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List of Publications

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1. **Gautam, A.**, Athira, T. S., Naik, D. N., Singh, R., Narayanamurthy, C. S., Singh, R. K., Recording of incoherent vector holograms using elements of the spatial cross-spectral density matrix. *Opt. Lasers Eng.* **169**, 107687 (2023).
2. **Gautam, A.**, Naik, D. N., Narayanamurthy, C. S., Singh, R. K., Effect of Polarization on Cross-Spectral Density Matrix. *Photonics* **11**, 142 (2024).
3. **Gautam, A.**, Chandra, S., Singh, R. K., Phase retrieval in inverse ghost diffraction using Sagnac interferometer. *J. Opt.* **26**, 075702 (2024).
4. **Gautam, A.**, Agarwal, A. K., Singh, R. K., Coherence vortices by binary pinholes. *Nanophotonics* **13**, 4397-4407 (2024).
5. **Gautam, A.**, Agarwal, A. K., Singh, R. K., Lithographic pinhole masks to generate vortex beam. (Accepted in Journal of Optics).
6. **Gautam, A.**, Sheoran, G., Singh, R. K., Digital generation of coherence vortices using DMD. (To be submitted).

Not Included In Thesis

1. **Gautam, A.**, Arora, G., Senthilkumaran, P., Singh, R. K. Detecting topological index of randomly scattered V-point singularities using Stokes correlations. *J. Opt. Soc. Am. A* **41**, 95-103 (2023).
2. Chandra, S., **Gautam, A.**, Singh, R. K. Folded interferometer to measure coherence–polarization matrix. *Opt. Lett.* **49**, 326-329 (2024).

Conferences/ Workshop/ Symposium

1. **Gautam, A.**, Athira, T. S., Naik, D. N., Singh, R., Narayanamurthy, C. S., Singh, R. K., Holography with incoherent light. *Engineering Proceedings* **34**, 5 (2023).
2. **Gautam, A.**, Athira, T. S., Naik, D. N., Singh, R., Narayanamurthy, C. S., Singh, R. K., Interferometry with a light emitting diode. Conference on Optics, Photonics & Quantum Optics, Pg. No. 136-137, IIT-Roorkee, India (2022).
3. Dixit, M., **Gautam, A.**, Singh, R. K., Ghost Polarimetry. Conference on Optics, Photonics & Quantum Optics, Pg. No. 136-137, IIT-Roorkee, India (2022).
4. **Gautam, A.**, Singh, R. K., Vortices in correlation function. International conference on Optics, Photonics & Quantum Information, Pg. No. 266, International School of Photonics, Cochin University of Science and Technology, Kochi, India (2023).
5. **Gautam, A.**, Singh, R. K., Vortices in two-point correlation function, OPTICS & PHOTONICS International Congress, Yokohama, Japan (2024).
6. **Gautam, A.**, Singh, R. K., Generation of Fractional Coherence Vortices. International conference on Advances in Optics and Photonics Instrumentation, CSIR-CSIO, Chandigarh, India (2024).