

# WINTER SCHOOL

in Competitive Programming 2021

COVID-19 and closed borders are not an excuse to study! The world-class experts in the field of Competitive Programming will help you gain knowledge and obtain professional skills from any convenient location for you!

#### WHEN?

January 11 - 22, 2021

### ECTS?

Yes! 3 ECTS + ITMO Official Certificate

#### FEES?

20,000 RUB (~ 225€)

## **WHAT TOPICS ARE COVERED?**

- Sorting and Binary Search
- Dynamic Programming
- Graphs, Depth First Search, Connected Components and Strongly Connected Components
- Graphs, Shortest Paths, BFS, Dijkstra Algorithm
- Strings, Prefix-function, Z-function, Hashing
- Segment Tree

- RMQ, LCA, Sparse Table
- Geometry
- Minimum Spanning Tree
- Game Theory, Grundy Theorem,
  Retroactive Analysis of Cyclic Graphs
- Fast Fourier Transform
- Suffix Array
- Maximum Flow Problem
- NP-completeness and Backtracking

# **How to apply?**

1. Application deadline:

December 15, 2020

- 2. Prepare application documents:
  - Copy of your valid passport
  - CV
- **3.** Forward application documents to ITMO coordinator:

Mrs. Ekaterina Rassolenko, e.rassolenko@itmo.ru

- 4. Receive confirmation of admission and personal agreement
- **5.** Pay tuition fees:
  - visit the website https://pay.ifmo.ru/en/
  - enter your agreement's number and email
  - pay tuition fees online by card
- **6.** Receive a link to your **ZOOM** classes



Check here for more information!