

# Short online course on INTRODUCTION TO QUANTUM OPTICS

July 19–30, 2021



## Course Contents

1. Introduction to Quantum Optics (Brief Discussion on History & Achievements, Scope), Quantization of Light
2. Quantum Coherent State and its Applications
3. Displacement Operator and Quantum Beam Splitter
4. Squeezed State and its Applications
5. Photon Statistics
6. Intensity Interferometer and Correlation Function Measurement
7. Cavity Quantum Electrodynamics (Cavity QED)
8. Two-Photon Excitation and its Application in Optical Pumping
9. Brief Discussion on Laser Cooling and Trapping
10. Bose-Einstein Condensation

In addition to the regular lectures, the course will consist of four assignments and four tutorial sessions. Solutions of assignments will be discussed during tutorial sessions. Detailed schedule and virtual classroom link will be shared with the registered participants.



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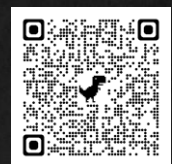
## Schedule

July 19 to July 23:  
Every day 10.00-11.30 AM  
July 26 to July 30:  
Every day 10.00-11.30 AM

Venue: Virtual classroom

## Registration Link

<https://bit.ly/3gLRIQh>



Registration is free, but  
mandatory.