

The International Physicists' Tournament 2023 in Paris

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You surely know about the soccer World Cup... what about the physics World Cup? The International Physicists' Tournament (IPT) is a competition born fifteen years ago from a will of exchanges and meetings between undergraduate bachelor or master physics students of different countries. Very quickly, many European countries joined the precursors (Ukraine and Russia) and then the tournament became globalized, by welcoming now five continents with teams from Australia, China, Bolivia, Canada, and so on.

Like the World Cup, the IPT has its qualifications, semi-finals, and finals. The physics matches or "Physics Fights" have their attackers, defenders, and referees. The Opponent team challenges the Reporter team on one of the seventeen open physics problems that were published at the beginning of the school year, and the Reporter presents the result of his or her work on the subject. The Opponent will constructively criticize the results presented, highlight the limits, point out the inconsistencies. Then a third (Reviewer) team joins the game, with the objective to moderate the scientific discussion between the two other teams, and to advance the understanding of the problem. It is the jury, composed of international researchers, who counts the "goals" and ranks the performances of the teams.

Why does a fluorescent tube light up under a high voltage line? What is the radius of curvature of a burnt match? Why does flash damage artwork? The Physics Fights are an opportunity to answer many physics questions that are usually taken from everyday life. In addition to the pleasure of the meeting and the stimulation brought by the resolution of original physics problems, the preparation and the participation constitute a complete scientific training for the students, by reproducing the various stages of the research: after a stage of bibliography, the teams analyse, model, and question experimentally the problems posed. Their work often goes through a meeting with researchers, before putting their results into shape to be presented in front of their peers. And of course, during the tournament the students must defend their results and react live in an international context.

In almost fifteen years, the IPT has become more and more structured with each annual edition. Twenty-four countries are now involved in the tournament, and most of them have developed national selections to determine the team that will represent the country at the international tournament. From an institutional point of view, the IPT has recently joined forces with the International Association of Physics Students (IAPS) and the next edition of the tournament will be the first under the IAPS umbrella.

The 2023 edition of the tournament, organized by the French Physical Society (SFP), will take place for the second time in France and it is the École Polytechnique, the famous engineering school and regular podium winner of the tournament, which will host the 18 teams of six students from all over the world. The tournament is also supported by the French Academy of Sciences. With about 160 participants expected, the week 23rd-29th April 2023 will be a great moment of scientific exchange, and a unique event for students from different backgrounds to meet and discover different ways of doing Science.



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