Abstract

Scheduling University Courses is regarded as a Non-deterministic Polynomial-time hardness (NP-hard) problem. This is because no universal constraint works for all universities. While some will have constraints similar, they might differ in their resource values - length of days, time slots, and rooms. Several literatures have been able to address several constraints, using various optimization methods - genetic algorithms, tabu search and so on. The result often time works but lacks adoptability due to their non-inclusiveness of some resource parameters - day and dynamic time-slot. In this research, we address the various constraints related to the Federal University of Technology Akure (FUTA) using mathematical model that includes the necessary resource parameters. We adopt Tabu search diversification approach to implement a scheduling system that satisfies the constraints defined.

References

1. Alizera R. K., Mehrdad N. K. 2015. A mathematical model for University Course
A Tabu Search-based University Lectures Timetable Scheduling Model


Index Terms

Computer Science Information Sciences
Keywords

Timetable, Tabu Search, Constraint, Diversification, Economy Code Protocol (ECP), Mathematical Model, Comfort Adjustment Factor (CAF).