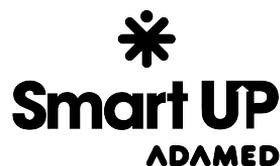


INTERNATIONAL MATHEMATICAL CAMP

**M**aths  
**B**eyond  
**L**imits

Participating countries

Milówka 2017



**Maths Beyond Limits (MBL)** is an international mathematical camp for talented youth. MBL 2017 was the second edition of this initiative and was held from 6th to 17th September 2017 in Milówka, Poland. 60 students from Czech Republic, Hungary, Poland and Slovakia, along with 11 tutors and 8 organisers, took part in it.

Along with numerous people that devoted their free time to come to the camp and help in situ stand the organisations that assisted the Organising Committee in financial and administrative way. Making MBL 2017 would not be possible if it were not for the generous sponsors and wonderful project partners, which we had great pleasure of cooperating with. The present handout is a result of the cooperation of the Polish Children’s Fund (Poland), Charles University (Czech Republic), The Joy of Thinking Foundation (Hungary) and Trojsten (Slovakia).

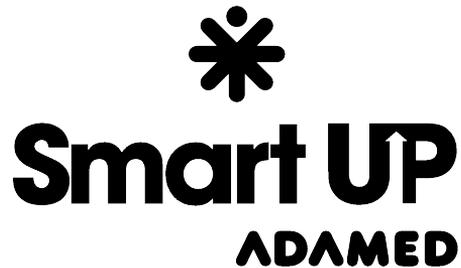
The purpose of the **International Visegrad Fund** is to facilitate and promote the development of closer cooperation among citizens and institutions of the Visegrad Group countries (Czech Republic, Hungary, Poland and Slovakia). Grant support is given to original projects namely in the areas of culture, science and research, youth exchanges, cross-border cooperation and tourism promotion and other. The International Visegrad Fund approved for funding Maths Beyond Limits 2017 as one of such projects.

## Sponsors



• Visegrad Fund

The International Visegrad Fund  
[visegradfund.org](http://visegradfund.org)



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## Project partners



Polish Children’s  
 Fund  
[fundusz.org](http://fundusz.org)



Charles University  
[mff.cuni.cz](http://mff.cuni.cz)



The Joy of Thinking  
 Foundation  
[agondolkodasorome.hu](http://agondolkodasorome.hu)



**Trojsten**

Trojsten  
[trojsten.sk](http://trojsten.sk)

# Czech Republic

- Capital city - Prague
- Population - 10,610,947
- Area - 78,866 km<sup>2</sup>
- Currency - Czech koruna (CZK)



## Charles University

Faculty of Mathematics and Physics of Charles University in Prague (Univerzita Karlova v Praze, Matematickofyzikální fakulta) was also Partner Organisation of Maths Beyond Limits 2016. It organises manifold conferences, summer schools, camps and competitions for Czech youth such as: an international mathematical competition Náboj, a physics team competition FYKOSí Fyziklání and the Czech Linguistics Olympiad. If you want to know more about these initiatives or study mathematics or computer science in Prague, please visit their website [www.mff.cuni.cz](http://www.mff.cuni.cz).

## Fun facts about Czech Republic

- The Czech language has one completely specific consonant, which is denoted by the letter ř. Another characteristic feature is the syllabic sounds of *r* and *l*. Thanks to these, Czechs can pronounce words like *vrh* (“throw”), *vlk* (“wolf”), *strhl* (“ripped”/“torn down”), *svršky* (“goods/chattels”), etc. without any problem.
- Sauces form a vital part of Czech meals, especially in combination with meat and dumplings. The dumplings used to form the basic component of Czech fare, as they were served with a variety of tasty sauces to satisfy the hunger of hard-working peasants, who only enjoyed meat during holidays.
- At 11 AM sharp on November 11th, almost every winery and restaurant in the Czech Republic opens the first wines that are produced that year. These are the young wines. This celebration is very similar to the one in France called the French Beaujolais Nouveau. However, the Czech ritual has been in existence much longer than the one in France.
- Guests are offered house slippers called pantofle.
- According to the 2001 census, 59% of the Czechs are Agnostic, Atheist, or non-believer, 26.8% Roman Catholic and 2.5% Protestant. Only 19% said that they believed in God, meaning that about 11% of the self-declared Christians were only Christian in name (or by tradition).
- The Czech Republic has the most hospital beds per inhabitant in the EU.
- Czech people are the world’s heaviest consumers of beer.
- There are over 2,000 castles, keeps, and castle ruins in the Czech Republic, one of the highest density in the world (notably after Belgium and France).

# Hungary

- Capital city - Budapest
- Population - 9,797,561
- Area - 93,030 km<sup>2</sup>
- Currency - Forint (HUF)



## The Joy of Thinking Foundation

The Joy of Thinking Foundation (A Gondolkodás Öröme Alapítvány) supports gifted Hungarian students in fully developing their talents, reaching their goals in life, and becoming useful members of society. It attains this goal via furthering students' abilities at math camps, math circles, one-to-one sessions and small group activities. Among the biggest initiatives of the Foundation are: the weekend math camps (started by Lajos Pósa in 1988) and Math is Fun! Camps (abbreviated MaMuT in Hungarian) which started in 2004. You can find more on their website [gondolkodasorome.hu](http://gondolkodasorome.hu).

## Fun facts about Hungary

- Hungarians refer to themselves and their language as Magyar, which is the direct descendant of the language spoken by the Huns. There are only two languages related to it in Europe: Finnish (Suomi) and Estonian (Eesti keel).
- In Hungary, when people write their names or introduce themselves publicly, they typically use their last name first.
- Hungary is one of the oldest countries in Europe. It was founded in A.D. 896, before France, Germany, or England.
- Average Hungarian consumes more than 1.10 lbs. (500 g) of paprika a year. The spice has more vitamin C than citrus fruits. Hungarians also call red peppers paprika, and there are more than 40 varieties grown in Hungary.
- Irish author Bram Stoker based his Dracula on an actual 15th century figure, Vlad the Impaler. He actually terrorized Wallachia, which was part of Hungary at the time, until King Matthias put him in jail. Dracula means Son of the Devil, or little Devil. Dracula was first made famous in film by Hungarian actor Bela Lugosi.
- Budapest, the capital of Hungary, has existed as a settlement from the Bronze and Iron Age, but it didn't become Budapest until 1873 when three separate cities, Pest, Buda, and Óbuda (Old Buda) were combined to make one city.
- Lake Balaton is the second largest lake in Europe and the largest in central Europe. It is known as the "Hungarian Sea." It is 48 miles (77 km) long, 2 to 9 miles (3 to 14 km) wide, and covers an area of 232 square miles (601 sq km).
- Hungary does have a kind of cowboy, called czikós (horseherd). The cowboy tradition goes back to the Magyars, who may have come to Hungary from central Asia. The czikos can still be seen on Hungary's vast Puszta (Great Plain).

# Poland

- Capital city - Warsaw
- Population - 38,634,007
- Area - 312,679 km<sup>2</sup>
- Currency - Polish złoty (PLN)



## Polish Children's Fund

Polish Children's Fund's mission is to support exceptionally gifted children and teenagers from all of Poland in order to enable them to fully develop their talents and scientific as well as artistic passions. The innovative, original aid programme conducted by the Fund for the last 33 years aims to support young people who cannot find opportunities to fully develop their potential in their local environment (both home and school). In helping them, they strive not only to create suitable conditions for broadening knowledge and enriching abilities, but also to strengthen their motivation and to build in the conviction that their own development can and should serve the society at large. Visit their website [fundusz.org](http://fundusz.org).

## Fun facts about Poland

- Located in Wrocław, the "Piwnica Świdnicka" is the oldest restaurant in Europe, open since 1275.
- It is estimated that 100 million pączki, a Polish doughnut, are consumed every year on the the Thursday before Ash Wednesday alone.
- Polish-born Mariusz Pudzianowski is a five-time winner of the "World's Strongest Man" title.
- Polish people marry the youngest within the European Union (24 years old for women and 26.5 years old for men in average).
- Nicolaus Copernicus, the famous 16th century astronomer who first suggested the sun was the center of our universe was born in Thorn, Royal Prussia, part of the Kingdom of Poland.
- The name "Polan" originates from the name of the tribe "Polanie" which means "people living in open fields".
- Nearly 35% of the 60 million Poles live abroad and large Polish speaking communities can be found in the US, Canada, UK, Germany, Australia, Brazil and Argentina.
- One of the world's oldest salt mines, the Wieliczka Salt Mine, located in the southern Polish town of Wieliczka, was built in the 13th century and produced table salt until 2007. Approximately 1.2 million visitors walk through the salt mine annually.
- The highest mountain in Australia, Mount Kosciuszko, was named after Polish General Tadeusz Kościuszko, who fought against the Russian Empire as well as in the American Revolutionary War.

# Slovakia

- Capital city - Bratislava
- Population - 5,435,343
- Area - 49,035 km<sup>2</sup>
- Currency - Euro (EUR)



## Trojsten

Trojsten is a civic association that organizes mathematics, physics and informatics events in Slovakia for elementary and secondary school students. It has supported scientifically gifted youth since 1985, which makes it one of the most experienced organisations of Slovakia in this field. One of its initiatives called KMS (Correspondent Mathematical Seminar) has been highly popular among Czech and Slovak students. Moreover, it organises a well established international mathematical competition Náboj in Slovakia, the International Programming Competition ICPS and co-organises the International Mathematical Seminar iKS. For more information visit [www.trojsten.sk](http://www.trojsten.sk).

## Fun facts about Slovakia

- More than six thousand caves have been discovered in Slovakia so far! Ochtinska Aragonite Cave is the only one aragonite cave located in Europe and a huge 34 m high sinter column in Krasnohorska cave is even listed in the Guinness Book of Records.
- Near the village Kremnické Bane in Slovakia is located the geographical midpoint of Europe. Famous recreational site in the ski resort Krahule near the village Kremnické Bane is named “The Centre of Europe” However, another 7 European villages also claim to host this hypothetical midpoint.
- The capital of Slovakia, Bratislava, the only one capital in the world that borders two independent countries (Austria and Hungary).
- Old medieval town of Levoča is a home of the highest wooden altar in the world. This remarkable work is 18,6 m high and 6 m wide altar and was made without the use of a single nail!
- Since November 2014 all children, full-time students less than 26 years old, widowed or disabled pensioners under 62 and seniors 62 and older are eligible to travel by train for free using the national railways. It is available only for citizens or permanent residents of countries that are member states of the European Union.
- A welcome supplement to an active holiday is to relax in numerous Slovak thermal pools. In the Bešeňová or Aquapark Tatralandia thermal resorts, you can relax and have a good time year round, and sample the healing power of hot springs.
- Almost 50 amazingly well-preserved wooden churches stand all over Slovakia. They are part of the cultural heritage of UNESCO, all-wood and without a single nail. The oldest of them is the 600-year-old church of St. Francis of Assisi in Hervatov.

# Sources

- [www.afocr.org/czech-cultur](http://www.afocr.org/czech-cultur)
- [www.factretriever.com/hungary-facts](http://www.factretriever.com/hungary-facts)
- [slovakie.eu/en/intro/slovakia/culture](http://slovakie.eu/en/intro/slovakia/culture)
- [slovakia.travel/en/things-to-see-and-do/culture-and-sights](http://slovakia.travel/en/things-to-see-and-do/culture-and-sights)
- [wikitravel.org](http://wikitravel.org)
- [blog.timeforslovakia.com/10-interesting-facts-about-slovakia-3](http://blog.timeforslovakia.com/10-interesting-facts-about-slovakia-3)
- [www.factretriever.com/poland-facts](http://www.factretriever.com/poland-facts)
- [www.eupedia.com/poland/trivia.shtml](http://www.eupedia.com/poland/trivia.shtml)
- [en.wikipedia.org/wiki/Czech\\_Republic](http://en.wikipedia.org/wiki/Czech_Republic)
- [en.wikipedia.org/wiki/Hungary](http://en.wikipedia.org/wiki/Hungary)
- [en.wikipedia.org/wiki/Poland](http://en.wikipedia.org/wiki/Poland)
- [en.wikipedia.org/wiki/Slovakia](http://en.wikipedia.org/wiki/Slovakia)
- [www.eupedia.com/czech\\_republic/trivia](http://www.eupedia.com/czech_republic/trivia)
- [www.slovakia.com/facts/interesting](http://www.slovakia.com/facts/interesting)