IEEEXtreme 18.0 Call for Problems

IEEEXtreme is an annual global programming competition that attracted nearly 17,000 competitors last year. IEEEXtreme 18.0 will take place on October 26th, 2024. The contest seeks original and inspirational ideas for programming challenges. If you are interested in contributing a problem to IEEEXtreme 18.0, please read below for how to proceed. This Call for Problems is open to anyone except the competitors who will compete in IEEEXtreme 18.0. Please feel free to forward this to anyone who may be interested.

Candidate problems should be emailed to the IEEEXtreme 18.0 Technical Lead at victor.galva.o@uni.pe by September 8th, 2024.

Candidate problems

A candidate problem submission shall include the following:

• A description of the problem's task.

  – The task needs to be unambiguously specified.

  – The task must require a contestant's program to (possibly) read input and produce output.

  – Please provide the input size, and the value ranges of all the input tokens.

• A description of the expected solution program.

  – A solving program must not take an excessively long time and should typically finish within 10 seconds on any valid input data.

  – A solving program should not be over complicated. Remember that contestants must write solutions in a relatively short amount of time. A few hundred lines of code should be an upper limit of the size of a solving program.

The format of both descriptions can be sent as a Word document, PDF document, or tex/latex source that can be compiled directly on Overleaf.

Here is a sample of what needs to be included in a problem idea submission.

The following will make the candidate problem more solid and increase its chance of being used in the competition:

  • A full solving program that can be compiled and executed to solve the proposed problem.

  • Time/space complexity analysis of the expected solution.

  • Preliminary test data.

Please note that these are optional, and you do not need to submit fully developed problems. We welcome all contributions from problem ideas to fully-tested problems at all levels of difficulty.

A typical IEEEXtreme problem has static input data and expected output data. Additionally, IEEEXtreme 18.0 also in particular welcomes problems with the following novel features:

• Problem with multiple subtasks: Subtasks have different difficulty levels to provide better contest experience for all contestants.

• Interactive problems: The solving program will interact with a judge program to receive input and solve a task. The judge program's response may depend on the contestant's output, and vice versa.

• Offline problems: The problem requires information, knowledge, or insight that is not directly obtained from the problem description. For example, to solve a riddle using resources available from the Internet.

• Competitive problems: The problem sets up an environment for contestants' programs to compete with each other.

• Optimization problems: The problem does not have a fixed answer. Instead, the better answer receives a higher score.

If you submit a candidate problem to us, we will require you to adhere to strict confidentiality related to all communication between us about this problem. If the problem is not selected by IEEEXtreme 18.0, you will be able to resend it for future IEEEXtreme contests, or submit it to a different contest.