

# Computational Mathematics

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# Contents

<b>I</b>	<b>Algorhitms</b>	<b>2</b>
<b>1</b>	<b>Trees and graphs</b>	<b>3</b>
1.1	Linear data structures . . . . .	3
1.2	Binary trees . . . . .	3
1.3	Graphs . . . . .	3
<b>2</b>	<b>Computational geometry</b>	<b>4</b>
<b>3</b>	<b>Randomized algorithms</b>	<b>5</b>
<b>II</b>		<b>6</b>
<b>4</b>	<b>Information theory</b>	<b>7</b>
<b>5</b>	<b>Coding theory</b>	<b>8</b>
<b>6</b>	<b>Cryptography</b>	<b>9</b>
<b>III</b>		<b>10</b>
<b>IV</b>	<b>Numerical analysis</b>	<b>11</b>
<b>7</b>	<b>Finite difference method</b>	<b>12</b>
<b>8</b>	<b>Mathematical optimization</b>	<b>13</b>
<b>9</b>	<b>Finite element method</b>	<b>14</b>

**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**

## **Chapter 8**

# **Mathematical optimization**

## **Chapter 9**

# **Finite element method**