Two Days Workshop
On
Advanced Photonic System Simulations with Optiwave - 2025

in Hybrid Mode (26th – 27th November, 2025)

Organized by
Department of Electronics and Communication Engineering
National Institute of Technology Delhi

About National Institute of Technology Delhi (NITD):

NITD is one of the thirty one NIT (s) established in the year 2010 by an act of parliament and has been declared as an Institute of National importance. NIT Delhi is an autonomous Institute which functions under the aegis of Ministry of Education, Government of India. It aims to provide instructions and research facilities in various disciplines of Engineering, Science and Technology, Management, Social Sciences and Humanities for advance learning and dissemination of knowledge. Currently, the institute offers B.Tech. programs in Computer Science and Engineering, Electronics and Communication Engineering, and Electrical and Electronics Engineering. The institute also offers M.Tech. and Ph.D. programs. The institute is currently running at IAMR Campus, Narela, Delhi.

About the Department:

The Department of Electronics and Communication Engineering was established in 2010, immediate with the beginning of the Institute under the ages of Ministry of Human Resource and Development (MHRD), Govt. of India. Currently it is offering one Undergraduate (B. Tech) course and two Post Graduate (M. Tech) courses in ECE and in VLSI Design. The Department offers PhD programme in areas like signal Processing, communication, VLSI design, electronic devices and circuits, electronic measurement and instrumentation, microprocessor and microcontroller, microwave and antenna design, optical fibre communication and optical device.

About the Workshop:

The workshop introduces participants to advanced modelling and simulation of photonic devices and optical communication systems using Optiwave tools such as OptiSystem, OptiFDTD, and OptiSPICE.

Led by Dr. Ahmad Atieh and Dr. Scott from Optiwave Systems Inc., Canada, the sessions will include practical demonstrations and discussions on photonic design workflows and real-world applications in optical networks and integrated photonics.

Tentative Workshop Contents:

- Overview of Photonic System and Device Simulation
- Introduction to Optiwave Tools: OptiSystem, OptiFDTD, OptiSPICE, and OptiBPM
- Optical Communication System Design and Analysis
- Simulation of Free Space Optics (FSO), Li-Fi, and UAV-based Optical Links
- Photonic Integrated Circuit (PIC) Design and Co-Simulation Techniques
- LiDAR Signal Processing and Target Detection Modelling
- Machine Learning Integration
- Fundamentals of Quantum Communication and Quantum Key Distribution (QKD)
- Simulation of QKD Protocols and Quantum Cryptography Techniques
- Practical Applications of QKD
- Case Studies, Research Examples, and Hands-on Demonstrations

Eligibility for Participants:

Faculties of various Universities/Institutions, Industry Personals, Scientists and Engineers from research and development organizations, UG, PG, and PhD scholars can apply for this workshop. The interested persons need to apply online through Google forms.

How to Apply:

For the registration please fill the Google form. The link for the Google form is given below-

☞**Google Form Link-** https://forms.gle/643Y4KYT7vki43MA8

***Note:** E-certificate will be issued to participants after completion of the Workshop.

Registration Fee: NA

Last Date for Registration: 20 November 2025

****No TA/DA will be provided to the participants from the institute. However, candidates wishing to avail hostel accommodation may request the availability, which will be offered on a first-come, first-served and on payment basis.**

Experts for the Workshop:

➤Dr. Ahmad Atieh
VP, Optical Systems, Optiwave Systems Inc., Canada

Dr. Ahmad Atieh is a leading authority in optical fiber and free-space communication technologies, backed by 180+ publications and 32+ patented innovations. A Ph.D. graduate of the University of Ottawa, he has contributed significantly to advanced optical system design in both academia and industry. He currently serves as Vice President of Optical Systems at Optiwave Systems Inc. and Adjunct Professor at the University of Ottawa.

➤Dr. Scott Newman
Director, Technical Sales & Applications, Optiwave Systems Inc., Canada

Dr. Scott Newman is an expert in computational electromagnetics and photonic periodic structures, holding a Ph.D. in Electrical Engineering from Carleton University. He leads technical development and research for OptiFDTD, OptiBPM, and OptiMode at Optiwave Systems Inc. He currently serves as Director of Technical Sales & Applications and Project Lead at Optiwave.

Sponsored by:

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Optiwave
Design Software for Photonics

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