

Mathematics with Physics

Personal Statement

I have always been fascinated to learn about the world surrounding us and see behind the curtains of natural phenomena. That is the reason why mathematics and physics grabbed my attention at a very young age: these two subjects are the most essential if we want to describe the laws our universe in great detail. Calculating planetary orbits is a prime example of utilization of mathematics and physics to solve real-life problems. This interest of mine motivated me to attend a class specialised in math with an increased amount of physics lessons to fuel my passions.

I am especially fond of competitions and I have participated in a vast amount of them throughout my studies. I am tremendously proud of my silver medals at the International Physics Olympiad (IPhO) in 2017 and at the first European Physics Olympiad (EuPhO) in 2017 in Estonia. Moreover, last year I took eleventh place in Mathematics and tenth place in Physics at the Hungarian National High School Olympiads (OKTV). Furthermore, I was awarded third and second prize at the national Arany Dániel mathematics competition in 2015 and in 2016 as well as I finished in the top 15 in the national Irinyi János chemistry competition in 2015 and in 2016.

I am really keen on team competitions as well, for example in 2017 I took part in the European Union Science Olympiad (EUSO) in Denmark where our team came absolute winner. Another success was the Distinction Prize at the Singapore International Mathematics Challenge (SIMC) in 2016 given to our team by an international jury including Professor Imre Bennett Leader from Trinity College. Team spirit and interdisciplinary knowledge have played a crucial role in achieving these results.

I have been doing programming since the age of twelve and it has become a staple part of my life. I have covered some more advanced concepts and algorithms such as Dijkstra's algorithm or dynamic programming. Thanks to years of devoted work, I have come seventh twice in the National Olympiad (OKTV) in informatics and have been invited to the national team selection test for the International Olympiad in Informatics twice.

I have also taken part in numerous extra-scholar activities in connection with sciences. By regularly solving problems from KöMaL (a monthly mathematical and physical journal for high school students), I have learnt how to express my thoughts clearly and precisely. Attending preparatory classes for IMO, IPhO and IOI has widened my knowledge significantly and has given me the opportunity to meet and make friends with the most talented students of Hungary.

Besides competitions, I also enjoy carrying out long-term projects and voluntary work. Last year with one of my friends, I developed a mobile application in a Tech Camp organized by the Joy of Thinking Foundation under the leadership of Miklós András Danka, a former Cambridge student. As voluntary work, I held mathematics lectures for 12-year-old students for half a year once a week in collaboration with some of my classmates.

Despite having spent a vast amount of time on science, I perceive myself as a many-sided person possessing various hobbies. I am a passionate violin player; I have been playing that instrument for more than ten years. I have also been tenor in our school choir for two years. I am deeply attracted to the French language that I find particularly beautiful and an enthralling challenge to master. I even finished in the top 15 in the Hungarian National French Olympiad (OKTV) in 2017.

Having attended a great number of international competitions, I realised that I love being surrounded by scientists from all around the world. This is the kind of environment I can really flourish in and gain inspiration from, and the atmosphere of your university along with your outstanding facilities would be a perfect place to enhance my skills further.