



Module PMRF-ISSS129/2024

Randomised Algorithms

Name of the PMRF student

Bhargav Thankey

Required background of the students taught

Computer Science,
Artificial Intelligence,
Mathematics



Details of the content of the module

Week 1: Probability review, Monte Carlo and Las Vegas algorithms.

Week 2: Randomised quick sort, Karger's min cut algorithm.

Week 3: Polynomial Identity Testing and its applications.

Week 4: Isolation lemma, MVV perfect matching algorithm.

Week 5: Miller-Rabin primality test, randomised approximation algorithms for 3-SAT, MAX-CUT etc.

Week 6: Markov chains and their applications to randomised algorithms.

An hour-long problem-solving session sometime in week 6.

Schedule of the module

Start date: 23rd August

End date: 28th September

Total Duration: 19 hours

Class Schedule: Friday and Saturday

Class Time: 5:00-6:30 pm

One problem solving session at the end

Meeting link : Will be shared later

[Link](#)

Contact email ID: issforum@gmail.com

Registration link:

<https://forms.gle/LeFzWEnW8CPIyaUF7>