



# International Young Physicists' Tournament

## IYPT



We, the organization stated below, hereby file an

### Application for Recognition as an IYPT Member Organization (IMO)

in accordance with Article 7, Section 1 of the Statutes of the IYPT.

<b>Name of Organization:</b>	Istraživački Centar Mladih / Youth Research Center
<b>Legal Type of Organization:</b> (e.g. school, university, association (NGO), ...)	Non-governmental organization associated with the University of Zagreb
<b>Registration details:</b>	Personal identification number of the organization (OIB): 01168533815
<b>Full Address:</b> (including country)	Ulica grada Gualdo Tadino 20, HR-10000 Zagreb, Croatia
<b>Email Address:</b>	istrazivacki.centar.mladih@gmail.com
<b>Organisation website:</b>	<a href="http://www.icm.hr">http://www.icm.hr</a>
<b>Tournament website:</b>	<a href="http://www.icm.hr/iypt">http://www.icm.hr/iypt</a>

To comply with the regulation that applications for IMO status can only be made by someone who has participated in one of 5 most recent IYPTs (either as an observer, team or guest team member, team leader, or juror). This person commits to act as a team leader of the team participating at IYPT on behalf of this IMO. This person can be changed by the IMO at any time to another person fulfilling the qualification criteria.

<b>Name:</b>	Magdalena Živković
<b>Email Address:</b>	mzivkovi@dominis.phy.hr
<b>Last participated IYPT in year:</b>	2016.
<b>Last participated IYPT as:</b> (observer, team member, team leader, or juror)	Team member - captain, Team Croatia

We declare that we will respect and comply with the Statutes and the Regulations of IYPT. In particular, we agree to implement an IYPT qualification procedure, which shall be open to all students/teams from the country we represent. This qualification procedure shall be organized as a non-profit event. We annex a brief description of the selection procedure performed in our country.

In case our application is accepted, we nominate the following person to represent us in the International Organizing Committee (IOC), until further notice. Changes in our IOC representative will be announced (in due time) to the President of IYPT in writing.

<b>Name:</b>	Magdalena Živković
<b>Email Address:</b>	mzivkovi@dominis.phy.hr

We give explicit consent to publish the contact details of our organization and our designated IOC representative on the IYPT website.

Date and Place: Zagreb, 11. 2. 2019.

Name and Position (e.g. President, Secretary General, ...) of the person authorized to sign this application on behalf of the organization:

Domagoj Plušćec, President of Youth Research Centre

Signature of authorized person on behalf of organization:



Domagoj Plušćec



Signature of person who participated IYPT before and will act as the team leader:



Magdalena Živković

Signature of designated IOC representative:



Magdalena Živković

*Annex1: Brief description of the Youth Research Center*

*Annex 2: Brief description of the selection procedure*



## **Description of the selection of the national team of Croatia for the IYPT 2019**

The members of the Croatian team for the IYPT are selected on the National Young Physicists' Tournament (Croatian: Državni turnir mladih fizicara). The national tournament is carried out in collaboration of the Youth Research Center and the Croatian Physical Society ([www.hfd.hr](http://www.hfd.hr)).

All students attending a high school in Croatia may participate in the National Tournament. The National Tournament is an individual competition. This is because of the small scales of Croatian schools and general small population density of most of Croatia. The only tournament level is the nationwide level and there are no restrictions on a number of students from a certain school or area. There is no grouping of participants during their evaluation based on their geographic location, age or the type of school they are attending. This gives any participant equal conditions of evaluating their work.

For the school year 2018/2019, we received a total of 70 applications from 20 towns and 35 schools in Croatia. More detailed statistics are available upon request.

The selection of the national team consists of two stages.

In the first stage, every participant picks a problem, solves it and writes a short paper (approximately 10 pages long) describing their solution. Every paper is evaluated by at least three independent reviewers. Scoring is done using a detailed form covering all the aspects of a problem solution, with emphasis on theoretical explanation of the phenomenon, quality of the experiment and data analysis, and finally, validity of conclusions. Reviewers' comments on the papers are given to the participants in order to give them guidelines to improve their knowledge and research skills.

For the first stage, we received 30 solution papers to the IYPT problems.

The best ten papers are called to the second stage - the National Tournament. The National Tournament consists of a short written exam and Physical Fights. The exam questions general physics knowledge through conceptual questions. Physics Fights are similar to PFs on the IYPT regarding the stages and duration, but there is no Reviewer role and the schedule of reports and oppositions is announced in advance. Five independent jurors, experienced in IYPT as former participants or team leaders, evaluate the fights. Jury scoring is done the same way as on the IYPT.

Final scores of the National Tournament consist of following elements:

- submitted paper with the solution of the problem (30%)
- written exam on the National Tournament (20%)
- performance as the Reporter (30%)
- performance as the Opponent (20%).

The best five participants on the National Tournament are selected for the Croatian team for the IYPT.

After the team is selected, the Youth Research Center as a IYPT Member Organization leads the preparation of the team, in collaboration with the team members' local school mentors.



## **Description of the Youth Research Center**

The Youth Research Center (Croatian: Istrazivacki Centar Mladih, abbreviation: ICM) is a non-profit non-governmental organization registered as a student's association associated with the University of Zagreb, situated at the Faculty of Electrical Engineering and Computing ([www.fer.unizg.hr](http://www.fer.unizg.hr)).

Informally, the organization exists since 2005, when it was founded as a laboratory inside the Fifth Gymnasium in Zagreb. Its main purpose from 2005 to 2010 was to be the main laboratory for preparing the Croatian team for the IYPT and other experimental students' competitions in Croatia.

The Youth Research Center was registered as a legal entity (non-profit NGO) in 2010 and associated with the University of Zagreb in 2011. At the same time, the focus of the Youth Research Center moved toward taking part and organizing different events for popularization of science and technology, organizing thematic workshops and experimental projects for high school undergraduate and graduate students, while acting as an school-independent laboratory and workshop providing tutoring and equipment for students willing to participate in experimental competitions, including IYPT.

Starting with 2015, the Youth Research Center has been organizing the Croatian Young Naturalists' Tournament (<http://iynt.icm.hr>) in order to select a team for the IYNT. The Croatian team has participated in four IYNT's, receiving four medals.

In the current academic year (2018/2019), besides all the above mentioned work, members of the Youth Research Center collaborate with the Croatian Physical Society (Croatian: Hrvatsko fizikalno drustvo, abbreviation: HFD), revitalizing the Physicists' Tournament in Croatia after a two-year hiatus. The current selection and preparation system relies on experiences from former preparations of the IYPT team and methods proved successful for the IYNT selection and preparation.