Our students impress at International Physics Tournament

Above: Olympic-style voting at the International Physics Tournament.

Right: Members of the Nottingham team: James Robinson, Sofia Palazzo-Corner, Joe Farrow and Arani Navaneethakrishnan.

The International Physics Tournament invites teams of up to six university students from different countries to compete in challenging, interactive 'physics fights'. Participants solve tricky scientific problems, present them to opposing teams, and dispute and discuss each other's solutions, all set against the backdrop of the Lake Geneva region of Switzerland.

Did you know that if you point a green laser into a cola bottle the beam inside changes colour depending on height; green near the surface of the cola and red at a greater depth? Do you think you could work out why?

In 2013, a team of four Nottingham physics students represented the UK in the International Physics Tournament based at the Ecole Polytechnique Fédérale de Lausanne (EPFL), which is a top-ranked research and teaching institution located in an idyllic spot overlooking Lake Geneva and facing the Alps.

In a competition involving 10 countries, the Nottingham team, comprising Sofia Palazzo-Corner, Joe Farrow, Arani Navaneethakrishnan and James Robinson, tackled a variety of tasks from a list of physics problems designed to be both challenging and fun. Examples included optimising the design of a dart gun, and finding out how tall you can build a sandcastle before it collapses on itself.

The 'physics fights' involved not only presenting the solution to the physics problem, but also opposing or reviewing the solution of another team. Doing this effectively demanded a high level of understanding as well as excellent communication skills, and time was spent before the tournament coaching these aspects.

The Nottingham team were delighted to win three out of four of their fights but didn't quite make the top four. The organisers commented that the first two days of the competition proved the level of all teams was very high, but style differences could be noticed, with each team showing a particular character. The Polish team, for example, impressed with its very structured approach while the British team seduced with a relaxed attitude.

The visit was organised by physics PhD student David Farmer who said: "This tournament was an amazing opportunity and it was great to watch our students get stuck in. I think they all got a lot out of representing their country, not just a free trip to Switzerland!"

The 'relaxed and confident attitude' of the Nottingham students was exemplified by Sofia who said, "There was lots of physics and fun. That's all people need! My brain also feels bigger". On a more serious note, Arani said, "I've developed my skills in analysing problems, especially in terms of learning how to approach a new problem. My presentation skills have improved, and I think I'm more confident in my abilities".