

UNIVERSIDADE FEDERAL DO TOCANTINS  
PRÓ-REITORIA DE PESQUISA E PÓS-GRADUAÇÃO  
MESTRADO PROFISSIONAL EM MODELAGEM COMPUTACIONAL

Avenida NS 15, ALCNO 14 – Bala I, Sala 1 | 77001-090 | Palmas/TO  
(63) 3232-8306 | [www.uft.edu.br/ppgmcs](http://www.uft.edu.br/ppgmcs) | [ppgmcs@uft.edu.br](mailto:ppgmcs@uft.edu.br)



TÉCNICAS DE INTELIGÊNCIA COMPUTACIONAL

**Créditos:** 04  
**Carga horária:** 60  
**Tipo:** Eletiva

**EMENTA:**

Técnicas para solução de problemas de otimização combinatória: Heurísticas clássicas, Metaheurísticas. Principais metaheurísticas: Recozimento Simulado (Simulated Annealing), Busca Tabu, Busca Local Iterada (Iterated Local Search - ILS), Busca em Vizinhança Variável (Variable Neighborhood Search - VNS), Procedimentos de Busca Adaptativa Aleatória e Gulosa (Greedy Randomized Adaptive Search Procedures - GRASP), Algoritmos Genéticos, Colônia de Formigas, Busca Dispersa (Scatter Search). Aplicações.

**BIBLIOGRAFIA:**

M.R. Garey e D.S. Johnson. Computers and Intractability: A Guide to the Theory of NP-Completeness, W.H. Freeman and Company, San Francisco, 1979. R.E. Campello e N. Maculan. Algoritmos e Heurísticas: Desenvolvimento e Avaliação de Performance, EDUFF, Niterói, 1994. J. Pearl. Heuristics: Intelligent Search Strategies for Computer Problem Solving, Addison, Wesley, Reading, 1985. C.R. Reeves (editor). Modern Heuristic Techniques for Combinatorial Problems, Blackwell Scientific Publications, London, 1993. ANDRIES P. ENGELBRECHT, Computational Intelligence: An Introduction, Wiley, 2nd ed, 2007. ISBN 0470035617. F.G. GLOVER, AND G.A. KOCHENBERGER, Handbook of Metaheuristics. Boston, Kluwer Academic Publishers, 2003. ISBN 1402072635. M.G. RESENDE, J. PINHO DE SOUSA, Metaheuristics: Computer Decision-Making (Applied Optimization), Springer, 2003. ISBN 1402076533. T.F GONZALEZ, Handbook of Approximation Algorithms and Metaheuristics, Chapman & Hall/CRC, 2007. ISBN 1584885505. El-Ghazali Talbi (Author). Metaheuristics: From Design to Implementation. Publisher: Wiley; New edition (June 22, 2009). ISBN-10: 0470278587 Thomas Bartz-Beielstein, Marco Chiarandini, Luís Paquete, Mike Preuß. Experimental Methods for the Analysis of Optimization Algorithms. Publisher: Springer; 1 edition (October 1, 2010). ISBN-10: 3642025374. Johann Dréo, Alain Pérowski, Patrick Siarry, Eric Taillard, A. Chatterjee. Metaheuristics for Hard Optimization: Methods and Case Studies. Publisher: Springer; 1 edition (December 22, 2005). ISBN-10: 354023022X. Stefan Edelkamp, Stefan Schroedl, Sven Koenig. Heuristic Search: Theory and Applications. Publisher: Morgan Kaufmann (June 29, 2010). ISBN-10: 0123725127. Günther Zäpfel, Roland Braune, Michael Bögl. Metaheuristic Search Concepts: A Tutorial with Applications to Production and Logistics. Publisher: Springer; 1st Edition. edition (March 9, 2010). ISBN-10: 3642113427. Manuel Laguna, Rafael Martí. Scatter Search : Methodology and Implementations in C. Editora: Springer. ISBN: 1402073763. Enrique Alba. Parallel Metaheuristics: A New Class of Algorithms. Publisher: Wiley-Interscience. ISBN: 0471678066. Cesar Rego. Metaheuristic Optimization via Memory and Evolution. Editora: Springer. ISBN: 1402081340.