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List of Publications

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1. **Sourav Chandra**, and Rakesh Kumar Singh, Measurement of coherence-polarization matrix from a single-frame recording, *Optics and Lasers in Engineering*, **184**, 108611 (2025).

2. **Sourav Chandra**, Rajeev Singh, and Rakesh Kumar Singh. "Statistical insights of polarization speckle via von Mises–Fisher distribution on the Poincaré sphere," *JOSA A*, **41**, 1287 (2024). *Editors' pick.*

3. **Sourav Chandra**, and Rakesh Kumar Singh. Experimental measurement of complex elements of correlation matrix of polarized light, In *Quantitative Phase Imaging X*, vol. 12852, pp. 46-50. SPIE Photonics West 2024, San Francisco, California, USA (January, 2024) (*SPIE Proceedings*).

4. **Sourav Chandra**, Akanksha Gautam, Rakesh Kumar Singh, Folded interferometer to measure complete coherence-polarization matrix, *Optics Letters*, **49**, 326 (2024).

5. **Sourav Chandra**, Tushar Sarkar, Raj Kumar, Bhargab Das, and Rakesh Kumar Singh, Hanbury Brown–Twiss approach for imaging through a dynamic scattering medium, *Optics Letters*, **48**, 3391 (2023).

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7. **Sourav Chandra**, Tushar Sarkar, Raj Kumar, Bhargab Das, and Rakesh Kumar Singh, Looking through fog by correlation holography with fast detector. (*Manuscript under preparation*).

8. **Sourav Chandra**, and Rakesh Kumar Singh, Diffuser-aided single-shot polarimeter. (*Manuscript under preparation*).

Not Included In Thesis

1. Tushar Sarkar, **Sourav Chandra**, Gyanendra Sheoran, and Rakesh Kumar Singh, Leveraging the depolarization of scattered light for holography with the Stokes correlation. *Applied Physics Letters*, **124**, (2024).
2. Akanksha Gautam, **Sourav Chandra**, and Rakesh Kumar Singh. Phase retrieval in inverse ghost diffraction using Sagnac interferometer. *Journal of Optics,* **26**, 075702 (2024).
3. Tushar Sarkar, **Sourav Chandra**, and Rakesh Kumar Singh, Phase recovery with intensity and polarization correlation, *Progress in Optics*, **68**, 101 (2023). (Review article) [Invited]
4. Tushar Sarkar, Vipin Tiwari, **Sourav Chandra**, Nandan Singh Bisht, and Rakesh Kumar Singh, Holography with higher-order Stokes correlation, *Physical Review A*, **106**, 013508 (2022).

5. Tushar Sarkar, **Sourav Chandra**, Vipin Tiwari, Nandan Singh Bisht, Bhargab Das, and Rakesh Kumar Singh, On-axis phase-shifting correlation holography with un-polarized light, *Optics Letters*, **47**, 4953 (2022).

Conferences/ Workshop/ Symposium

1. **Sourav Chandra**, and Rakesh Kumar Singh. Vectorial Holography with Randomness, OPTOIn-2024, CSIO-CSIR, Chandigarh, India (October, 2024).
2. Prateek Agrawal, **Sourav Chandra**, and Rakesh Kumar Singh. Synthesizing Coherence with GS Algorithm," OPTOIn-2024, CSIO-CSIR, Chandigarh, India (October, 2024).
3. **Sourav Chandra**, and Rakesh Kumar Singh. Two-channel holography to reconstruct the scattered Stokes Vector, In Biomedical Imaging and Sensing Conference, Yokohama, Japan, (April, 2024) (SPIE Proceedings).
4. **Sourav Chandra**, and Rakesh Kumar Singh. Experimental measurement of complex elements of correlation matrix of polarized light, In *Quantitative Phase Imaging X*, vol. 12852, pp. 46-50. SPIE Photonics West 2024, San Francisco, California , USA (January, 2024) (SPIE Proceedings).
5. **Sourav Chandra**, and Rakesh Kumar Singh, Measurement of Coherence-Polarization matrix by One-shot Approach, OPTIQ-2023, International School of Photonics, CUSAT, Kochi, India (December, 2023).
6. Gave an **Oral talk** at the Chiba University, Chiba, Japan, Seeing the Invisible Through a Dynamic Scatterer
7. **Sourav Chandra**, Tushar Sarkar, Raj Kumar, Bhargab Das, and Rakesh Kumar Singh, Looking through a dynamic scatterer, The 84th JSAP Autumn Meeting 2023, Kumamoto, Japan (September, 2023).
8. Participated in Global Institute of Academic Network (GIAN) workshop on digital and dynamic holography with applications, IIT-Patna, India (December, 2022).
9. **Sourav Chandra**, Rajeev Singh, and Rakesh Kumar Singh, Polarization length of a coherent random light, COPaQ-2022, Pg. No. 241-242, IIT-Roorkee, India (November, 2022).