrated thin-film lithium niobate modulator*. arXiv [physics.optics] 2112.09961. 2021. Available: <http://arxiv.org/abs/2112.09961>
20. Moody G, Sorger VJ, Blumenthal DJ, Juodawlakis PW, Loh W, Sorace-Agaskar C, et al. 2022 *Roadmap on integrated quantum photonics*. J Phys Photonics. 2022;**4**: 012501. doi:[10.1088/2515-7647/ac1ef4](https://doi.org/10.1088/2515-7647/ac1ef4)
21. Shi H, Zhuang Q. *Computable limits of optical multiple-access communications*. Phys Rev A. 2022;**105**: 022429. doi:10.1103/PhysRevA.105.022429
22. Tserkis S, Head-Marsden K, Narang P. *Information back-flow in quantum non-Markovian dynamics and its connection to teleportation*. arXiv [quant-ph] 2203.00668. 2022. Available: <http://arxiv.org/abs/2203.00668>
23. Tillman IJ, Rubenok A, Guha S, Seshadreesan KP. *Supporting multiple entanglement flows through a continuous-variable quantum repeater*. arXiv [quant-ph] 2203.07965. 2022. Available: <http://arxiv.org/abs/2203.07965>
24. Chen P-K, Briggs I, Hou S, Fan L. *Ultra-broadband quadrature squeezing with thin-film lithium niobate nanophotonics*. Opt Lett. 2022;**47**: 1506–1509. doi:[10.1364/OL.447695](https://doi.org/10.1364/OL.447695)
25. Maity S, Pingault B, Joe G, Chalupnik M, Assumpção D, Cornell E, et al. *Mechanical Control of a Single Nuclear Spin*. Phys Rev X. 2022;**12**: 011056. doi:[10.1103/PhysRevX.12.011056](https://doi.org/10.1103/PhysRevX.12.011056)
26. Bambauer JR, Zarsky T, Mayer J. *When a Small Change Makes a Big Difference: Algorithmic Fairness Among Similar Individuals*. UC Davis Law Review. 2022. Available: <https://papers.ssrn.com/abstract=3940705>
27. Asfaw A, Blais A, Brown KR, Candelaria J, Cantwell C, Carr LD, et al. *Building a Quantum Engineering Undergraduate Program*. IEEE Trans Educ. 2022;**65**: 220–242. doi:[10.1109/TE.2022.3144943](https://doi.org/10.1109/TE.2022.3144943)
28. Xin CJ, Mishra J, Chen C, Zhu D, Shams-Ansari A, Langrock C, et al. *Spectrally separable photon-pair generation in dispersion engineered thin-film lithium niobate*. Opt Lett. 2022;**47**: 2830–2833. doi:[10.1364/OL.456873](https://doi.org/10.1364/OL.456873)
29. Chen KC, Dhara P, Heuck M, Lee Y, Dai W, Guha S, et al. *Zero-Added-Loss Entangled Photon Multiplexing for Ground- and Space-Based Quantum Networks*. arXiv [quant-ph] 2206.03670. 2022. Available: <http://arxiv.org/abs/2206.03670>
30. Raveendran N, Rengaswamy N, Rozpędek F, Raina A, Jiang L, Vasić B. *Finite rate QLDPC-GKP coding scheme that surpasses the CSS Hamming bound*. Quantum. 2022;**6**: 767. doi:[10.22331/q-2022-07-20-767](https://doi.org/10.22331/q-2022-07-20-767)
31. Knall EN, Knaut CM, Bekenstein R, Assumpcao DR, Stroganov PL, Gong W, et al. *Efficient Source of Shaped Single Photons Based on an Integrated Diamond Nanophotonic System*. Phys Rev Lett. 2022;**129**: 053603. doi:[10.1103/PhysRevLett.129.053603](https://doi.org/10.1103/PhysRevLett.129.053603)
32. Nain P, Vardoyan G, Guha S, Towsley D. *Analysis of a tripartite entanglement distribution switch*. Queueing Syst. 2022;**101**: 291–328. doi:[10.1007/s11134-021-09731-w](https://doi.org/10.1007/s11134-021-09731-w)

33. Gong Z, Rodriguez N, Gagatsos CN, Guha S, Bash BA. *Quantum-Enhanced Transmittance Sensing*. arXiv [quant-ph] 2208.06447. 2022. Available: <http://arxiv.org/abs/2208.06447>
34. Han X, Zou C-L, Fu W, Xu M, Xu Y, Tang HX. *Superconducting cavity electromechanics: The realization of an acoustic frequency comb at microwave frequencies*. Phys Rev Lett. 2022;**129**. doi:[10.1103/physrevlett.129.107701](https://doi.org/10.1103/physrevlett.129.107701)
35. Sajjad A, Grace MR, Zhuang Q, Guha S. *Attaining quantum limited precision of localizing an object in passive imaging*. Phys Rev A. 2021. Available: <https://journals.aps.org/pra/abstract/10.1103/PhysRevA.104.022410>
36. Grace MR, Gagatsos CN, Guha S. *Entanglement-enhanced estimation of a parameter embedded in multiple phases*. Physical Review Research. 2021. Available: <https://journals.aps.org/prresearch/abstract/10.1103/PhysRevResearch.3.033114>
37. Sidhu JS, Bullock MS, Guha S, Lupo C. *Unambiguous discrimination of coherent states*. arXiv preprint arXiv:210900008. 2021. Available: <http://arxiv.org/abs/2109.00008>
38. Gagatsos CN, Guha S. *Impossibility to produce arbitrary non-Gaussian states using zero-mean Gaussian states and partial photon number resolving detection*. Physical Review Research. 2021. Available: <https://journals.aps.org/prresearch/abstract/10.1103/PhysRevResearch.3.043182>
39. Pizzimenti AJ, Lukens JM, Lu HH, Peters NA, Guha S. *Non-Gaussian photonic state engineering with the quantum frequency processor*. Phys Rev A. 2021. Available: <https://journals.aps.org/pra/abstract/10.1103/PhysRevA.104.062437>
40. Shi H, Hsieh MH, Guha S, Zhang Z. *Entanglement-assisted multiple-access channels: capacity regions and protocol designs*. 2021 IEEE International. 2021. Available: <https://ieeexplore.ieee.org/abstract/document/9518082/>
41. Anderson EJD, Guha S, Bash BA. *Fundamental limits of bosonic broadcast channels*. 2021 IEEE International. 2021. Available: <https://ieeexplore.ieee.org/abstract/document/9518198/>
42. Gong Z, Gagatsos CN, Guha S. *Fundamental Limits of Loss Sensing over Bosonic Channels*. 2021 IEEE International. 2021. Available: <https://ieeexplore.ieee.org/abstract/document/9517810/>
43. Dhara P, Johnson SJ, Gagatsos CN, Kwiat PG. *Heralded-Multiplexed High-Efficiency Cascaded Source of Dual-Rail Polarization-Entangled Photon Pairs using Spontaneous Parametric Down Conversion*. arXiv preprint arXiv. 2021. Available: <https://arxiv.org/abs/2107.14360>
44. Lee KK, Guha S, Ashok A. *Quantum-inspired Optical Super-resolution Adaptive Imaging*. Computational Optical Sensing and. 2021. Available: <https://opg.optica.org/abstract.cfm?uri=COSI-2021-CF4B.2>
45. Grace MR, Guha S. *Quantum-Optimal Object Discrimination in Sub-Diffraction Incoherent Imaging*. arXiv preprint arXiv:210700673. 2021. Available: <http://arxiv.org/abs/2107.00673>
46. Tahmasbi M, Bash BA, Guha S. *Signaling for covert quantum sensing*. 2021 IEEE International. 2021. Available: <https://ieeexplore.ieee.org/abstract/document/9517722/>
47. Dhara P, Patil A, Krovi H, Guha S. *Subexponential rate versus distance with time-multiplexed quantum repeaters*. Phys Rev A. 2021. Available: <https://journals.aps.org/pra/abstract/10.1103/PhysRevA.104.052612>
48. Dhara P, Linke NM, Waks E, Guha S. *Multiplexed quantum repeaters based on dual-species trapped-ion systems*. Phys Rev A. 2022. Available: <https://journals.aps.org/pra/abstract/10.1103/PhysRevA.105.022623>

49. Jagannathan A, Grace M, Brasher O, Shapiro JH. *Demonstration of quantum-limited discrimination of multicopy pure versus mixed states*. Phys Rev A. 2022. Available: <https://journals.aps.org/prabstract/10.1103/PhysRevA.105.032446>
50. Seshadreesan KP, Dhara P, Patil A, Jiang L, Guha S. *Coherent manipulation of graph states composed of finite-energy Gottesman-Kitaev-Preskill-encoded qubits*. Phys Rev A. 2022. Available: <https://journals.aps.org/prabstract/10.1103/PhysRevA.105.052416>
51. Hao S, Shi H, Gagatsos CN, Mishra M, Bash B, Djordjevic I, et al. *Demonstration of Entanglement-Enhanced Covert Sensing*. Phys Rev Lett. 2022;**129**: 010501. doi:[10.1103/PhysRevLett.129.010501](https://doi.org/10.1103/PhysRevLett.129.010501)
52. Patil A, Pant M, Englund D, Towsley D. *Entanglement generation in a quantum network at distance-independent rate*. npj Quantum Information. 2022. Available: <https://www.nature.com/articles/s41534-022-00536-0>
53. Lee KK, Gagatsos C, Guha S, Ashok A. *Quantum Multi-Parameter Adaptive Bayesian Estimation and Application to Super-Resolution Imaging*. arXiv preprint arXiv:220209980. 2022. Available: <http://arxiv.org/abs/2202.09980>
54. Terry C. *On its 12th anniversary, it's clear the 2010 U.S. "broadband plan" was A colossal dud*. In: Techdirt [Internet]. 16 Mar 2022 [cited 19 Sep 2022]. Available: <https://www.techdirt.com/2022/03/16/on-its-12-year-anniversary-its-clear-the-2010-u-s-broadband-plan-was-a-colossal-dud/>
55. Raymer MG, Guha S. *How U.S. policymakers can enable breakthroughs in quantum science*. In: Brookings [Internet]. 13 Jun 2022 [cited 19 Sep 2022]. Available: <https://www.brookings.edu/techstream/how-u-s-policymakers-can-enable-breakthroughs-in-quantum-science/>
56. D. S. Levonian, R. Riedinger, B. Machielse, E. N. Knall, M. K. Bhaskar, C. M. Knaut, R. Bekenstein, H. Park, M. Lončar, and M. D. Lukin, *Optical Entanglement of Distinguishable Quantum Emitters*, Phys. Rev. Lett. 2022;**128**: 213602.
57. S. Merkouche, V. Thiel, A. O. C. Davis, and B. J. Smith, *Heralding Multiple Photonic Pulsed Bell Pairs via Frequency-Resolved Entanglement Swapping*, Phys. Rev. Lett. 2022; **128**: 063602.
58. Dixon, Grein, Murphy, Stevens, Hamilton. *Optical Fiber Characterization for the Operation of a Boston Area Quantum Network Testbed*. Quantum 20. Available: <https://opg.optica.org/abstract.cfm?uri=QUANTUM-2022-QTu2A.34>
59. Krastanov S, Raniwala H, Holzgrafe J, Jacobs K, Lončar M, Reagor MJ, et al. *Optically Heralded Entanglement of Superconducting Systems in Quantum Networks*. Phys Rev Lett. 2021;**127**: 040503. doi:[10.1103/PhysRevLett.127.040503](https://doi.org/10.1103/PhysRevLett.127.040503)
60. A. Patil, J. I. Jacobson, E. Van Milligen, D. Towsley, and S. Guha, *Distance-Independent Entanglement Generation in a Quantum Network Using Space-Time Multiplexed Greenberger–Horne–Zeilinger (GHZ) Measurements*, in 2021 IEEE International Conference on Quantum Computing and Engineering (QCE) (2021), pp. 334–345.
61. A. Patil, M. Pant, D. Englund, D. Towsley, and S. Guha, *Entanglement Generation in a Quantum Network at Distance-Independent Rate*, Npj Quantum Information **8**, 1 (2022).
62. F. Rozpędek, K. Noh, Q. Xu, S. Guha, and L. Jiang, *Quantum Repeaters Based on Concatenated Bosonic and Discrete-Variable Quantum Codes*, Npj Quantum Information **7**, 1 (2021).

63. N. Rengaswamy, A. Raina, N. Raveendran, and B. Vasić, *Distilling GHZ States Using Stabilizer Codes*, <http://arxiv.org/abs/2109.06248>.
64. S. Krastanov, A. S. de la Cerda, and P. Narang, *Heterogeneous Multipartite Entanglement Purification for Size-Constrained Quantum Devices*, *Phys. Rev. Research* **3**, 033164 (2021).
65. A. Chandra, W. Dai, and D. Towsley, *Scheduling Quantum Teleportation with Noisy Memories*, <http://arxiv.org/abs/2205.06300>.
66. M. Guedes de Andrade, J. Días, J. Navas, S. Guha, I. Montañó, B. Smith, M. Raymer, and D. Towsley, *Quantum Network Tomography with Multi-Party State Distribution*, [arXiv E-Prints arXiv:2206.02920](https://arxiv.org/abs/2206.02920) (2022).
67. N. K. Panigrahy, P. Dhara, D. Towsley, S. Guha, and L. Tassiulas, *Optimal Entanglement Distribution Using Satellite Based Quantum Networks*, <http://arxiv.org/abs/2205.12354>.