

International Workshop
on
Advanced data structures and algorithms
(4-15 June 2012)

Tentative Contents of the Workshop

1. Introduction to algorithms, code tuning, complexity analysis
2. Linear data structures, sorting and searching techniques, amortized and expected complexity Analysis
3. Trees, Binary Search Trees, AVL trees, B-tress, Red-Black trees, Skip lists, Tries and Splay Trees
4. Binomial and Fibonacci heaps, succinct and persistent data structures, disjoint sets, Hashing, augmenting data structures
5. Divide and conquer, Greedy algorithms, Dynamic Programming, Backtracking, Branch and bound technique
6. Graph Algorithms, Shortest Path algorithms, Maximum Flow algorithms and String matching algorithms
7. Parallel algorithms, Randomized algorithms, Cache oblivious algorithms, Data mining algorithms
8. Online algorithms, Geometric algorithms and Networking algorithms
9. FFT and cryptographic algorithms, Multi facility location problems
10. Game theory, Complexity classes, P NP etc, Approximation algorithms