



EUCYS

BACKGROUND INFORMATION

Date: 19/09/2016

*Research and
Innovation*

28 years of the European Union Contest for Young Scientists

What is the European Union Contest for Young Scientists (EUCYS)?

The Contest was initiated in 1989 when the then European Commission President Jacques Delors took up a challenge from Royal Philips Electronics of the Netherlands to organise a Europe-wide student science fair. Philips had organised a similar event since 1968. The European Union Contest for Young Scientists (EUCYS) was launched with the aim of encouraging young people to get involved in science and eventually embark on a career in research. The contest is part of the Science with and for Society activities managed by the Directorate-General for Research and Innovation of the European Commission.

Who can take part?

The contest is open to all EU Member States, countries associated to the EU research framework programme and invited guest countries that should have a Science and Technology agreement with the EU. To be able to participate, the country has to have a national contest and a national organiser confirmed by their Ministry of Science/Education.

The participants in the EU Contest for Young Scientists are already winners! To enter the contest, participants must have previously won a competition for young scientists at national level. This high standard sets the EU Contest for Young Scientists apart from other similar competitions. Entries from both individuals and small teams of up to three people are allowed, and the students must be aged between 14 and 20. The projects cover a wide range of scientific disciplines.

The event is held in a different city every year. At the venue, each participating team is allocated a stand in an exhibition area to display its findings to the jury and other visitors. The jury is made up of leading scientists from both academia and industry. Before the event, the jury carries out a preliminary assessment of all projects submitted. At the event, each team is interviewed by at least five jury members. During these intense interviews, the jury is looking for the following:

- originality and creativity;
- skill and thoroughness in the way the project has been carried out;
- reasoning and clarity in the interpretation of the results;
- top class presentation of the project, both in the written work and during the interviews.

The jury members also take into account how much support a team had from teachers and other mentors

The Jury

The jury of the 2016 contest in Brussels is composed of 20 members

President of the Jury: Dr. Lina Tomasella – Physics - ITALY

<u>Nationality</u>	<u>Title</u>	<u>First name</u>	<u>Name</u>	<u>Field</u>
ITALY Jury President	<i>Dr.</i>	Lina	Tomasella	Physicist
AUSTRIA	<i>Dr</i>	Johannes	Pollack	Social science
BELGIUM	<i>Dr.</i>	Estelle	Mossou	Physicist
BULGARIA	<i>Dr.</i>	Mariya	Lyubenova	Physicist
CZECH REPUBLIC	<i>Prof.</i>	Milan	Macek	Medicine
DENMARK	<i>Dr.</i>	Morten	Lenholm	Physics/engineer/math
ESTONIA	<i>Dr.</i>	Margus	Nitsoo	Maths/computing
FRANCE	<i>Prof.</i>	Evelyne	Cottreau	Engineer
FRANCE	<i>Dr.</i>	Yann	Ollivier	Maths/computing
HUNGARY	<i>Dr.</i>	Attila	Borics	Chemist
IRELAND	<i>Mrs</i>	Mella	Frewen	Biology
IRELAND	<i>Prof.</i>	Tony	Fagan	Engineer

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LITHUANIA	<i>Dr.</i>	Sergej	Makovejev	Engineer
MALTA	<i>Prof.</i>	Maria	Cordina	Pharmacy/medicine
NL	<i>Dr.</i>	Hans	Langeveld	Bio/chemist
POLAND	<i>Dr.</i>	Zuzanna	Szymańska	Maths/computing
PORTUGAL	<i>Dr.</i>	Luisa	Pereira	Biology
SERBIA	<i>Prof.</i>	Lidija	Matija	Materials
SLOVENIA	<i>Dr.</i>	Milena	Horvat	Environment
UK	<i>Prof.</i>	Derek	Bell	Biology/General

The Prizes

	Prizes 2016		Nb Projects/Persons
Core Prizes	The First Prize	7 000,00 EUR	3 projects
	The Second Prize	5 000,00 EUR	3 projects
	The Third Prize	3 500,00 EUR	3 projects
Honorary Prizes Associated with the First Prizes	London International Youth Science Forum	26th July to 9th August 2017	2 contestants
	Stockholm International Youth Science Seminar	3 - 11 December 2016	3 contestants
Special Donated Prizes	ESA (European Space Agency)	The opportunity to take part in one of the following major space science conferences in 2017: The European Geophysical Union General Assembly or The European Week of Astronomy & Space Science of the European Astronomical Society or one week's visit to ESA's technical centre, ESTEC, in the Netherlands to meet and interact with ESA scientific and technical staff.	1
	CERN The European Laboratory for Particle Physics	A one week stay in Geneva, Switzerland	1 project (maximum 3 people)
	EUROFusion	A one week stay at the JET facility in Culham, United Kingdom	1 project (maximum 3 people)

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	ESRF The European Synchrotron Radiation Facility*	A one week stay in Grenoble, France	1 or 2
	EMBL The European Molecular Biology Laboratory	A one week stay in Heidelberg, Germany	1
	ESO European Southern Observatory	A visit to the ESO site (Paranal, home of the Very Large Telescope) in Chile	1
	ILL The Institute Laue-Langevin*	A one week stay in Grenoble, France	1 or 2 (max 3 for ILL and ESRF together)
	European X-Ray Free-Electron Laser Facility GmbH	A one week stay in Hamburg, Germany	1
	Joint Research Centre (JRC) - the European Commission's internal science service	A two-day stay at the JRC's Institute in Ispra, Italy.	3 projects with up to three people each
	Intel ISEF 2016 PRIZE	An opportunity to take part in INTEL ISEF 2017, Los Angeles CA, May 2017	3 projects up to 3 students in each
	BBI JU Biobased industries bioeconomy prize	A stay in Brussels, including travel and accommodation. Activities will include visits to biobased plants in Belgium and Northern France.	1 project up to 3 persons
	FoodDrinkEurope bioeconomy prize	Apple MacBook Air for the best project in the field of agri food	1 project up to 3 persons
	Dupont prize	A stay in Denmark, including travel and accommodation. Activities will include visits to Dupont's plants in Denmark and a sightseeing tour.	1 project up to 3 persons
	Fererro prize	A stay in Italy, including travel and accommodation. Activities will include visits	1 project up to 3 persons

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		to Ferrero's research facilities in Alba.	
	Nestle prize	A stay in the UK, including travel and accommodation. Activities will include visits to Nestle's facilities in the historical city of York.	1 project up to 3 persons
EuCheMS special donated prize	EuCheMS special donated prize	1 000,00 EUR for the best chemistry entry	1 project
Wolfram	Wolfram Research	A free one-year Mathematica Student Edition license + free one-year subscription to WolframAlpha Pro	All students who submit projects in the field of mathematics
Host Special Donated Prizes	PRACE	Visit to the Czech republic to visit PRACE facilities	1 project up to 3 persons
	Salveti Foundation	2 000,00 EUR	1 project up to 3 persons

EUCYS in numbers

28 years of EUCYS

24 cities have hosted the contest

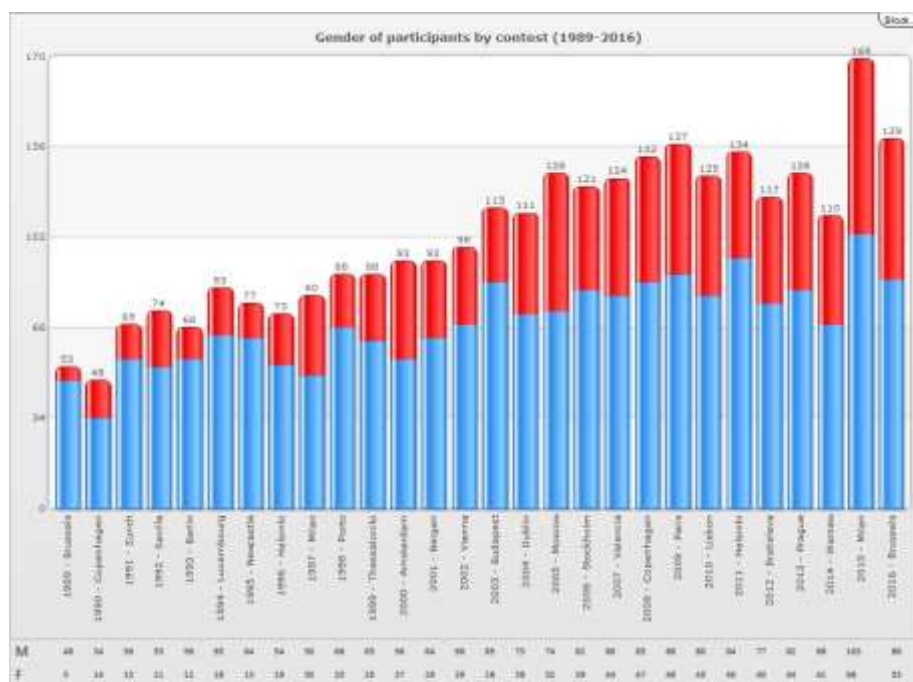
2869 contestants participated since 1989

719 prizes since 1989 + 36 prizes for this year

The number of participants has increased every year since 1989 from 59 to 138 this year.

Participation

Participants per year from 1989 to 2016



A total of 45 different countries have taken part in EUCYS since 1989. Currently, 43 countries have national organisers:

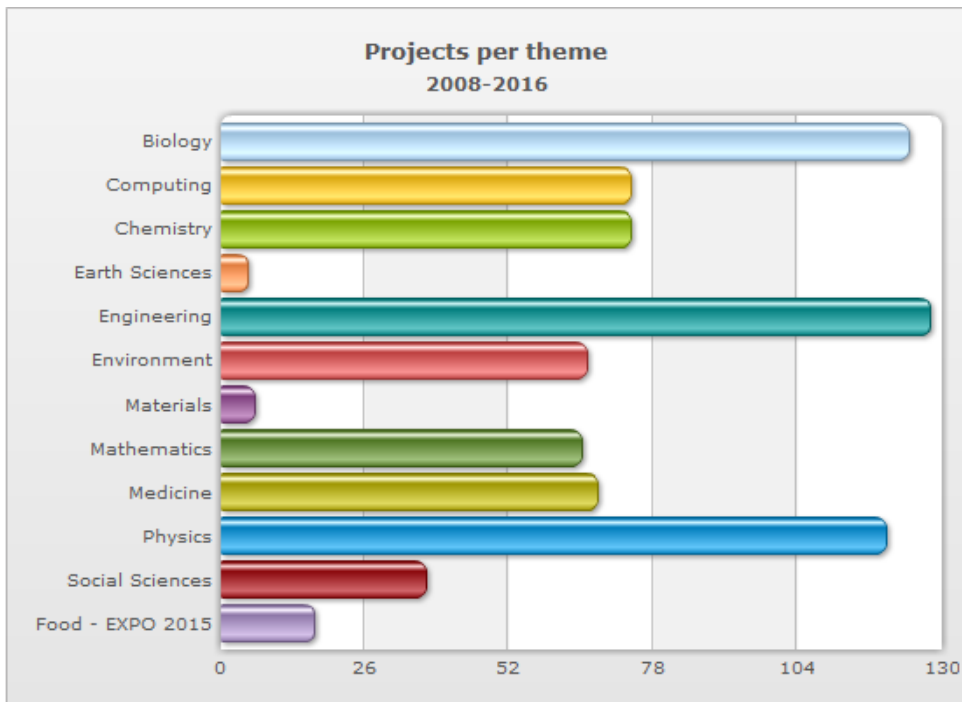
- EU Member States (factsheet per country)

[Austria](#) - [Belgium](#) - [Bulgaria](#) - [Czech Republic](#) - [Cyprus](#) - [Denmark](#) - [Estonia](#) - [Finland](#) - [France](#) - [Germany](#) - [Greece](#) - [Hungary](#) - [Ireland](#) - [Italy](#) - [Latvia](#) - [Lithuania](#) - [Luxembourg](#) - [Malta](#) - [Poland](#) - [Portugal](#) - [Slovakia](#) - [Slovenia](#) - [Spain](#) - [Sweden](#) - [United Kingdom](#)

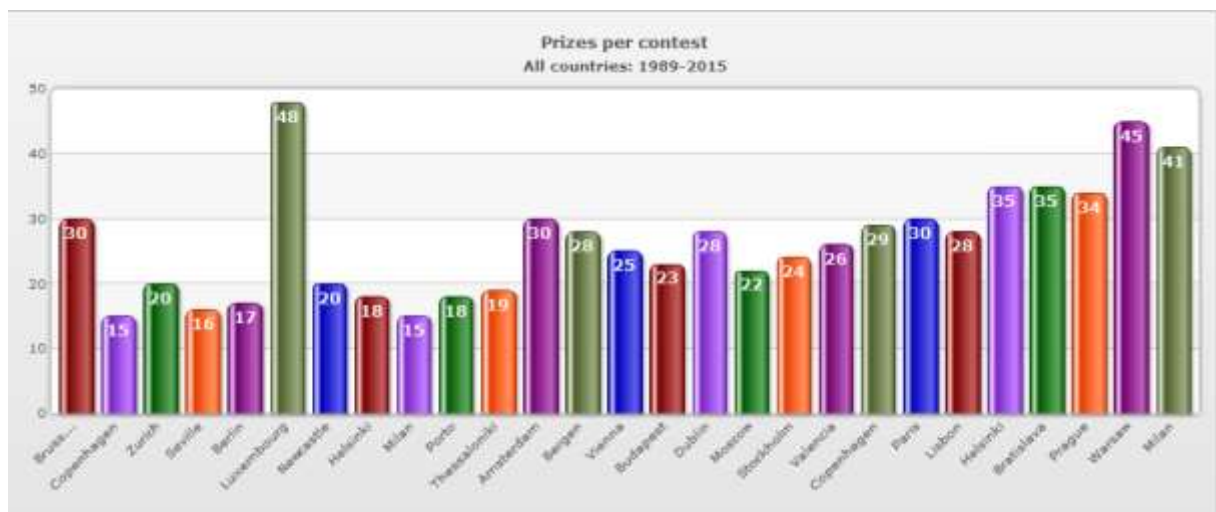
- Other countries (factsheet per country) and association

[Belarus](#) - [Canada](#) - [China](#) - [Egypt](#) - [Georgia](#) - [Iceland](#) - [Israel](#) - [Japan](#) - [New Zealand](#) - [Norway](#) - [Russia](#) - [Serbia](#) - [South Korea](#) - [Switzerland](#) - [Turkey](#) - [Ukraine](#) - [United States of America](#) - [European Schools](#)

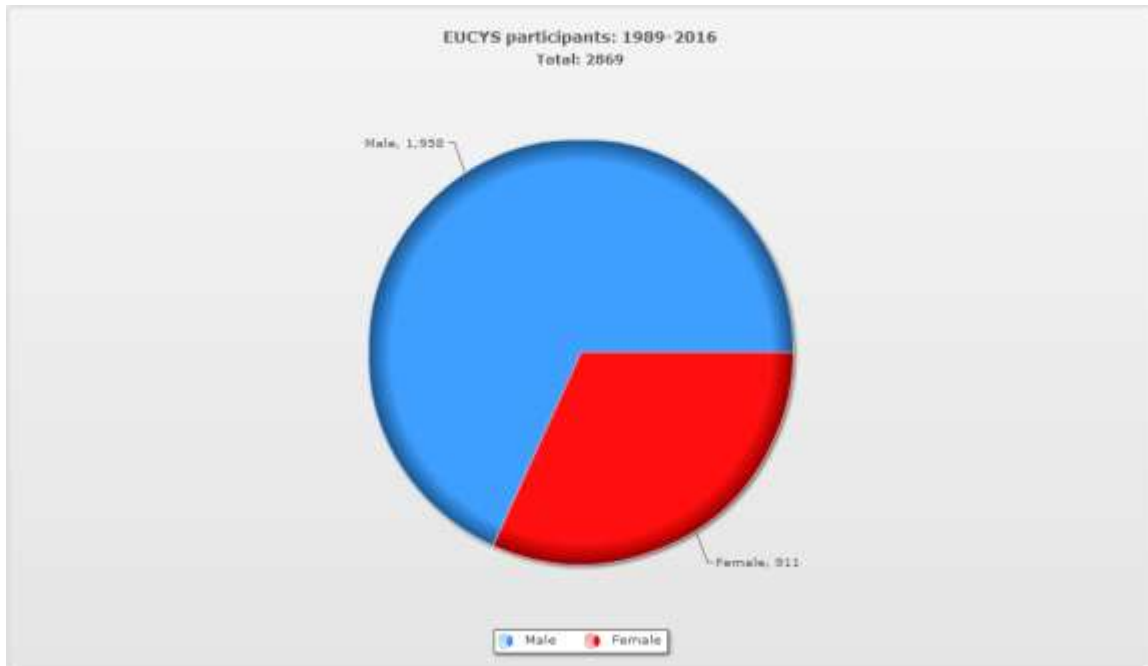
EUCYS and Science



Since 2008, 785 projects have competed and the scientific fields that have the most projects are Engineering (128), Biology (125), and Physics (120). The winning projects also come mainly from these three fields (2008 – 2016).



EUCYS and Gender



Of the 2869 EUCYS participants since 1989, 911 were female. In 2016, 53 young women and 85 young men were present. 272 female participants, some in the same teams, have won prizes over the 28 years. Since 1989, 755 prizes were given out. The participation of young women was low at the start, but since 1997 has generally exceeded 30% with a peak of around 41% in 2005. This year we reached 31.75%.

Where are they now?

Some past contestants, not only the winners, have gone on to set up cutting-edge companies or work at world-class research facilities or universities. All see EUCYS as having been a great opportunity and a real springboard for their career in science.

Here are a few **examples**:

Lina Tomasella is once again this year **President of the Eucys Jury**. She is from Italy and won First Prize in **1989** at the first EUCYS contest in Brussels. She did not know that her project 'Toxicity of colour dyes used as tracers' would lead her to become a researcher at the National Institute for Astrophysics in Padua.

Winner of the 2014 Fields Medal, the world's foremost maths prize, for his work on random systems, **Martin Hairer** from Austria won in **1991** a COMETT Award. His prize was for an electronics project. He is now a Professor based at the University of Warwick, in the UK and works in the field of random systems called stochastic

analysis. He has developed a theory to accurately characterise random systems that change as time passes, for example the breakdown of a magnetic field as a magnet is heated up. He has won a Consolidator Grant from the European Research Council to refine his theory and work out how it can be applied to different physical systems.

In **2008**, **Eriks Zaharans** from Latvia won Third Prize in Copenhagen (DK). He presented his project "Monitoring of cardiovascular system" with his twin brother Janis and described the contest has inspiring. "It was like a push". He is finishing his second master in biomedical engineering. Eriks work as an electrical engineer/programmer in a startup in Sweden which is building a smart watch. The two brothers have their own company. "It is a consultant company - our customers come to us with an idea of some kind of appliance and we help them to build the device and do all the programming."

Kristina Aare, 25-year-old Estonian, won in **2009**, the European Molecular Biology Laboratory Special Prize in Paris (FR) with her project "Factors influencing the phenol tolerance of soil bacteria *Pseudomonas putida*". She is now a researcher at University College London.

Charalampos Ioannou is Greek; he won a prize in **2012** in Bratislava (SK) with his Engineering project. He is currently studying Electrical and Software Engineering at the National Technical University of Athens (NTUA). In 2013, he was one of the 5 global finalists of Google's global science competition, "Google Science Fair" with his invention of a movement-enhancing exoskeleton glove. Currently, he is a founding member of "Bioassist", a company that applies state of the art software and machine learning algorithms in order to monitor vital health signal of independent living for elderly people.

More examples can be found on the contest website and media platform.