

Optics and Photonics Centre **Indian Institute of Technology Delhi**

List of research topics is tabulated below.

Name of the faculty	Broad topic of research	Email-ID
Saurabh Mani Tripathi	Photonic Biosensors	smt@opc.iitd.ac.in
Saurabh Mani Tripathi	Photonic non-Hermitian dynamics for advanced optical sensing	smt@opc.iitd.ac.in
Deepak Jain	Fiber Lasers, Entangled Single Photon Source, Hollow Core Optical Fibers for Data Centers, Photonics Processors for Data Centers and AI/ML	jaindeepak@opc.iitd.ac.in
A. Aadhi	Scalable Neuromorphic Photonic Processors: Hardware Design and Applications (Experimental)	aadhi@opc.iitd.ac.in
A. Aadhi	Topological Photonic Computing (Experimental)	aadhi@opc.iitd.ac.in
Dheeraj Pratap	Design and fabrication of metalenses	dpratap@iitd.ac.in
Dheeraj Pratap	Holographic metasurfaces for AR/VR technology	dpratap@iitd.ac.in
Dheeraj Pratap	Holographic metasurface optical tweezers	dpratap@iitd.ac.in
Dheeraj Pratap	Photoacoustic imaging	dpratap@iitd.ac.in
Awanish Pandey	Photonic Quantum Processor (under National Quantum Mission of India)	opcawanish@iitd.ac.in
Awanish Pandey	Integrated photonic interconnects for AI systems (under Intel India University Program)	opcawanish@iitd.ac.in
Ritwick Das	Electric and magnetic field sensing using exceptional point singularities in PT-symmetric optical systems (Experimental)	dasritwick@iitd.ac.in
Ritwick Das	All-optical Skyrmions in frequency upconversion and topological Hall effect (Experimental)	dasritwick@iitd.ac.in
Gayathri Bharathan & P. Senthilkumaran	Fiber lasers for polarization structured vortex beam: Generation and applications (Experimental)	gayathrib@iitd.ac.in
Gayathri Bharathan	Photonic platforms for biomedical monitoring (Experimental)	gayathrib@iitd.ac.in

Gayathri Bharathan	Water absorption optimized 2.1 um fiber laser for controlled thermal therapy in biomedical procedures (Experimental)	gayathrib@iitd.ac.in
Parvendra Kumar	Photonic Quantum Sensing (Experimental)	parvendra@iitd.ac.in
Parvendra Kumar	Nonreciprocity and Sensing with Optomechanics (Theory)	parvendra@iitd.ac.in
Joby Joseph and Ritwick Das	Photonic metasurfaces for imaging and sensing	dasritwick@iitd.ac.in