

STRUCTURE, SCORING AND PURPOSE OF COMPUTING COMPETITION

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Overview

Three contests:

- ACM Intercollegiate Programming Competition (ICPC)
- International Olympiad in Informatics (IOI)
- TopCoder Algorithm Competition

Questions:

- What is the purpose of each?
- How is the purpose achieved?

ACM ICPC

The ACM International Collegiate Programming Contest (ICPC) provides college students with opportunities to interact with students from other universities and to sharpen and demonstrate their problem-solving, programming, and teamwork skills. The contest provides a platform for ACM, industry, and academia to encourage and focus public attention on the next generation of computing professionals as they pursue excellence.



The primary goal of the IOI is to stimulate interest in informatics (computing science) and information technology. Another important goal is to bring together exceptionally talented pupils from various countries and to have them share scientific and cultural experiences.

TopCoder

TopCoder's mission is to create objective ratings that place high value on the programming industries [sic] best and brightest, and build opportunity and community for programmers through ongoing programming tournaments and employer connections.

ACM ICPC

- teams of three students
- one computer per team
- immediate on-line feedback



- individual competitors
- native-language programming tasks
- no feedback or scoreboard

TopCoder

- on-line contest and environment
- phases: coding, challenge, system test

Other contests

- computing: algorithmic, non-algorithmic
- other disciplines

Contest design issues

- the need to identify a winner
- pressure elements
- prior knowledge vs. skill
- collaboration vs. competition
- spectators, scoreboards, and blackouts