



INTERNATIONAL INFORMATICS OLYMPIAD IN TEAMS

REGULATIONS

- Introduction
- Goals
- General regulations
- Teams
- The International Committee
- The Scientific Committee
- Competitions
 - Problems
 - Evaluation
 - Results and prizes
- Host Country

Approved by the International Committee, IIOT 2018

INTRODUCTION

The Olympiad is organized by an International Committee, which consists of the representatives of the countries which are regular participants. Regular participants are the countries which, in turn organize the International Olympiad. At present the representatives of Italy, Romania and the Russian Federation are regular participants, as founding countries of the competition. According to the rules accepted by the initiators of the IOT, any other teams from Europe can be invited as **regular** participants, if they become full members of the organizational committee, so they will also be hosts of the final future editions of IOT. Moreover, the host country may invite **guest** participants from other countries. The guest teams will, in certain situations, have to pay a participation fee.

English is the official language for all communication: documents, problems texts, website, emails and appeals.

IOT logo, name and trophy are property of the International Committee and can be used only under its formal written permission and never for commercial use.

GOALS

IOT aims at motivating secondary school students to get more interested in informatics and information technology in general, test and prove their competence in solving problems with the help of computers, exchange knowledge and experience with other students of similar interest and qualification, establish personal contacts with young people of other countries.

The primary objective is to stimulate the interest of young people in Computer Science and Information Technologies alongside to Individual Computer Olympiad.

More and more often, the work world operates in contexts in which working groups (or teamwork) are made up to carry out specific projects or activities. The ability to work in groups, therefore, becomes a prerequisite for all those who move in the current labor market. Today's organizations, as a matter of fact, aim a lot for group work as a strategy to achieve better results under collective talents of the team, the ability of members to support each other to overcome the difficult times, the ability to multiply the options thanks to the creativity that comes from the comparison of different ideas. The teamwork skill becomes a requirement by companies that select personnel, but not only; assuming that in all workplaces, or nearly so, you need to interface with other people to carry on your own activities, it is clear that establish this capability could lead to a better life working environment and improve the level of performance.

GENERAL REGULATIONS

Each team is coordinated by one team leader. The teams will be registered in the competitions by their coordinating team leader.

Only the cost of travel to and from the place of the competition should be paid by teams; all local expenses are covered by the institutions from the host country.

Accompanying persons and observers are welcome, but they should pay for their stay. Interested people are advised to contact the local organizers.

Only the computers and software with built-in help facilities provided by the organizers may be used in the competition. The host country shall provide software (including the operating system) localized in English. Each team may bring and use their own keyboards, provided that they are approved by the host scientific committee.

TEAMS

The contestants are students enrolled in a school for secondary education/high school, in the country they are representing, during at least September- December in the year before IOT and who are not older than 20 on July 1st of the year of IOT. Students who are studying abroad may represent the country of their nationality.

Each team is composed of 4 students and 2 reserves for replacement, if needed. A team can include no more than one awarded contestant of the National Individual Olympiad in Informatics in the previous year. There cannot be any student exchanges between teams. A team cannot be composed by students from different schools.

Teams attending the International Final are directly selected by the country they represent according to its own rules.

THE INTERNATIONAL COMMITTEE

The International Committee (IC) is the engine of IOT; it consists of the representatives of the countries which are regular participants. Each country is represented by a national committee that consists of four people: the representative of the Ministry of Education or another appropriate institution, the scientific coordinator and the headmaster and a teacher of the leader school.

Every year during the IOT competition days, IC members have a round-table meeting so as to evaluate the current edition, planning next year's edition, making changes in the Regulations if needed, welcoming the requests of nations wishing to become part of the project.

During these meetings, IC members elect the **International Secretary** with the tasks of upholding the IOT web site, carrying out the countries admissions formalities, writing the minutes at the end of IC meetings and protecting and upholding IOT Regulations. The International Secretary is elected by an IC majority vote, remains in charge for three years and can be removed by a 2/3 IC majority votes during an IC meeting.

During these meetings, IC members also elect the **International Coordinator** with the tasks of maintaining the IOT institutional email, ensuring communication and co-operation within the IC members, representing the project at the exterior, promoting the IOT development, establishing links with other International Olympiads and/or the Informatics Olympiad in synergy with the IC. The International Coordinator is elected by an

IC majority vote, remains in charge for three years and can be removed by a 2/3 IC majority vote during an IC meeting.

The voting procedure is based on “one country, one vote”; votes require a simple majority except for what already said and the following decisions:

- selection of the next host is made by the IC by a majority vote;
- revision of the Regulations of the IOT is adopted by the IC by a 2/3 majority vote;
- enlarging or reducing the set of IOT countries can only be adopted by a 2/3 majority vote.

IC meetings can also be held on-line.

IC meetings are exceptionally open to invite other personalities for specific and well-defined purposes. Invitations are made by the IC itself; the invited people have no voting rights.

THE GENERAL ASSEMBLY

The General Assembly (GA) is the democratic representative of all those who are involved into IOT, both regular and guest nations. It is composed of the team leaders of the participating countries, experts in Informatics and a president nominated by the host country, together with four people for each country: the representative of the Ministry of Education or another appropriate institution, the scientific coordinator and the headmaster and a teacher of the leader school.

The GA determines the minimum scores for the gold, silver and bronze medals.

The voting procedure is based on “one country, one vote”; votes require a simple majority.

The GA's life is during that specific IOT edition.

THE SCIENTIFIC COMMITTEE

The national Scientific Committee (SC) of each regular participant country of the IOT consists of the scientific experts who could be teachers and University students, coordinated by a University referent.

The national Scientific Committees become active well before the beginning of the Olympiad and have the task of selecting and preparing problem proposals, test and evaluate the solutions of the contestants for their national championships.

The Scientific Committee of the host country should prepare for the International Final Competition at least one extra proposal, besides the seven problems which the contestants will have to solve. They will be presented to the International Scientific Committee (consisting of a representative of each national SC) the day before the contest.

The International SC has the right to deny the proposal of a problem prepared and proposed by the Scientific Committee of the host country, in case of a major ambiguity of formulation or other serious reasons. For such cases the Scientific Committee of the host country should prepare at least one extra proposal. The text of the accepted proposals

must not be changed by the International SC, except for minor rephrasing that is needed to avoid smaller ambiguities.

The International Scientific Committee should set up a guideline for the Syllabus and the production of problems during next year edition.

The national Scientific Committees can receive help from a **Technical Committee** at their discretion, which should propose, develop and support technical matters concerning the IOT: Virtual Machines, CMS, OS, tools, hardware, network security. One month before the IOT the host national Scientific Committee can collect the requests from competing countries.

COMPETITIONS

Each regular member can decide by itself about the selection procedure during its National Championship, but the National Final contest must be on-site and it must be held by the 31st of March of the year of IOT.

All the data about its competitions are published by the nation itself on its website on some dedicated pages. It includes at least:

- enrolled teams data: team name, members (names, dates of birth, class attended), school (name and city)
- scheduled contests
- contest rankings

For instance, a suggested format for the National Competition is the following. Four online preliminary competitions and one National Final on-site. Each competition lasts 3 hours and it involves solving 7 problems. The first four Preliminary Competitions are held online, on a National dedicated platform, with automatic evaluator. Each team is given a valid username for the whole competition and a password that is different for each competition. The National Final Competition, in presence, decides its participants according to the total scores obtained in the previous 4 Competitions. The scores of the National Final Competition are not added to the scores of the Preliminary competitions. Each teacher assigned to a team will ensure the proper running of the national competitions, checking:

- that students do not use mobile phones, tablets or any type of electronic device.
- that students do not consult textbooks.
- that in the used laboratories the Internet connection is disconnected, with the exception of the Race Platform.
- that communication between teams is not possible.

The first one or two winning teams of each National Final Competition will participate in presence in the **International Competition** (the host country will decide the number of participating teams, depending on the number of participating countries).

The Nation Leader Schools of the regular participants participate with 1 more team (6 students and a teacher) as “a special guest team”. Their results are not put in the official

rank.

The International Competition, in presence, lasts 4 hours and it involves solving 7 problems.

Contestants may submit written questions to the Scientific Committee of the host country concerning the formulation and interpretation of the problems during the initial period of each competition round.

No special hardware requirement or software packages (e.g. graphic packages) is needed to solve the problems. The whole communication between the IOT committees and contestants is in a written form.

PROBLEMS

All the problems are given and solved in English.

The test that the students face is the writing of programs that solve 7 problems assigned.

The languages that can be used are: C, C ++ and Pascal.

The topics of the Olympic competitions include: arrays, even multidimensional, sorting and searching, greedy algorithms, recursion, dynamic programming, graphs, trees, lists.

EVALUATION

When the working time is over, the solutions of each of the contestant team is checked by an automatic evaluator and published onto the official IOT website. If a team leader does not accept the results of the evaluation, he/she may appeal to the International Scientific Committee.

RESULTS AND PRIZES

The General Assembly determines the minimum scores for the gold, silver and bronze medals. The proportion of these gold, silver and bronze medals should be approximately 1:2:3. About 50% of the contestants should receive medals. Each contestant receives a certificate of participation.

Each participant team, both regular and guest teams, have the right to be awarded, according to their results. The official rank will present only the results of the regular participants. The results of the guest teams will not be put in the official rank.

A contestant may be disqualified by the IC in the event of unethical behaviour during the contest and/or outside it which means any behavior that may ruin individuals, countries or IOT reputation.

HOST COUNTRY

A host country, which is willing to organize an IOT edition in a given year in its country, has to announce its intention at least one year before (during the previous IOT competition days). The selection of the next host is made by the IC during its annual

meeting.

The host country proposes the date of the next IIOT edition to the other IC members; it should be by the end of May. The host country communicates the official date to all the participating countries at least three months before the IIOT edition with all the needed information: location, VISA, invitations.

The program should be published by the host country at least one month before. It should include opening and award ceremonies, practice and contests, social and cultural activities.

At the end of the event, certificates of attendance are provided by the host country for all the participants: students, teachers, delegates. The award ceremony should be comprehensive of the closing ceremony too. It consists also in the passing-by of the official trophy to the next year's host country.

The host country decides the fees that may be paid by "guest" countries as well as how many teams per nation to accept (one or two) and it will take in account religious or cultural dietary requirements as much as possible.

REGULATIONS REVISION

Regular members may propose Revisions to the IIOT Regulations to the International Committee at least one month before the beginning of the IIOT competition days. Guest members to the IIOT may also submit suggestions. IC members decide about Regulations Revision during the annual meeting. The Revision is adopted by a 2/3 majority vote and becomes effective starting from the next year's edition of the IIOT.

Signed by those in charge of IIOT National Delegations

Headmaster ITALIAN Leader School I.I.S. ALDINI VALERIANI-SIRANI:
PH D SALVATORE GRILLO

Headmaster ROMANIAN Leader School COLEGIUL NATIONAL DE INFORMATICA:
PH D DANIELA NEAMTU

Headmaster RUSSIAN FEDERATION Leader School GYMNASIUM 1517:
PH D ANNA VAHNEEVA