
Unpublished Materials:

Bernardo, Ricardo M. Jr. [NSACO : a multiobjective nondominated sorting ant colony optimization algorithm for continuous and mixed-variable domains](#). 2010. LG 995 2010 C65 B47

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Calibjo, Cirilo C. [Development of a reference grid performance assessment model : an alternative regulatory framework for the transmission company in a market environment](#). 2011. LG 996 2011 E643 C57

Caranguian, Luther Paul Dela Rosa. [Device interoperability and authentication for telemedical appliance based on the ISO or IEEE 11073 personal health device \(PHD\) standards](#). 2012. LG 995 2012 E64 C37

Cayetano, Arjay Caburnay. [Multi-objective evolutionary optimization of UVB phototherapy of psoriasis through a 3-dimensional agent-based model](#). 2011. LG 995 2011 C65 C39

De Jesus, Neon S. [Correcting the direction-of-arrival \(DoA\) estimates of passive UHF RFID tag signals by carrier leakage cancellation using LMS adaptive filtering](#). 2010. LG 995 2010 E64 D45

Rañola, Jo Ann P. [An optimal renewable portfolio standard using genetic algorithm-benders' decomposition method in a least cost approach](#). 2012. LG 995 2012 E64 R36

Tolentino, Ian Christopher Magana. [Self-powered GPS tracking system for vehicle and asset monitoring](#). 2011. LG 995 2011 E64 T65

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This pathfinder contains suggested materials on Algorithm that are available at the College of Engineering Library II. However, some references were not included.

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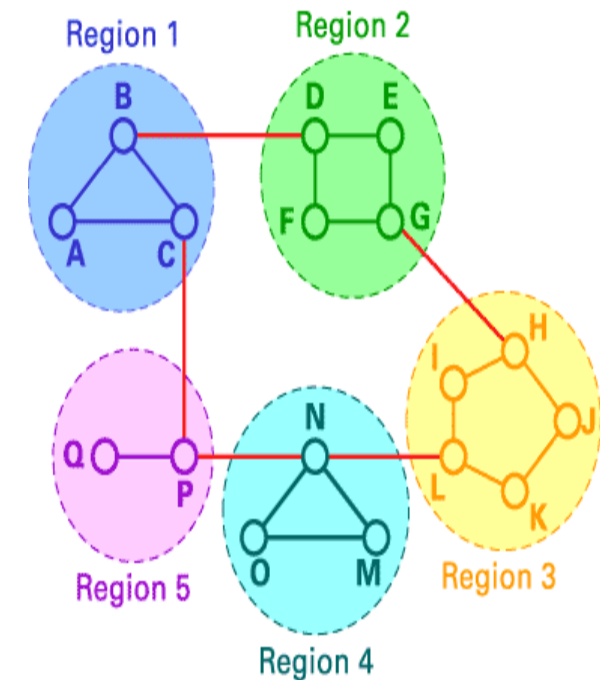


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ALGORITHM

PATHFINDER



Algorithm

- In mathematics, computing, linguistics and related subjects, an algorithm is a finite sequence of instructions, an explicit, step-by-step procedure for solving a problem, often used for calculation and data processing. It is formally a type of effective method in which a list of well-defined instructions for completing a task, will when given an initial state, proceed through a well-defined series of successive states, eventually terminating in an end-state. The transition from one state to the next is not necessarily deterministic; some algorithms, known as probabilistic algorithms, incorporate randomness.

HISTORY

Origin of the word

- The word algorithm comes from the name of the 9th century Persian mathematician Abu Abdullah Muhammad ibn Musa al-Khwarizmi whose works introduced Indian numerals and algebraic concepts

Discrete and distinguishable symbols

- To keep their track of their flocks, their sacks of grain and their money the ancients used tallying : accumulating stones or marks scratched on sticks or making discrete symbols in clay.

Manipulation of symbols as “place holders” for numbers : algebra

- The work of the ancient greek geometers, Persian mathematician Al-Khwarizmi (often considered the “father of algebra” and from whose name algorism and algorithm are derived and Western European mathematicians culminated in Leibniz’s notion of the calculus ratiocinator

Mechanical contrivances with discrete states

- The clock
- Jacquard Loom, Hollerith punch cards,
- Telephone switching networks

Mathematics during the 1800s up to the mid-1900s

- Symbols and rules
- The paradoxes
- Effective calculability

Emil Post (1936) and Alan Turing (1936-7, 1939)

J.B. Rosser (1939) and S.C. Kleene (1943)

History after 1950

- A number of efforts have been directed toward further refinement of the definition of “algorithm” and activity is on-going because of issues surrounding in particular, foundations of mathematics and philosophy of mind.

Source: <http://en.wikipedia.org/wiki/Algorithm>

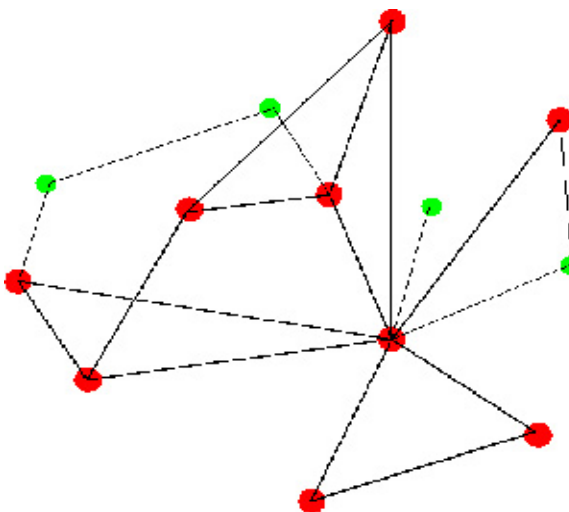


Image URL: <http://www.physorg.com/newman/gfx/news/algorithm.fin.jpg>

Books: (c2000-2012)

Dasgupta, Sanjoy et al.. [Algorithms](#). McGrawHill, c2008. QA 9.58 D37 2008

Even, Shimon. [Graph algorithms](#). Cambridge University Press, 2012. QA 166 E94 2012

Goodrich, Michael T. [Data structures and algorithms in C++](#). Wiley, c2011. QA 76.73 C153 G66 2011

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Grimaldi, Ralph P. [Fibonacci and Catalan numbers : an introduction](#). Wiley, c2012. QA 241 G75 2012

[Handbook of applied algorithms: solving scientific, engineering and practical problems/](#) edited by Amiya Nayak, Ivan Stojmenovic. Wiley-Interscience, 2008. QA 76.9 H36 2008

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