Juliet T. Gopinath

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University of Colorado Boulder
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EDUCATION

Massachusetts Institute of Technology
Ph.D. in Electrical Engineering and Computer Science 2005
S.M. in Electrical Engineering and Computer Science 2000

University of Minnesota
B.S. in Electrical Engineering 1998

EMPLOYMENT

University of Colorado Boulder
Professor 2021-
Alfred T. and Betty E. Look Endowed Professor 2019 -
Associate Professor 2017 - 2021
Assistant Professor 2009 - 2017

NIST
Associate, FAINT Photonics Group 2024 -
Focus on quantum optical networking

MIT Lincoln Laboratory, Laser Technology and Applications
Technical Staff Member 2005 - 2009

AWARDS AND HONORS

University of Colorado Engineering Research Award 2025
Optica (formerly OSA) Fellow 2021
University of Colorado Boulder Provost Achievement Award 2016
R&D 100 Award : Wavelength Beam Combining Fiber-Coupled Diode Laser 2012
IEEE Senior Member 2011
National Science Foundation Graduate Fellowship 1998 - 2001

PROFESSIONAL SERVICE

Service to Journals
Deputy Editor, Optica 2025 -
Associate Editor, Optica 2020 - 2024
IEEE Publications Council 2018
IEEE Photonics Society Journal, Associate Editor 2011 - 2017

Service to Funding Agencies
Reviewer for grant agencies: NSF, AFOSR, ONR, NIH

Reviewer for CINT, Center for Integrated Nanotechnologies
Panelist for NSF and NIH

Leadership in the Academic Community

Secretary Treasurer, APS Division of Laser Science	2023 - 2026
APS DLS Anderson Dissertation Award Committee	2023 - 2024
Member-at-large, APS Division of Laser Science	2021 – 2023
Photonics Society Rep., IEEE Nanotechnology Council	2020 – 2021
Division of Laser Science/APS Nominating Committee	2019
OSA Charles Hard Townes Award Committee	2019 - 2021

Conference Organization

CLEO Science and Innovations Program Chair	2026
Optica Biophotonics Conference, Subcomm. Member	2022 - 2023
Advanced Solid State Lasers (ASSL), Subcomm. Member	2022, 2023, 2025
Hilton Head Workshop 2022/2024, Subcommittee Member	2021 - 2024
Ultrafast Optics Conf. 2023, Subcommittee Member	2022 - 2023
International Semiconductor Laser Conf., Subcomm Mem.	2022, 2023, 2024
Advanced Photonics Congress 2022, Subcomm. Member	2021 - 2022
Frontiers in Optics 2021, Subcommittee Member	2021
General Co-Chair for the Joint Symposium on Optics (OSA/OSK/OSJ)	2021
OSA/OSK/OSJ Symposium Committee	2019
CLEO 2023, 2024, Subcommittee Chair	2022-2024
CLEO 2023, 2024 Diversity Task Force	2022 - 2024
CLEO 2014-16, 2019-22, Subcommittee Member	2014-16/19 - 22
CLEO Steering Committee APS DLS Representative	2021-ongoing
Ultrafast Optics, Program Committee	2017
Colorado Photonics Industry Association Annual Meeting, Program Chair	2014 - 2017
OECC/ACOFT 2014, Program Committee,	2013 - 2014
OSA Optical Sensors Topical Meeting, Program Comm.	2012

University Service

CUbit, Associate Director	2019
Quantum Interdisciplinary Research Theme, Director	2018 - 2019

ONLINE TEACHING

Active Optical Devices Specialization	2020 - ongoing
Coursera MOOC	
Online course on semiconductor light sources, detectors & displays	

OUTREACH

CU Boulder Women in ECEE, founder and faculty advisor	2011- ongoing
Student group for women in electrical engineering	
Fifth graders day at CU Boulder	2023
Organized full day field trip for 50 5th graders to CU Boulder	
Science Discovery Summer Electromagnetics Course	2011- 2022

EM course for under-represented high school students

Chair, CU ECEE Diversity, Equity and Inclusion (DEI) 2020 - 2022

Committee for DEI in ECEE department

MIT EECS Rising Stars Workshop, panelist 2021

Two-day career workshop for diverse postdocs

APS Conf. for Undergrad. Women in Physics (CUWiP) 2017

Workshop for undergraduate women in physics: panelist & speaker

PEER-REVIEWED PUBLICATIONS **h index = 32** **Google scholar profile (hyperlinked)**

1. B. Xu, B. Lu, M. Topper, M. Zohrabi, **J. T. Gopinath** and W. Park, "Dispersion Engineered High-quality Ge–Sb–S Reflowed Wedge Resonator," *IEEE Journal of Lightwave Technology* (2025) doi: 10.1109/JLT.2025.3579685.
2. S. D. Gilinsky, E. J. Miscles, J. Bartos, J. Musgrave, S. -W. Huang, V. M. Bright and **J. T. Gopinath**, "Nonmechanical spectral domain optical coherence tomography using an electrowetting beam-scanner," *Accepted for publication in Optics Express* (2025).
3. O. Durnan, C. A. Saladrigas, V. Kumar, I. S. Ogunmwonyi, V. M. Bright, **J. T. Gopinath**, and I. Kymissis, "Bottom-emitting striped microLED array light source for uniform optical sectioning structured illumination microscopy," *Journal of the Society for Information Display* (2025). https://doi.org/10.1002/jsid.2069
4. E. J. Miscles, D. R. Quiroz, M. Zohrabi, V. M. Bright and **J. T. Gopinath**, "Two-dimensional dynamic scanning utilizing electrowetting tunable prism," *Accepted for publication in Optics Express* (2025).
5. G. L. Futia, M. Zohrabi, C. McCullough, A. Teel, F. Simoes de Souza, R. Oroke, E. J. Miscles, B. N. Ozbay, K. Kliborn, V. M. Bright, D. Restrepo, **J. T. Gopinath** and E. A. Gibson, "Opto2P-FCM: A MEMS based miniature two-photon microscope with two-photon patterned optogenetic stimulation,"*Under review at Nature Communications* (2024). Also on biorxiv at https://www.biorxiv.org/content/10.1101/2024.10.21.619528v1:
6. K. N. Dickson, Y. Lange Simmons, A. F. Ricks, A. M. Skipper, A. F. Briggs, A. J. Muhowski, S. R. Bank, and **J. T. Gopinath**, "Impact of Mechanically Applied Strain on Auger Recombination in InGaAs Multiple Quantum Wells," *Applied Physics Letters* **126**, 032105 (2025).
7. F. Speed, C. A. Saladrigas, A. Teel, S. Vieau, V. M. Bright, **J. T. Gopinath**, C. G. Welle, D. Restrepo, and E. A. Gibson, "High-speed in vivo calcium recording using structured illumination with self-supervised denoising," *Optica Continuum* 3, 20244 (2024).
8. E. Miscles, M. Zohrabi, **J. T. Gopinath** and V. M. Bright, "Direct laser write lithography for high optical quality electrowetting prisms," *Optics Express* 32, 36632 - 36645 (2024).
9. R. Oroke, E. J. Miscles, S. D. Gilinsky, M. Zohrabi, **J. T. Gopinath**, and V. M. Bright, "Electrowetting lens based on a conical aluminum cavity," *Sensors and Actuators: A. Physical* **379**, 115917 (2024).
10. K. Wootten, M. Zohrabi, Y. Wang, and **J. T. Gopinath,** "Using Orbital Angular Momentum for Temperature and Force Sensing in an Optical Fiber," *Optics Express* **32**, 29558-29565 (2024).
11. T. Shanavas, R. R. McLeod, M. E. Siemens, and **J. T. Gopinath**, "A fast finite difference solver for optical microscopy in deep biological tissue, "*Optics Letters* **49**(15), 4417-4420 (2024).
12. S. A. Pierce, J. Jacobellibi, K. S. Given, W. B. Macklin, **J. T. Gopinath**, M. E. Siemens, D. Restrepo, and E. A. Gibson, "OpenSTED: Open-Source DyMIN 1 system for STED Microscopy," *Journal of Neuroscience, special section on Open Source Tools and Techniques* **11**(3):034311 (2024), doi: 10.1117/1.NPh.11.3.034311.

13. G. Krueper, L. Cohen and **J. T. Gopinath**, *"*New Cascaded Architecture for Classical and Quantum Multiparameter Sensing", arXiv:2304.08545 [quant-ph], https://doi.org/10.48550/arXiv.2304.08545, *Physical Review A **111**, 012618 (2024).*
14. S. D. Gilinsky, D. N. Jung, G. L. Futia, M. Zohrabi, T. A. Welton, O. D. Supekar, E. A. Gibson, D. Restrepo, V. M. Bright, and **J. T. Gopinath**, "Tunable liquid lens for three-photon excitation microscopy" *Biomedical Optics Express* **15**, 3285-3300 (2024).
15. D. J. Park, O. D. Supekar, V. M. Bright, A. R. Greenberg, and **J. T. Gopinath**, "Raman spectroscopy for real-time concurrent detection of multiple scalants on RO membranes, " *Desalination* **565**, 116851 (2023).
16. S. D. Gilinsky, M. Zohrabi, O. D. Supekar, W. Y. Lim, V. M. Bright, and **J. T. Gopinath**, "Two-dimensional individually addressable electrowetting lens array" *Optics Express* **31**, 30550-30561 (2023).
17. V. Kumar, K. Behrman, F. Speed, C. A. Saladrigas, O. D. Supekar, Z. Huang, V. M. Bright, C. G. Welle, D. Restrepo, **J. T. Gopinath**, E. A. Gibson, and I. A. Kymissis, "A microLED light source for optical sectioning structured illumination microscopy," *Optics Express* **31**, 16709-16718 (2023) (2023).
18. E. J. Miscles, W. Y. Lim, O. D. Supekar, M. Zohrabi, **J. T. Gopinath** and V. M. Bright, "Axisymmetrical resonance modes in an electrowetting optical lens," *Applied Physics Letters* **122**, 201106 (2023).
19. M. Zohrabi, W. Y. Lim, S. Gilinsky, V. M. Bright and **J. T. Gopinath**, "Adaptive aberration correction using an electrowetting array," *Applied Physics Letters* **122**, 081102 https://doi.org/10.1063/5.0133473 (2023).
20. M. Grayson, G. Krueper, B. Xu, M. Zohrabi, D. Hjelme, **J. T. Gopinath**, and W. Park, "On-chip mid-infrared optical sensing with GeSbSe waveguides and resonators," *Opt. Express* **31**, 877- 889 (2023)
21. T. Shanavas, M. Grayson, B. Xu, M. Zohrabi, W. Park, and J. T. Gopinath, "Cascaded forward Brillouin lasing in a chalcogenide whispering gallery mode microresonator," *APL Photonics* 116108 (2022) https://doi.org/10.1063/5.0112847.
22. D. J. Park, O. D. Supekar, A. Greenberg, **J. T. Gopinath** and V. M. Bright, "In-situ monitoring of calcium carbonate scale progression on reverse osmosis membranes using Raman spectroscopy," *Desalination and Water Treatment* **273**, 92–103 (2022).
23. M. Grayson, B. Xu, T. Shanavas, M. Zohrabi, K. Bae, **J. T. Gopinath** and W. Park, "Fabrication and Characterization of High Quality GeSbSe Reflowed and Etched Ring Resonators," *Optics Express* **30**, 31107 - 31121 (2022).
24. A. Q. Anderson, E. F. Strong, S. C. Coburn, G. B. Rieker, and **J. T. Gopinath**, "Orbital Angular Momentum-Based Dual-Comb Interferometer for Ranging and Rotation Sensing," *Optics Express* **30**, 21195-21210 (2022).
25. O.D. Supekar, A. Sias, S.R. Hansen, G. Martinez, G.C. Peet, X. Peng, V.M. Bright, E.G. Hughes, D. Restrepo, D.P. Shepherd, C.G. Welle, **J.T. Gopinath**, and E.A. Gibson, "Miniature Structured Illumination Microscope for in vivo 3D Imaging of Brain Structures with Optical Sectioning", *Biomedical Optics Express* **13**, 2530-2541 (2022).
26. G. Krueper, C. Yu, S. B. Libby, R. Mellors, L. Cohen, and **J. T. Gopinath**, "Realistic Model of Entanglement-Enhanced Sensing in Optical Fiber," *Optics Express* **30**, 8652-8666 (2022).
27. B. Heffernan, P. Riley, O. Supekar, S. Meyer, D. Restrepo, M. Siemens, E. A. Gibson, and **J. T. Gopinath**, "Two-photon fiber-coupled super-resolution microscope for biological imaging," *APL Photonics* **7**, 036102 (2022), DOI: 10.1063/5.0075012.
28. W. Y. Lim, M. Zohrabi, J. Zhu, T. Socco, T. Carmon, **J. T. Gopinath** and V. M. Bright, "Spectrally tunable liquid resonator based on electrowetting," *Optics Express* **30**, 18949-18965 (2022).
29. Y. L. Simmons, K. J. Underwood, O. D. Supekar, B. M. Heffernan, T. A. Welton, E. A. Gibson, and **J. T. Gopinath**, "Femtosecond diode-based time lens laser for multiphoton microscopy," *Biomed. Opt. Express* **12**, 6269-6276 (2021)

30. B. Xu, B. M. Heffernan, K. Bae, M. Siemens, **J. T. Gopinath** and W. Park, "Selective excitation of plasmon resonances with cylindrical vector beams," *Optics Express* **29**, 13071 (2021).
31. E. F. Strong, A. Q. Anderson, M. P. Brenner, B. M. Heffernan, N. Hoghooghi, **J. T. Gopinath** and G. B. Rieker, "Angular velocimetry for fluid flows: an optical sensor using structured light and machine learning," *Optics Express* **29**, 9960 (2021).
32. A. Q. Anderson, E. F. Strong, B. M. Heffernan, M. E. Siemens, G. B. Rieker and **J. T. Gopinath**, "Observation of the Rotational Doppler Shift in Spatially Incoherent Light," *Optics Express* **29,** 4058-4066 (2021).
33. J. Zhu, T. M. Horning, M. Zohrabi, W. Park and **J. T. Gopinath**, "Photo-induced writing and erasing of gratings in As2S3 chalcogenide microresonators," *Optica* **7**, 1645-1648 (2020).
34. D. Park, O. D. Supekar, A. R. Greenberg, **J. T. Gopinath** and V. M. Bright, "Real-time monitoring of calcium sulfate scale removal from RO desalination membranes using Raman spectroscopy," 497, 114736 (2021).
35. K. Bae, J. Zhu, C. Wolenski, A. Das, T. M. Horning, S. Pampel, M. Grayson, M. Zohrabi, **J. T. Gopinath** and Won, Park, "Indium Tin Oxide Nanoparticle-Coated Silica Microsphere with Large Optical Nonlinearity and High Quality Factor," *ACS Photonics*, https://pubs.acs.org/doi/10.1021/acsphotonics.0c01079 (2020).
36. E. L. Strong, A. Anderson, **J. T. Gopinath** and G. Rieker, "Centering a beam of light to the axis of rotation of a planar object", *Review of Scientific Instruments* **91**, 105101 (2020).
37. S. Pampel, K. Bae, M. Zohrabi, M. Grayson, T. M. Horning, W. Park and **J. T. Gopinath**, "Third-Harmonic Generation Enhancement in an ITO Nanoparticle-Coated Microresonator," **28**, 30004 *Optics Express* (2020).
38. K. J. Underwood, A. F. Briggs, S. D. Sifferman, V. B. Verma, N. Sirica, R. P. Prasankumar, S. -W. Nam, K. L. Silverman, S. R. Bank and **J. T. Gopinath**, "Strain dependence of Auger recombination in 3 mm GaInAsSb/GaSb type-I active regions," *Applied Physics Letters* **116**, 262103 (2020).
39. A. Q. Anderson, E. F. Strong, B. M. Heffernan, M. E. Siemens, G. B. Rieker, and **J. T. Gopinath**, "Detection Technique Effect on Rotational Doppler Measurements," *Optics Letters* **45,** 2636-2639 (2020).
40. M. Zohrabi, W. Y. Lim, V. M. Bright and **J. T. Gopinath**, "High extinction ratio, low insertion loss, optical switch based on an electrowetting prism," *Optics Express* **28**,5991-6001 (2020).
41. W. Y. Lim, M. Zohrabi, **J. T. Gopinath**, and V. M. Bright, "Calibration and characteristics of an electrowetting laser scanner," *IEEE Sensors* **20**, 3496-3503 (2020).
42. O. D. Supekar, D. J. Park, A. R. Greenberg, **J. T. Gopinath**, and V. M. Bright, "Real-Time Detection of Early-Stage Calcium Sulfate and Calcium Carbonate Scaling Using Raman Spectroscopy," *Journal of Membrane Science* **596**, 117603 1-9 (2020).
43. M. Grayson, M. Zohrabi, K. Bae, J. Zhu, **J. T. Gopinath** and W. Park, "Enhancement of third-order nonlinearity of thermally evaporated GeSbSe waveguides through annealing," *Optics Express* **27** , 33606-33620 (2019).
44. J. Chiles, N. Nader, E. J. Stanton, D. Herman, G. Moody, J. Zhu, C. Skehan, B. Guha, A. Kowligy, **J. T. Gopinath**, K. Srinivasan, S. A. Diddams, I. Coddington, N. R. Newbury, J. M. Shainline, S. W. Nam, and R. Mirin, "Multi-functional integrated photonics in the mid-infrared with suspended AlGaAs on silicon," *Optica* **6**, 1246-1254 (2019).
45. B. M. Hefferman, S. A. Meyer, D. Restrepo, M. E. Siemens, E. A. Gibson and **J. T. Gopinath**, "A fiber-coupled stimulated emission depletion microscope for bend-insensitive through-fiber imaging," *Scientific Reports* **9**, 11137 (2019).
46. J. Zhu, M. Zohrabi, K. Bae, T. M. Horning, M. B. Grayson, W. Park, and **J. T. Gopinath**, "Nonlinear characterization of silica and chalcogenide microresonators," *Optica* **6**, 716-722 (2019).
47. M. Zohrabi, W. Y. Lim, R. H. Cormack, O. D. Supekar, V. M. Bright, and **J. T. Gopinath**, "Lidar system with nonmechanical electrowetting-based wide-angle beam steering,"

Optics Express 27, 4404-4415 (2019).
48. J. M. Anderson, S. N. Alperin, A. A. Voitiv, W. G. Holtzmann, **J. T. Gopinath** and M. E. Siemens, "Characterizing vortex beams from a spatial light modulator with collinear phase shifting holography," *Applied Optics* **58**, 404-409 (2019).
49. W. Y. Lim, O. D. Supekar, M. Zohrabi, **J. T. Gopinath** and V. M. Bright, "Liquid combination with high refractive index contrast and fast scanning speeds for electrowetting adaptive optics," *Langmuir* 34 DOI: 10.1021/acs.langmuir.8b02849, 14511-14518 (2018).
50. O. D. Supekar, J. Brown, A. R. Greenberg, **J. T. Gopinath** and V. M. Bright, "Real-time detection of reverse-osmosis membrane scaling via Raman spectroscopy," *Industrial and Engineering Chemistry Research***,** DOI: 10.1021/acs.iecr.8b01272 (2018)
51. B. N. Ozbay, G. L. Futia, M. Ma, V. M. Bright, **J. T. Gopinath**, E. G. Hughes, D. Restrepo, and E. A. Gibson, "Three dimensional two-photon imaging of neural activity in freely moving mice using a miniature fiber coupled microscope with dynamic focusing," *Scientific Reports* **8**, 8108, DOI: 10.1038/s41598-018-26326-3 (2018).
52. O. D. Supekar, B. N. Ozbay, M. Zohrabi, P. D. Nystrom, G. L. Futia, D. Restrepo, E. A. Gibson, **J. T. Gopinath**, and V. M. Bright, "Two-photon laser scanning microscopy with electrowetting-based prism scanning," *Biomedical Optics Express* **8**, 5412-5426, (2017).
53. M. Zohrabi, R. H. Cormack, C. McCullough, O. D. Supekar, E. A. Gibson, V. M. Bright and J. T. Gopinath, "Wavefront aberration correction using multielectrode electrowetting-based devices," *Optics Express* **25** 31451-31461 (2017).
54. B. M. Heffernan, R. D. Niederriter, M. E. Siemens, and **J. T. Gopinath**, "Tunable higher-order angular momentum using polarization maintaining fiber," *Optics Letters* **42**, 2683-2686 (2017).
55. G. Kang, M. R. Krogstad, M. Grayson, D.-G. Kim, H. Lee, **J. T. Gopinath** and W. Park, "High quality chalcogenide-silica hybrid wedge resonator," *Optics Express* **25**, 15581-15589 (2017).
56. O. D. Supekar, M. Zohrabi, **J. T. Gopinath**, and V. M. Bright, "Enhanced response time of electrowetting lenses with shaped input voltage functions ," *Langmuir* **33**, 4863-4869 (2017).
57. R. D. Niederriter, B. N. Ozbay, G. L. Futia, E. A. Gibson, and **J. T. Gopinath**, "Compact diode-laser-based pulse source for multiphoton biological imaging," *Biomedical Optics Express* **8**, 315-322 (2016).
58. R. D. Niederriter, M. E. Siemens, and **Juliet T. Gopinat**h, "Simultaneous control of orbital angular momentum and beam profile in two-mode polarization-maintaining fiber," *Optics Letters* **41**, 5736-5738 (2016).
59. K. Underwood and **J. T. Gopinath**, "Control of the state of a mode-locked fiber laser using an intracavity Martinez compressor," *Optics Letters* **41**, 5393-5396 (2016).
60. M. R. Krogstad, S. Ahn, W. Park, and **J. T. Gopinath**, "Optical characterization of chalcogenide Ge-Sb-Se waveguides at telecom wavelengths," *Photonics Technology Letters* **28**, 2720 (2016).
61. S. N. Alperin, R. D. Niederriter, **J. T. Gopinath** and M. E. Siemens, "Quantitative measurement of the orbital angular momentum of light with a single, stationary lens," *Optics Letters* **41,** 5019 (2016).
62. M. Zohrabi, R. H. Cormack and **J. T. Gopinath**, "Wide-angle non-mechanical beam steering using liquid lenses," *Optics Express* **24**, 23798 (2016).
63. R. D. Niederriter, M. E. Siemens, and **J. T. Gopinath**, "Continuously tunable orbital angular momentum generation in polarization maintaining fiber," *Optics Letters* **41**, 3213 (2016).
64. R. D. Montoya, K. Underwood, S. Terrab, A. M. Watson, V. M. Bright, and **J. T. Gopinath**, "Large extinction ratio optical electrowetting shutter," *Optics Express* **24**, 9660-9666 (2016).
65. S. Terrab, A. M. Watson, C. Roath, **J. T. Gopinath** and V. M. Bright, "Adaptive electrowetting lens-prism element," *Optics Express* **23** 25838 - 25845(2015).
66. A. M. Watson, K. Dease, S. Terrab, C. Roath, **J. T. Gopinath**, and V. M. Bright, "Focus-

tunable low power electrowetting lenses with thin parylene films," *Applied Optics* **54**, 6224- 6229 (2015).

67. K. J. Underwood, A. M. Jones, and **J. T. Gopinath**, "Optical pulse generation by Fourier synthesis of three cw semiconductor lasers using an FPGA-based gradient descent phase-locking algorithm," *Applied Optics* **54**, 5624 (2015).
68. B. N. Ozbay, J. T. Losacco, R. Cormack, R. Weir, V. M. Bright, **J. T. Gopinath**, D. Restrepo, and E. A. Gibson, "Miniaturized fiber-coupled confocal microscope with a continuously moving focus using no moving parts," *Opt. Lett.* **40**, 2553-2556 (2015). *Also appears in Virtual Journal for Biomedical Optics (2015).*
69. M. R. Krogstad, S. Ahn, W. Park, and **J. T. Gopinath**, "Nonlinear characterization of $Ge_{28}Sb_{12}Se_{60}$ bulk and waveguide devices," *Opt. Exp.* **23**, 7877 (2015).
70. A. M. Jones and **J. T. Gopinath**, "Fast-to-slow axis mode imaging for brightness enhancement of a broad-area laser diode array," *Opt. Exp.* **21**, 17912-17919 (2013).
71. R. D. Niederriter, A. M. Watson, R. N. Zahreddine, C. J. Cogswell, R. H. Cormack, V. M. Bright, and **J. T. Gopinath**, "Electrowetting lenses for compensating phase and curvature distortion in arrayed laser systems," *Appl. Opt.* **52**, 3172 (2013).
72. R. D. Niederriter, **J. T. Gopinath** and M. E. Siemens, "Measurement of the M2 beam propagation factor using a focus-tunable liquid lens," *Applied Optics* **52**, 1591-1598 (2013).
73. **J. T. Gopinath**, V. M. Bright, C. C. Cogswell, R. D. Niederriter, A. Watson, R. Zahreddine, and R. H. Cormack, "Simulation of electrowetting lens and prism arrays for wavefront compensation," *Appl. Opt.* **51**, 6618 (2012).
74. P. W. Juodawlkis, J. J. Plant, W. Loh, L. Missaggia, F. O'Donnell, D. C. Oakley, A. Napoleone,, J. Klamkin, **J. T. Gopinath**, D. J. Ripin, S. Gee, P. J. Delfyett, and J. P. Donnelly, "High-Power, Low-Noise 1.5-μm Slab-Coupled Optical Waveguide (SCOW) Emitters: Physics, Devices, and Applications," *IEEE J. of Sel. Top. in Quant. Electron.* **17**, 1698-1714 (2011).
75. K-H Hong, **J. T. Gopinath**, D. Rand, A. M. Siddiqui, S-W Huang, E Li, B. J. Eggleton, J. D. Hybl, T. Y. Fan, and F. X. Kaertner, "High-energy, kHz-repetition-rate, ps cryogenic Yb:YAG chirped-pulse amplifier," *Optics Letters* **35**, 1752-1754 (2010).
76. K-H Hong, A. Siddiqui, J. Moses, **J. T. Gopinath**, J. Hybl, F. O. Ilday, T. Y. Fan, and F. X. Kaertner, "Generation of 287-W, 5.5-ps pulses at 78-MHz repetition rate from a cryogenically-cooled Yb:YAG amplifier seeded by a fiber chirped-pulse amplification system," *Optics Letters* **33**, 2473-2475 (2008).
77. **J. T. Gopinath**, B. Chann, T.Y. Fan, and Antonio Sanchez, "1450-nm high-brightness wavelength-beam combined diode arrays and stacks," *Optics Express* **16**, 9405-9410 (2008).
78. **J. T. Gopinath**, B. Chann, R. K. Huang, C. Harris, J. J. Plant, L. Missaggia, J. P. Donnelly, P. W. Juodawlkis, and D. J. Ripin, "980-nm monolithic passively modelocked diode lasers with 62 pJ of pulse energy," *IEEE Photonics Technology Letters* **19**, 937-939 (2007).
79. J. J. Plant, **J. T. Gopinath**, B. Chann, D. J. Ripin, R. K. Huang, and P. W. Juodawlkis, "250 mW, 1.5μm monolithic passively mode-locked slab-coupled optical waveguide laser," *Optics Letters* **31**, 223-225 (2006).
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CONFERENCE PRESENTATIONS

1. J. Erikson, B. Lu, M. Zohrabi, W. Park, and **J. T. Gopinath**, "Second-Order Nonlinearity in Chalcogenide Waveguides Achieved through All-Optical Poling," *Presented at Conference on Lasers and Electro-Optics (CLEO)* (2025).
2. C. A. Saladrigas, R. Anchordoquy, M. Heyrich, D. Restrepo, M. E. Siemens, E. A. Gibson, and **J. T. Gopinath**, "Two-photon fiber STED microscope demonstrated at depth in tissue phantom," *Presented at Conference on Lasers and Electro-Optics (CLEO)* (2025).
3. F. Speed, S. R. Hansen, O. D. Supekar, F. Simoes de Souza, V. M. Bright, **J. T. Gopinath**, C. G. Welle, D. Restrepo, and E. A. Gibson, "Calcium Imaging Using a Miniature Structured Illumination Microscope," *Presented at CLEO Europe* (2025).
4. J. T. Gopinath, ***Invited presentation for Optical Fiber Conference (OFC)*** (2025).
5. J. T. Gopinath, "Chalcogenide glasses for nonlinear photonics," ***Invited keynote talk at 22nd International Symposium on Non-Oxide and New Optical Glasses*** (ISNOG 2024).
6. M. Zohrabi, G. Futia, C. M. McCullough, A. Teel, F. de Souza, R. Oroke, V. M. Bright, D. Restrepo, E. Gibson, and J. T. Gopinath, "A MEMS based miniature two-photon microscope with patterned optogenetic stimulation for all optical neural recording and modulation, *Presented at Society for Neuroscience* (2024).
7. S. Reynolds, P. Fowler; A. Voitiv, D. Restrepo, E. Gibson, J. Gopinath, and M. Siemens, "SpiralVortex Superresolution Localization With a Stable Excitation Beam," *Presented at Frontiers in Optics Conference* (2024).
8. D. R. Quiroz, E. J. Miscles, M. Zohrabi, V. M. Bright, and J. T. Gopinath, "Characterization of two-dimensional dynamic scanning with electrowetting tunable prisms," *Presented at presentation at the IEEE Photonics Society Conference* (2024).
9. S. D. Gilinsky, E. J. Miscles, J. Musgrave, J. Bartos, S. -W. Huang, V. M. Bright and J. T. Gopinath, "Nonmechanical spectral-domain optical coherence tomography using an electrowetting prism," *Presented at presentation at the IEEE Photonics Society Conference* (2024).
10. E. Miscles, C. A. Saladrigas, M. Zohrabi, V. Kumar, I. Kymissis, J. T. Gopinath and V. M. Bright, "Monolithic electrowetting prism for structured illumination microscopy," *Presented 2024 Hilton Head workshop* (2024).
11. G. L. Futia, M. Zohrabi, C. McCullough, A. Teel, F. Simoes de Souza, R. Oroke, V. M. Bright, D. Restrepo, J. T. Gopinath and E. A. Gibson, "Opto2P-FCM: A MEMS Based Miniature Two-Photon Microscope with Patterned Optogenetic Stimulation," *Postdeadline, Presented at Biophotonics Congress* (2024).
12. V. Kumar, C. A. Saladrigas, O. Durnan, F. Speed, E. A. Gibson, **J. T. Gopinath** and I. Kymissis, "MicroLED arrays as light source for optical sectioning-SIM and targeted illumination imaging," *Presented at Display Week* (2024).
13. **J. T. Gopinath**, "Nonlinear chalcogenide microresonator devices," ***Invited presentation, Photonics West***, paper 12871-1 (2024).
14. F. Speed, C. A. Saladrigas, S. Vieau, V. Kumar, A. Teel, V. M. Bright, D. Restrepo, I. Kymissis, **J. T. Gopinath**, C. G. Welle, and E. A. Gibson, "Calcium Recording in Hippocampal CA1 Pyramidal Neurons with Enhanced Contrast Using OS-SIM," *Presented at the Optica Biophotonics Congress* (2024).
15. B. Lu, B. Xu, G. Krueper, M. Zohrabi, **J. T. Gopinath** and W. Park, "High-quality mid-infrared chalcogenide ring resonator," *Accepted for presentation at Conference on Lasers and Electro-Optics* (CLEO), (2024).
16. C. A. Saladrigas, E. J. Miscles, V. Kumar, I. Kymissis, V. M. Bright and **J. T. Gopinath**, "Wobulation in structured illumination microscopy using a tunable electrowetting prism," *Accepted as a highlight talk at Conference on Lasers and Electro-Optics* (CLEO), (2024).

17. Y.L. Simmons, K. Dickson, A.F. Ricks, A.M. Skipper, A.F. Briggs, A.J. Muhowski, S.R. Bank, and **J.T. Gopinath**, "Impact of Mechanical Strain on Auger Recombination in InGaAs/InP," *Accepted for presentation at Conference on Lasers and Electro-Optics* (CLEO) (2024)
18. F. Speed, V. Kumar, C. Saladrigas, S. Vieau, I. Kymissis, **J. Gopinath**, V. Bright, C. Welle, D. Restrepo, E. Gibson. Illumination methods for voltage imaging with a microLED light source. Program No. PSTR574.22. *2023 Neuroscience Meeting Planner*. Washington, D.C.: Society for Neuroscience (2023).
19. K. Wootten, M. Zohrabi, M. E. Siemens, and **J. T. Gopinath**, "Temperature and strain fiber sensing using orbital angular momentum," *Presented at the IEEE Photonics Society Annual Meeting* (2023).
20. S. D. Gilinsky, D. N. Jung, G. L. Futia, M. Zohrabi, T. A. Welton, E. A. Gibson, D. Restrepo, V. M. Bright, and **J. T. Gopinath**, "Electrowetting lens for focus-tunable three-photon excitation microscopy," *Presented at the IEEE Photonics Society Annual Meeting* (2023).
21. R. Oroke, E. J. Miscles, S. D. Gilinsky, M. Zohrabi, **J. T. Gopinath**, and V. M. Bright, "Machined Aluminum Electrowetting Lens," *Presented at the IEEE Photonics Society Annual Meeting* (2023).
22. E. J. Miscles, M. Zohrabi, **J. T. Gopinath**, and V. M. Bright, "Enhancing Imaging Performance in Electrowetting Prism Scanners through Electrode Gap Reduction," *Presented at the IEEE Photonics Society Annual Meeting* (2023).
23. **J. T. Gopinath**, Shedding light on the brain: Super-resolution and multiphoton microscopy, ***Invited Presentation, NanoNeuro*** (2023).
24. **J. T. Gopinath**, "Photonic devices based on chalcogenides," ***Invited presentation, Photonics North*** (2023).
25. B. Xu, M. Grayson, T. Shanavas, **J. T. Gopinath**, and W. Park, "Dispersion control of high-quality Ge23Sb7S70 reflowed wedge resonators," *Presented at the Conference on Lasers and Electro-Optics* (2023).
26. G. M. Brodnik, H. Lu, J. Erikson, D. R. Carlson, **J. T. Gopinath**, J. A. Black, and S. B. Papp, "Robust wavelength control of microresonator parametric oscillation with nanophotonic bandgaps," *Presented at the Conference on Lasers and Electro-Optics* (2023).
27. G. Krueper, L. Cohen, R. Mellors, S. B. Libby, M. Messerly, J. Combes, and **J. T. Gopinath**, "Quantum Multiparameter Estimation Model of Cascaded Phases in Optical Fiber," *Presented at the Conference on Lasers and Electro-Optics* (2023).
28. T. Shanavas, R. McLeod, M. E. Siemens, and J. T. Gopinath, "Comparison of coherent and incoherent donut beams for deep tissue STED microscopy," *Presented at the Conference on Lasers and Electro-Optics* (2023).
29. D. J. Park, O.D. Supekar, A. R. Greenberg, **J. T. Gopinath**, and V. M. Bright, "Raman Chemical Fingerprints for Real-time Detection of Membrane Fouling," *Presented at the 31st Annual Meeting of the North American Membrane Society (NAMS)* (2022).
30. G. Krueper, L. Cohen, J. Combes, S. B. Libby, R. Mellors, M. Messerly, and **J. T. Gopinath**, "Modeling of Cascaded Phase Sensing in Optical Fiber Using Squeezed Light," *Presented at APS March Meeting* (2023).
31. **J. T. Gopinath**, B. Heffernan, S. A. Meyer, D. Restrepo, M. E. Siemens, and E. A. Gibson, 'A window into the brain: Advances in super-resolution microscopy," ***Invited presentation, Conference on Optics Photonics and Quantum Optics 2022*** (2022).
32. S. D. Gilinsky, M. Zohrabi, O. D. Supekar, W. Y. Lim, V. M. Bright, and **J. T. Gopinath**, "Two-Dimensional Individual Addressable Electrowetting Micro-Lens Array," *Presented at the IEEE Photonics Society Annual Meeting* (2022).
33. E. J. Miscles, W. Y. Lim, O. D. Supekar, M. Zohrabi, **J. T. Gopinath** and V. M. Bright, "Vibration suppression in an electrowetting lens," *Presented at the IEEE Photonics Society Annual Meeting* (2022).

34. **J. T. Gopinath**, "From water filtration to autonomous navigation: Using photonics to enable new sensing modalities", ***Plenary, Optical Sensors and Sensing Congress (2022)***.
35. M. Grayson, G. Krueper, B. Xu, D. Hjelme, **J. T. Gopinath** and W. Park, "GeSbSe Devices for Mid-Infrared Optical Sensing," *Presented at Optical Sensors and Sensing Congress 2022 SM4E.2* (2022).
36. O. Supekar, A. Sias, S. Hansen, G. Martinez, G. Peet, X. Peng, V. Bright, E. Hughes, D. Shepherd, C. Welle, **J. Gopinath** and E. Gibson, "SIMscope3D: A structured illumination miniature microscope for high resolution brain imaging," *Presented at the 2022 Biophotonics Congress: Biomedical Optics* (2022).
37. O. D. Supekar, Y. Lange Simmons, V. M. Bright, and **J. T. Gopinath**, "Narrow linewidth picosecond source at 760 nm generating 50 nJ pulses using four-wave mixing," *Presented at the 2022 Conference on Lasers and Electro-Optics (CLEO)* (2022).
38. T. Shanavas, M. B. Grayson, M. Zohrabi, W. Park, and **J. T. Gopinath**, "Cascaded Forward Brillouin Scattering in a Chalcogenide Microsphere," *Presented at the 2022 Conference on Lasers and Electro-Optics (CLEO)* (2022).
39. A. Q. Anderson, E. F. Strong, S. C. Coburn, G. Rieker, and **J. T. Gopinath**, "Dual Comb Ranging and Rotation Sensing with Orbital Angular Momentum," *Presented at the 2022 Conference on Lasers and Electro-Optics (CLEO)* (2022).
40. E. F. Strong, S. C. Coburn, A. Q. Anderson, R. Cole, **J. T. Gopinath**, S. Becker, and G. Rieker, "Broadband hyperspectral spectroscopy imging using dual frequency comb spectroscopy and compressive sensing," *Presented at the 2022 Conference on Lasers and Electro-Optics (CLEO)* (2022).
41. Y. Wang, B. M. Heffernan, M. Zohrabi, J. Farrell, M. E. Siemens, and **J. T. Gopinath**, "Fiber sensing using higher-order spatial modes and the orbital angular momentum of light," *Presented at the 2022 Conference on Lasers and Electro-Optics (CLEO)* (2022).
42. E. F. Strong, A. Q. Anderson, B. M. Heffernan, M. P. Brenner, N. Hoghooghi, **J. T. Gopinath** and G. B. Rieker, "Sensing angular velocity with optical orbital angular momentum and machine learning," *Presented at OSA Imaging and Applied Optics Congress* (2021).
43. S. A. Meyer, M. E. Siemens, **J. T. Gopinath**, D. Restrepo, and E. A. Gibson, "OpenSTED: Inexpensive and open-source implementation of Dynamic Intensity Minimum (DyMIN) for Stimulated Emission Depletion (STED) microscopy," *Presented at the OSA Biophotonics Congress* (2021).
44. G. R. Krueper, R. Mellors, C. Yu, S. B. Libby, M. Messerly, and **J. T. Gopinath**, "Entangled-enhanced interferometry in optical fiber," *Presentated at the Conference on Lasers and Electro-Optics (2021).*
45. B. M. Heffernan, P. Riley, O. D. Supekar, S. A. Meyer, N. M. George, D. Restrepo, M. E. Siemens, E. A. Gibson, and **J. T. Gopinath**, "Two-photon fiber STED microscopy using polarization maintaining fiber," *Presented at the Conference on Lasers and Electro-Optics (2021).*
46. A. Q. Anderson, E. F. Strong, B. M. Heffernan, M. E. Siemens, G. B. Rieker, and **J. T. Gopinath**, "Rotation measurement using spatially incoherent light and the rotational Doppler shift," *Presented at the Conference on Lasers and Electro-Optics (2021).*
47. B. M. Heffernan, B. Xu, K. Bae, M. E. Siemens, W. Park and **J. T. Gopinath**, "Tailoring the multipole content at tight focus using cylindrical vector beams with orbital angular momentum," *Presented at the Conference on Lasers and Electro-Optics (2021).*
48. B. Xu, B. M. Heffernan, K. Bae, M. Siemens, **J. T. Gopinath** and W. Park, "Group theory guided symmetry coupling between cylindrical vector beams and localized surface plasmon resonances," *Presented at the Conference on Lasers and Electro-Optics (2021).*
49. W. Y. Lim, M. Zohrabi, J. Zhu, **J. T. Gopinath** and V. M. Bright, "Electrowetting-based tunable liquid droplet microresonator," *Presented at the IEEE MEMS Conference (2021).*

50. D. Park, O. Supekar, A. Greenberg, **J. T. Gopinath** and V. M. Bright, "Novel Sensors for Real-time Detection of Membrane Fouling in RO Desalination Systems," *Presented at the AGU Fall Meeting (2020)*.
51. **J. T. Gopinath**, "Nonlinear chalcogenide photonic devices," ***Invited presentation at the IEEE Photonics Society Conference* (2020).**
52. S. Pampel, T. M. Horning, K. Bae, M. Zohrabi, M. Grayson, W. Park and **J. T. Gopinath**, "Enhanced Nonlinearity in a Functionalized Whispering Gallery Mode Microcavity," *Presented at the Frontiers in Optics Conference* (2020).
53. **J. T. Gopinath**, "Fiber-Coupled Stimulated Emission Depletion Microscopy (STED)," ***Invited presentation at OSA Imaging and Sensing Congress* (2020).**
54. A. F. Briggs, S. D. Sifferman, K. J. Underwood, L. J. Nordin, **J. T. Gopinath** and S. R. Bank, "Auger Recombination in Strained GaInAsSb Quantum Well Membranes*," Presented at EMC* (2020).
55. G. Martinez Sanchez, O. D. Supekar, G. L. Futia, B. N. Ozbay, C, Welle, V. M. Bright, **J. T. Gopinath**, D. Restrepo, D. Shepherd, and E. A. Gibson, "Widefield fluorescence optical sectioning microscopy in a miniature fiber-coupled microscope with active axial scanning" *Presented at Conference on Lasers and Electro-Optics* (2020).
56. A. Q. Anderson, E. F. Strong, B. M. Heffernan, M. E. Siemens, G. B. Rieker, and **J. T. Gopinath**, "Detection strategies for measuring rotation with the rotational Doppler effect" *Presented at Conference on Lasers and Electro-Optics* (2020).
57. E. F. Strong, A. Q. Anderson, B. M. Heffernan, M. P. Brenner, **J. T.Gopinath**, and G. B. Rieker, "An angular velocity sensor using machine learning and optical orbital angular momentum" *Presented at Conference on Lasers and Electro-Optics* (2020).
58. K. Bae, T. M. Horning, S. Pampel, M. Zohrabi, M. B. Grayson, **J. T. Gopinath**, and W. Park, "On-chip high-quality Ge23Sb7S70 round-wedge resonators for broadband dispersion engineering," *Presented at Conference on Lasers and Electro-Optics* (2020).
59. K. J. Underwood, A. F. Briggs, S. D. Sifferman, V. Verma, N. Sirica, R. Prasankumar, S. W. Nam, K. L. Silverman, S. Bank, and **J. T. Gopinath**, "Auger Recombination in Strained Mid-Infrared Quantum Wells," *Presented at Conference on Lasers and Electro-Optics* (2020).
60. Y. L. Simmons, K. J. Underwood, B. M. Heffernan, O. Supekar, E. A. Gibson, and **J. T. Gopinath**, "Near-infrared Femtosecond Time Lens Diode Laser with kW Peak Powers for Two-Photon Microscopy, " *Presented at Conference on Lasers and Electro-Optics* (2020).
61. M. Grayson, M. Zohrabi, K. Bae, J. Zhu, **J. T Gopinath**, and W. Park, "Enhancement of third-order nonlinearity of thermally evaporated GeSbSe waveguides through annealing," *Presented at SPIE Photonics West*, Proceedings Volume 11283, Integrated Optics: Devices, Materials, and Technologies XXIV; 1128319 (2020)
62. J. Zhu, K. Bae, M. Zohrabi, T. M. Horning, M. B. Grayson, W. Park, and **J. T. Gopinath**, "In situ, nonlinear characterization of microresonators," *Presented at the Conference on Nonlinear Optics, Postdeadline* (2019).
63. K. Bae, J. Zhu, M. B. Grayson, M. Zohrabi, C. Wolenski, T. M. Horning, **J. T. Gopinath** and W. Park, "High-quality factor, nonlinear indium tin oxide nanoparticle-coated silica microsphere," *Presented at the Conference on Nonlinear Optics* (2019).
64. J. Zhu, M. Zohrabi, T. M. Horning, W. Park, and **J. T. Gopinath**, "Photosensitive Writing and Erasing of Gratings in an As2S3 Chalcogenide Microresonator," *Presented at the Conference on Nonlinear Optics* (2019).
65. **J. T. Gopinath**, M. Zohrabi, O. D. Supekar, W. Y. Lim, B. N. Ozbay, G. L. Futia, D. Restrepo, E. A. Gibson, and V. M. Bright, "Electrowetting adaptive optical devices for LIDAR," ***Invited presentation, Applied Industrial Optics* (2019).**
66. A. F. Briggs, S. D. Sifferman, K. J. Underwood, L. J. Nordin, **J. T. Gopinath** and S. R. Bank, "Externally applied strain on GaSb-based GaInAsSb quantum well membranes," *Presented at EMC (2019).*

67. **J. T. Gopinath**, B. M. Heffernan, S. A. Meyer, D. Restrepo, M. E. Siemens, and E. A. Gibson, "Imaging of HeLa cells with fiber stimulated emission depletion microscopy (STED)," *Presented at the International Conference on Orbital Angular Momemtum (ICOAM)* (2019).
68. B. M. Heffernan, S. A. Meyer, D. Restrepo, M. E. Siemens, E. A. Gibson, and **J. T. Gopinath**, "Bend-insensitive, through-fiber stimulated emission depletion (STED) imaging of HeLa cells," *Presented at the Conference on Lasers and Electro-Optics (CLEO)* (2019).
69. S. D. Sifferman, M. Motyka, A. F. Brights, K. J. Underwood, K. M. McNichoas, R. Kudrawiec, **J. T. Gopinath** and S. R. Bank, "Dilute-Bismide Alloys for GaSb-based Mid-Infrared Semiconductor Lasers" *Presented at the Conference on Lasers and Electro-Optics (CLEO),* 2018.
70. O. D. Supekar, B. N. Ozbay, M. Zohrabi, P. D. Nystrom, G. L. Futia, D. Restrepo, E. A. Gibson, **J. T. Gopinath**, and V. M. Bright, "Electrowetting prism for scanning in two-photon microscopy," *Presented at the Conference on Lasers and Electro-Optics (CLEO),* 2018.
71. O. D. Supekar, J. J. Brown, A. R. Greenberg, **J. T. Gopinath**, and V. M. Bright, "Real-time detection of scaling on reverse osmosis membranes with Raman spectroscopy," *Presented at Conference on Lasers and Electro-Optics (CLEO),* 2018.
72. B. M. Heffernan, S. A. Meyer, M. E. Siemens, D. Restrepo, E. A. Gibson, and **J. T. Gopinath**, "Stimulated emission depletion microscopy with polarization-maintaining fiber," *Presented at the Conference on Lasers and Electro-Optics (CLEO),* 2018.
73. K. Underwood, A. F. Briggs, S. D. Sifferman, S. R. Bank, and **J. T. Gopinath**, "Auger Recombination in Mid-Infrared Active Regions," *Presented at the Conference on Lasers and Electro-Optics (CLEO),* 2018.
74. S. Alperin, B. Heffernan, R. D. Niederriter, M. E. Siemens, and **J. T. Gopinath**, "Generation and detection of tunable orbital angular momentum in optical fiber," Presented at *ICOAM (International Conference on Orbital Angular Momentum)*, Capri, Italy (2017).
75. **J. T. Gopinath**,"Nonlinear chalcogenide materials and devices," *Invited presentation at Progress in Electromagnetic Research Symposium (PIERS)* (2017).
76. M. Zohrabi, R. H. Cormack, and **J. T. Gopinath**, "Nonmechanical beam steering using tunable lenses," *Presented at Conference on Lasers and Electro-Optics*, SW4L.2 (2017).
77. O. D. Supekar, M. Zohrabi, J. J. Brown, **J. T. Gopinath** and V. M. Bright, "Enhancing the response time of electrowetting lenses using voltage shaping," *Presented at Conference on Lasers and Electro-Optics*, SM4C.7 (2017).
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INVITED PRESENTATIONS

ONR ASW Science and Technology Community of Interest Seminar (Spring 2025)

NIST Faint Photonics Group Seminar (Fall 2024)

IIT Roorkee, Optical Traveling Lecturer (Fall 2023)

Vescent Photonics Seminar (Fall 2023)

Columbia University and CUNY ASRC Seminar (Spring 2022)

MNIT Jaipur, IEEE Photonics Society Student Chapter
and SPIE Student Chapter, Webinar (Summer 2021)

University of Southern California, Photonics Seminar (Fall 2021)

Ball Aerospace, Seminar (Spring 2020)

NIST Applied Physics Division Seminar, Boulder (Fall 2019)

DMMI Workshop on Domestic Manufacturing Capabilities for Critical DoD Applications: Emerging Needs in Quantum Enabled Systems, Invited Panelist (Spring 2019)

Enabling Quantum Materials Workshop, Louisiana State University,
Invited Speaker (Spring 2019)

Kansas State University, OSA Traveling Lecturer (Spring 2019)

University of Denver, Physics Colloquium (Spring 2019)

University of Texas at Austin (Fall 2018)

Donostia International Physics Center, Seminar (Spring 2018)

University of Colorado Boulder, Physics Colloquium (Fall 2017)

Miami University, Physics Colloquium (Spring 2017)

University of Minnesota, Electrical Engineering Colloquium (Fall 2016)

Harvard University, CEAS Seminar (2016)

IEEE Boston Photonics Society, Seminar (2016)

Ball Aerospace, Research Seminar (2015)

NIST Boulder, Research Seminar (2015)

Cornell University, Electrical Engineering Seminar (2015)

University of California San Diego, Electrical Engineering Seminar (2015)

University of Colorado-Boulder, IONS Conference Seminar, Boulder CO (2015)

University of Colorado-Boulder, Research Seminar Series on Optical, Electronic and Quantum Systems (2014)

Colorado School of Mines, Research Seminar (2013)

University of Colorado-Boulder, Physics Department Condensed Matter Seminar (2010)

China Lake Naval Air Warfare Center, Seminar Speaker (2010)

University of Colorado-Boulder, Electrical and Computer Engineering Department Seminar (2008) and (2014)

Colorado State University, Electrical and Computer Engineering Department Seminar (2007)