

## IOI 2016 Call for Tasks

The IOI Scientific Committee invites everyone in the IOI community to submit tasks for the IOI 2016 competition.

The deadline for submitting tasks is **January 10, 2016**.



## IOI Competition Tasks

IOI tasks are typically focused on the design of efficient, correct algorithms. Input and output are to be kept as simple as possible.

The competition tasks from previous IOIs can provide, by example, good guidance on the desired composition of tasks:

- the tasks from IOI 2015 may be found at <http://ioi2015.kz/>;
- the tasks from IOI 2014 may be found at <http://www.ioi2014.org>;
- the tasks from IOI 2013 may be found at <http://www.ioi2013.org>;
- the tasks from IOI 2012 may be found at <http://www.ioi2012.org>;
- the tasks from IOI 2011 may be found at <http://www.ioi2011.or.th>;
- a large collection can be found at the IOI site at <http://www.ioinformatics.org/history.shtml>.

However, the nature of previous tasks should not constrain the design of new tasks; the submission of novel task types not yet seen in IOIs is encouraged. We are particularly interested in tasks whose basic rules (if not optimal strategy) are accessible to a wide audience, and tasks that illustrate algorithms and computational problems that arise in a variety of human endeavours. Open-ended tasks, ones that do not necessarily have a known efficient or optimal solution, are welcome.

We are also particularly interested in tasks that go beyond the typical format in which a program collects input, performs some computation, and returns output. Examples include "reactive" and "output only" tasks which have been used occasionally in previous IOIs. Tasks with some measure of solution effectiveness other than CPU time consumption are encouraged.

A syllabus listing what material is generally considered acceptable for IOI tasks can be found at <http://people.ksp.sk/~misof/ioi-syllabus/>. The syllabus is not meant to be restrictive, but to serve as a guideline for task preparation.

To ensure a fair and interesting competition for all, tasks should satisfy the following conditions:

1. the tasks should not have been seen by any potential IOI 2016 contestants;
2. the tasks should not have been used in any recent similar competition;
3. the tasks should be solvable by IOI competitors during an IOI contest round;
4. the task descriptions should be unambiguous and easy to understand;
5. the tasks should be original and/or innovative.

## What to Submit

A task submission **must** contain:

- Statement in English, preferably formatted in PDF with required diagrams and pictures included.
- Description of the desired solution (a description of an algorithm which should get full score).
- Contact address (preferably one e-mail address) and background information on the task author(s): affiliation, country, and a description of the author's role in the IOI or national olympiad, including training duties, over the period from IOI 2014 to IOI 2016.
- If you want the ISC to provide feedback on your submission, you should also provide a PGP key ID along with the submission.

It is also **strongly recommended** to contain:

- At least one implementation of the desired solution.
- Analyses of alternative solutions
- Suggestions for grading
- Test data or ideas for generating test data
- The motivation behind the task

Any comments related to the task are also welcome and would be highly appreciated.

Submitted tasks must be kept in strict confidence until the end of IOI 2016. At this time, authors are free to do whatever they wish with the tasks, but may be asked to have them considered for IOI 2017, in which case strict confidence would have to be maintained through until IOI 2017. All authors will be acknowledged at the closing of IOI 2016.

## How to Submit

Task materials must be placed together in a single file (use .zip or .tgz for multiple files) and submitted online

at <https://isc.ioinformatics.org/dropbox/>. When submitting a task, you will have to enter the authorization code "Cardamom". Please do not encrypt your submission: the upload page will do this automatically.

## Notes

Please note that by submitting the author asserts that he or she is authorized to grant, and does grant IOI an exclusive licence to use the material until August 19, 2016, and a perpetual non-exclusive transferable licence to reproduce the material. The author warrants that the requirements in this call for submissions are met, and that the materials will not be disclosed to any third party for the duration of the exclusive licence.

Task authors and their collaborators must not use a submitted task, or a variant thereof, or techniques specific to that task, in any competition or training until IOI 2016 has ended. In case of doubt, contact the ISC. Note that we do not wish to forbid authors of submitted tasks to be involved in other competitions and training, but we do ask them to take all necessary precautions to safeguard confidentiality.

## What Happens Next

Receipt of submissions will be confirmed via the provided contact address. The IOI Scientific Committee will carefully review all submissions and will select a short-list of around 10 tasks, six of which will eventually be given at the IOI 2016 competition. The authors of the tasks selected for the short-list will be invited to attend the IOI 2016 in Kazan as Invited Guests (authors will be responsible for their travel, but IOI 2016 will cover their stay). However, they will not be informed prior to the competition as to whether their tasks will be used at the actual contest or whether the IOI Scientific Committee has substantially modified their tasks.

The authors of all submitted tasks will receive feedbacks from the ISC. The authors of tasks included in the actual competition will also be recognized by listing their name, affiliation and country in the official IOI 2016 tasks booklet and on the official IOI website (unless they specifically decline this). The problems of tasks included in the actual competition will be made available under a [Creative Commons Attribution license \(CC-BY\)](#).

## SUMMARY

- *Submission deadline:* January 10, 2016
- *Language:* English
- *Text format:* PDF preferred
- *Multiple files for one task* (e.g. diagrams, solution code): in single zip or compressed tar archive
- *Multiple tasks:* submit separately
- *Minimum contents of submission:*
  - author(s) information: name, e-mail, affiliation, country, and olympiad-role;
  - task statement;
  - description of desired solution.
- *Also recommended:*
  - solution implementations;
  - suggestions for grading;
  - test data;
  - alternate solutions or expected near-solutions;
  - background information on the task;
  - any other comments relevant to the task.
- *Submission site:* <https://isc.ioinformatics.org/dropbox/>, authorization code is "Cardamom".

Please direct questions about the call for tasks to [ioi-sc@lists.ioinformatics.org](mailto:ioi-sc@lists.ioinformatics.org).