National Institute of Technology Rourkela

Departmental Seminar

Seminar Title	: Flexible Job Shop Scheduling using Gravitational Search Algorithm
Speaker	: Nikhil Aditya
Supervisor	: Prof. Saurav Datta (2524), PIC Departmental Seminar
Venue	: ME Seminar Hall (ME-001)
Date and Time	: 21 Jan 2025 (04:00 PM)

Abstract : Flexible job shop scheduling problem (FJSP) is one of the complex and important problems in operations management. Over time, many heuristic and metaheuristic approaches have been used to find solutions of FJSP. However, the potential of the gravitational search algorithm (GSA) is still unknown while solving FJSP. Therefore, the present work uses real number encoding-based GSA (RGSA) and chaotic GSA (RCGSA) to solve FJSP. The results of 35 benchmark problems and one industrial test case show that RCGSA performs significantly better than RGSA regarding the quality of solutions and convergence in a limited number of iterations.