Schedule for TCS Summer Programme 2018

All sessions will be held in Hall 123.

Date	9:45 − 11:00	11:30 − 12:45	14:15 − 15:30	16:00 − 17:00
May 28	Overview and PC 1			
May 29	Abhisekh	Ramanujam	PC 2	PS 1
May 30	Abhisekh	Ramanujam	PC 3	PS 2
May 31	Abhisekh	Ramanujam	PC 4	PS 3
June 1	Abhisekh	Ramanujam	PC 5	Project Discussion
June 4	Ramanathan	PS 4	PC 6	Vikram
June 5	Gaurav	PS 5	PC 7	Vikram
June 6	Ramanathan	PS 6	PC 8	Vikram
June 7	Gaurav	PS 7	PC 9	Vikram
June 8	Ramanathan	PS 8	PC 10	Vikram
June 11	Kamal	Swaroop	PC 11	PW
June 12	Kamal	Swaroop	PC 12	PW
June 13	Kamal	PC 13	Abhranil	PW
June 14	Kamal	Arijit	Abhranil	PW
June 15	Kamal	Arijit	Anuj	PW
June 18	Suresh	Niranka	Arijit	PW
June 19	Suresh	Anantha	Arijit	PW
June 20	Suresh	Niranka	PW	PW
June 21	Suresh	Anantha	PW	PW
June 22	Suresh	Anantha	PW	PW
June 25	Meena	SP	PW	PW
June 26	Meena	SP	PW	PW
June 27	Meena	SP	PW	PW
June 28	Meena	SP	PW	PW
June 29	Vaishali (Spl Lec)	Arvind (Spl Lec)		

Abbreviations:
PS: Problem Sessions: Ramit Das and Prafulla Tale
PW: Project Work
SP: Student Presentations
PC: Parameterized Complexity
Spl Lec: Special Lectures

Topics

Speaker	Topic
V Arvind	Graph Spectra
Niranka Banerjee	Dynamic Graph Algorithms
Abhranil Chatterjee	Algebraic techniques to design efficient algorithms
Arijit Ghosh	Lectures 1 and 2: Incidence geometry and its Applications Lectures 3 and 4: Dependent random choice
Kamal Lodaya	Automata theory and concurrency
Meena Mahajan	Boolean functions and circuits
Anantha Padmanabha	Turing machines
R Ramanujam	Games and distributed algorithms
Abhisekh Sankaran	Logical definability and algorithms
Vikram Sharma	Solving Sparse Linear Equations
Gaurav Sood	Circuit or Communication Complexity
S P Suresh (CMI)	Security theory
N P Swaroop	Ramsey type theorems
Anuj Tawari	Data Compression algorithms
Ramanathan S Thinniyam	Arithmetic and Computation
Vaishali Surianarayanan	Edmonds-Gallai graph decomposition

Parameterized Complexity Lectures (Tentative)

	Speaker	Topic
PC01	Saket Saurabh	Introduction; simple branching; Buss rule
PC02	Pallavi Jain	Branching; iterative compression
PC03	Arindam Biswas	Dynamic Programming based approaches: Integer Linear Programming
PC04	Abhishek Sahu	Randomization: Randomized separation; color coding; chromatic coding
PC05	Jayakrishnan	Basic kernels I: Simple kernels (polynomial and exponential); FPT = kernel existence; Sunflower lemma
PC06	Ashwin Jacob	Basic kernels II: LP-based kernels; Expansion-based kernels
PC07	Krithika	W[1]-hardness: Which problems are unlikely to FPT?
PC08	Lawqueen Kanesh	Generalization of Fundamental Problems – A conflict approach
PC09	Sushmita Gupta	Matching Under Preferences – Stable Matching, Rank Matching and Popular Matching
PC10	Prafulla Tale	Algorithmic Engineering and FPT Algorithms
PC11	Diptopriyo Majumdar	Connected Vertex Cover – Does it have kernel? What can we do ?
PC12	Sanjukta Ray	Computational Social Choice on Tournaments
PC13	Roohani Sharma	Independence Covering and Simple Applications