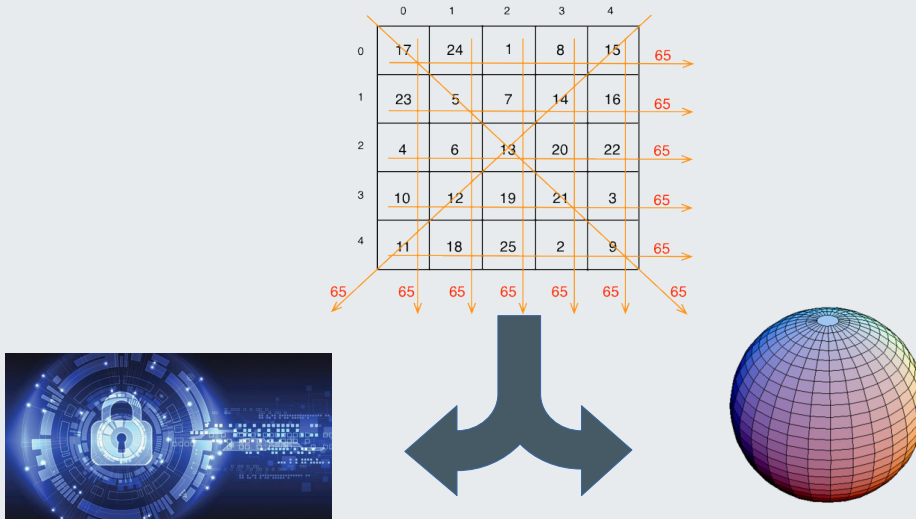


CREST SCHOOL

Applied Combinatorics: Cryptography and Combinatorial Topology



Institute for Advancing Intelligence (IAI) under the aegis of TCG CREST, is organizing a Summer School in Applied Combinatorics from 11.07.2022 - 22.07.2022. Research Scholars, Post Graduate and Final year Graduate students with Mathematics as a core subject may apply.

Topics:

- **Foundation:** Magic Squares, Polya Theory, Generating Functions, Pigeon-hole Principles, Graph Theory, Combinatorial Designs, Partition, Latin Squares, Orthogonal Arrays, Basic Number Theory, Galois Fields.
- **Cryptography:** Introduction, Stream Cipher, Block Cipher, Public Key Cryptography, Boolean Functions in Cryptography, Advanced Combinatorial Problems in Cryptography, Quantum Computation.
- **Combinatorial Topology:** The topological Tverberg problem, Kakutani and Dyson's Theorems, The index of Grassmannians and flag manifolds and orthogonal shadows, Graph Colouring, Topology of independent sets of a graph, Kneser's conjecture, Discrete Morse theory, Morse Homology.

Organizing Chair: [Goutam Mukherjee](#)

Organizing Committee: [Subhamoy Maitra](#), [Soumyajit Biswas](#), [Nilanjan Datta](#)

Application Deadline: 15/06/2022

Contact us @crest.iai.school@gmail.com

Website: <https://www.tcgcrest.org/crest-school-2022/>

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