

Computational Mathematics

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Part I

Algorhitms

Chapter 1

Trees and graphs

1.1 Linear data structures

1.2 Binary trees

1.3 Graphs

Chapter 2

Computational geometry

Chapter 3

Randomized algorithms

Part II

Chapter 4

Information theory

Chapter 5

Coding theory

Chapter 6

Cryptography

Part III

Part IV

Numerical analysis

Chapter 7

Finite difference method

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Mathematical optimization

Chapter 9

Finite element method