

**A Report on
A Two Day National Level Workshop on
"MATLAB BASED ADVANCED OPTIMIZATION
TECHNIQUES"**

7th - 08th November, 2013



Inaugural function of MATLAB based Advanced Optimization Techniques held on
Nov. 7, 2013.

Session I:

Mr. S.Prasanth Achuthamenon of P S G College of Technology handled the session on Particle Swarm Optimization (PSO). He gave a very lucid presentation covering topics like what is optimization?, overview of metaheuristics, what is particle swarm optimization?, types of PSO and PSO applications. He discussed the

three primary variants of PSO and solved a simple problem manually to explain how PSO works. It was followed by hands on session in MATLAB.



Session II:

Dr. K.C.Varaprasad of Sree Vidyanikethan Engineering College handled the session on Simulated Annealing. His elaborate presentation included Definition of Optimization, Local search algorithms, Hill-Climbing, Problems with Hill Climbing, Definition of annealing, Simulated annealing, Physical annealing Vs. Optimization. He explained how to solve LP problems using MATLAB software. This was followed by hands on session in MATLAB.



Session III:

Dr. G. Paul Raj of J J College of Engineering handled the session on Non-conventional Optimization techniques for Engineering Applications. His presentation included discussion on Types of optimization techniques, Problems with conventional techniques, Non-conventional techniques, Genetic Algorithm, Simulated annealing algorithm, Engineering Applications. This was followed by hands on session: GENETIC ALGORITHM USING MATLAB 7.0b with clear explanation of GA execution steps.



Session IV:

Dr. S.Devaprasad of Vardhamaan Engineering College handled the session on Multi objective optimization using evolutionary algorithms. His presentation included discussion on need for multiobjective optimization, lessons from mother nature, biomimicry and other ideas taken from nature, evolutionary algorithms- advantages and disadvantages and finally explained his real work – Multiobjective Flow shop scheduling: A genetic algorithmic approach.



Valedictory function



Valedictory function of MATLAB based Advanced Optimization Techniques held on Nov. 8, 2013.



Group Photo of participants