

Advanced Algorithms and Datastructures - Exam Notes

André O. Andersen

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Max Flow

Disposition

Presentation

Short notes

Linear Programming and Optimization

Disposition

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Short notes

Hashing

Disposition

Presentation

Short notes

Van Emde Boas Trees

Disposition

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NP-Completeness

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Exact Exponential Algorithms and Parameterized Complexity

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Approximation Algorithms

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1. Introduction
2. Definition of the *approximation ratio*, a $\rho(n)$ -*approximation algorithm* and a *randomized $\rho(n)$ -approximation algorithm*.
3. The Vertex-cover problem
 - (a) Introduction
 - (b) Proof that APPROX-VERTEX-COVER is a 2-approximation algorithm
4. MAX-3-CNF
 - (a) Introduction
 - (b) Proof that the randomized algorithm for MAX-3-CNF is a randomized $8/7$ -approximation algorithm

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Polygon Triangulation

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Short notes