

Program Schedule  
**ICTS School on Frontiers in Light-matter Interactions**  
**8-18 December 2014**

*C.V. Raman Lecture Hall, Indian Association for the Cultivation of Science (IACS)*

**Registration: 8 December, 9.15 – 10.00**

**Inauguration: 8 December, 10.00 – 10.10**

Date & Day	Lecture No.	Time	Speaker	Topics
8 Dec Mon	I.1	10.10 – 11.05	Ayan Banerjee	Saturation spectroscopy
	I.2	11.10 – 12.05		
8 Dec Mon	---	12.05 – 12.35 (Tea/coffee)	---	---
8 Dec Mon	I.3	12.35 – 13.30	Vaibhav Prabhudesai	Basic molecular physics: Structure and spectra of diatomic molecules
8 Dec Mon	---	13.30 – 15.00 (Lunch break)	---	---
8 Dec Mon	I.4	15.00 – 16.15	Vaibhav Prabhudesai	(continue)
9 Dec Tue	II.1	09.15 – 10.10	G. S. Agarwal	Elements of quantum optics
	II.2	10.15 – 11.10		
9 Dec Tue	---	11.10 – 11.35 (Tea/coffee)	---	---
9 Dec Tue	II.3	11.35 – 12.30	G. S. Agarwal	(continue)
	II.4	12.35 – 13.30	S. Chaturvedi	Phase space and stochastic methods in quantum optics
9 Dec Tue	---	13.30 – 15.00 (Lunch break)	---	---
9 Dec Tue	II.5	15.00 – 15.55	S. Chaturvedi	(continue)
9 Dec Tue	---	15.55 – 16.20 (Tea/coffee)	---	---
9 Dec Tue	II.6	16.20 – 17.15	H. Ramachandran	Single atoms and single photons
10 Dec Wed	III.1	09.15 – 10.10	H. Ramachandran	(continue)
	III.2	10.15 – 11.10	B. N. Jagatap	Laser cooling & trapping
10 Dec Wed	III.3	11.35 – 12.30	B. N. Jagatap	(continue)
	III.4	12.35 – 13.30		
10 Dec Wed	---	13.30 – 15.00 (Lunch break)	---	---

10 Dec Wed	III.5	15.00 – 15.55	A. Mohapatra	Non-linear optics using highly excited Rydberg atoms
10 Dec Wed	---	15.55 – 16.20 (Tea/coffee)	---	---
10 Dec Wed	III.6	16.20 –17.15	A. Mohapatra	(continue)
11 Dec Thurs	IV.1 IV.2	09.15 – 10.10 10.15 – 11.10	Subhadeep De	Atomic clocks
11 Dec Thurs	---	11.10 – 11.35 (Tea/coffee)	---	---
11 Dec Thurs	IV.3 IV.4	11.35 – 12.30 12.35 – 13.30	T. N. Dey	EIT, EIA & CPT
11 Dec Thurs	---	13.30 – 15.00 (Lunch break)	---	---
11 Dec Thurs	IV.5	15.00 – 15.55	R. P. Singh	Optical vortex: Experimental aspects
11 Dec Thurs	---	15.55 – 16.20 (Tea/coffee)	---	---
11 Dec Thurs	IV.6	16.20 –17.15	R. P. Singh	(continue)
12 Dec Fri	V.1 V.2	09.15 – 10.10 10.15 – 11.10	D. S. Ray	Density matrix approach to light-matter interactions: System-reservoir theory
12 Dec Fri	---	11.10 – 11.35 (Tea/coffee)	---	---
12 Dec Fri	V.3 V.4	11.35 – 12.30 12.35 – 13.30	S. Banerjee	Open quantum systems: Density matrix formalism
12 Dec Fri	---	13.30 – 15.00 (Lunch break)	---	---
12 Dec Fri	V.5	15.00 – 15.55	Nirmalya Ghosh	Paraxial optics and spin-orbit interaction of light
12 Dec Fri	---	15.55 – 16.20 (Tea/coffee)	---	---
12 Dec Fri	V.6	16.20 –17.15	Nirmalya Ghosh	(continue)
13 Dec Sat	VI.1 VI.2	09.15 – 10.10 10.15 – 11.10	Ananda Jha	Entangled photons
13 Dec Sat	---	11.10 – 11.35 (Tea/coffee)	---	---
13 Dec Sat	VI.3 VI.4	11.35 – 12.30 12.35 – 13.30	J. K.Bhattacharjee	BEC for trapped gases, Ginzburg Pitaevski equation and ramifications
13 Dec Sat	---	13.30 – 15.00	---	---

		(Lunch break)		
13 Dec Sat	VI.5	15.00 – 15.55	J. K.Bhattacharjee	Weakly interacting fermions, BCS theory
13 Dec Sat	---	15.55 – 16.20 (Tea/coffee)	---	---
13 Dec Sat	VI.6	16.20 –17.15	J. K.Bhattacharjee	(continue)
14 Dec	SUN	DAY-----	-FREE--DAY-----	-----FREE--DAY-----
15 Dec Mon	VIII.1 VIII.2	09.15 – 10.10 10.15 – 11.10	K. Thyagarajan	Integrated quantum optics
15 Dec Mon	---	11.10 – 11.35 (Tea/coffee)	---	---
15 Dec Mon	VIII.3 VIII.4	11.35 – 12.30 12.35 – 13.30	K. Thyagarajan Sourav Dutta	(continue) Cold molecules
15 Dec Mon	---	13.30 – 15.00 (Lunch break)	---	---
15 Dec Mon	VIII.5	15.00 – 15.55	Sourav Dutta	(continue)
15 Dec Mon	---	15.55 – 16.20 (Tea/coffee)	---	---
15 Dec Mon	VIII.6	16.20 –17.35	A. Gaeta	Temporal magnification, compression, and cloaking of light
16 Dec Tue	IX.1 IX.2	09.15 – 10.10 10.15 – 11.10	S. Hughes	Light-matter interactions in planar photonic crystals and on-chip nanophotonic resonators Semiconductor cavity-QED using quantum dots – polaron master equation approach
16 Dec Tue	---	11.10 – 11.35 (Tea/coffee)	---	---
16 Dec Tue	IX.3 IX.4	11.35 – 12.30 12.35 – 13.30	A. Venugopal	Fabrication techniques for plasmonic and photonic structures: Applications
16 Dec Tue	---	13.30 – 15.00 (Lunch break)	---	---
16 Dec Tue	IX.5	15.00 – 15.55	S. Hughes	Quasimode theory of dissipative cavity systems and how to fix Purcell’s formula
16 Dec Tue	---	15.55 – 16.20 (Tea/coffee)	---	---
16 Dec Tue	IX.6	16.20 –17.15	S. Hughes	Quantum optics of plasmonic resonators

17 Dec Wed	X.1	09.15 – 10.10	E. Brion	Quantum optics with Rydberg atoms
	X.2	10.15 – 11.10		
17 Dec Wed	---	11.10 – 11.35 (Tea/coffee)	---	
17 Dec Wed	X.3	11.35 – 12.30	F. Bretenaker	Laser noise and amplifier noise.
	X.4	12.35 – 13.30		
17 Dec Wed	---	13.30 – 15.00 (Lunch break)	---	---
17 Dec Wed	X.5	15.00 – 15.55	M. Mukherjee	Entangled ions
17 Dec Wed	---	15.55 – 16.20 (Tea/coffee)	---	---
17 Dec Wed	X.6	16.20 – 17.15	M. Mukherjee	(continue)
18 Dec Thurs	XI.1	09.15 – 10.10	F. Bretenaker	Phase sensitive amplification and squeezing
	XI.2	10.15 – 11.10		
18 Dec Thurs	---	11.10 – 11.35 (Tea/coffee)	---	---
18 Dec Thurs	XI.3	11.35 – 12.30	TBA*	Tutorial
	XI.4	12.35 – 13.30		
18 Dec Thurs	---	13.30 – 15.00 (Lunch break)	---	---
18 Dec Thurs	----	15.00 – 17.00	Free Time	
18 Dec Thurs	---	17.00 – 17.40 (Tea/coffee)	---	---
18 Dec Thurs	XI.5	17.45 – 19.00	G. Kurizki	Dynamical control
18 Dec Thurs	---	19.00 – 21.00 Dinner	---	---

\* To be announced