

## THE PRIZES

The participants compete for a number of core prizes on the basis of a written description of their work, their exhibited material and the interviews with the Contest Jury. In addition to this, a limited number of special donated prizes are awarded by the Jury to offer some winners the opportunity to benefit from the specific experiences linked to these prizes. It is up to the Jury to decide whether a prize-winner can receive both a core prize and a special donated prize.

### CORE PRIZES

The Core Prizes are the principal prizes awarded at the contest. These are cash prizes. In the case of a team winning such a prize, the amount is shared equally between the members of the team.

There are three categories of Core Prizes:

- three First Prizes worth € 7.000 each;
- three Second Prizes worth € 5.000 each;
- three Third Prizes worth € 3.500 each.

### HONORARY PRIZES ASSOCIATED WITH THE FIRST PRIZES

There are two Honorary Prizes associated with the first prizes.



#### LONDON INTERNATIONAL YOUTH SCIENCE FORUM (LIYSF)

Up to three contestants receive an all-expenses paid trip to London to attend the London International Youth Science Forum (LIYSF). The prize covers the travel costs from the country of origin, accommodation, meals, registration and participation in all activities. LIYSF brings together 300 science students from around 60 countries worldwide. The programme, which includes

visits to industrial sites and world class research laboratories and facilities, lectures, demonstrations and seminars from leading scientists, highlights the links between individual fields of study and introduces all participants to the latest thinking across a broad range of science.

Participants are able to interact with the eminent speakers, to debate on current issues and to explore the way in which their chosen subject relates to other studies and has an impact on the world at large.

Each year LIYSF becomes a multicultural community, and, with its busy social activities programme, provides a unique opportunity to meet and develop friendships and contacts across the world. The participants attending LIYSF are usually between the age of 17 and 21 years old.

**For further information, please contact:**

#### **LONDON INTERNATIONAL YOUTH SCIENCE FORUM**

Royal Parade Mews, Chislehurst

Kent, BR7 6TN, United Kingdom

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Email: [enquiries@liysf.org.uk](mailto:enquiries@liysf.org.uk)

Web: [www.liysf.org.uk](http://www.liysf.org.uk)

Conference Director: Richard Myhill

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#### STOCKHOLM INTERNATIONAL YOUTH SCIENCE SEMINAR (SIYSS)

The Stockholm International Youth Science Seminar (SIYSS) is an annual weeklong event for international young scientists, arranged in connection with the Nobel festivities by the SIYSS Committee of the Swedish Federation of Young Scientist in collaboration with the Nobel Foundation.

The history of SIYSS dates back to 1976 when the first seminar was organized by the Swedish Federation of Young Scientists together with the Nobel Foundation, with inspiration from Society for Science & the Public

in USA. Turning into a great success, the SIYSS program has continued to combine Swedish science with the Nobel Prize Awarding Ceremonies with an intense social program.

The programme aims to promote international understanding and friendship, bringing together young people from all over the world with similar interests. The participants are selected in different ways; some are winners of national science fairs, others represent organizations for young scientists or are selected by merit at their home universities. Whatever their background, they all have two things in common: a great interest in natural sciences and a curiosity for other cultures and people.

The programme of the week comprises scientific activities and lectures as well as unique occasions to meet the Nobel Laureates. Furthermore, the students are introduced to Swedish science and research as well as Swedish culture and customs. However, the main event of the week is a big seminar where the participants present their research to each other and to Swedish students.

The week culminates with the Nobel festivities where the SIYSS participants attend both the Nobel Reception at Nordiska Museet and the Nobel Prize Award Ceremony at the Stockholm Concert Hall, followed by the Nobel Banquet at the Stockholm City Hall as well as the Nobel Night Cap, the final festivity after the banquet.

With its connection to the Nobel Prizes, SIYSS is widely considered the most prestigious youth science event in the world. Former participants often witness how the programme has inspired them to continue doing research and that the week in Stockholm was a truly unique experience.

**For further information, please contact:**

#### **THE SIYSS ORGANIZING COMMITTEE**

Förbundet Unga Forskare

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Tel: +46 (0) 700 176 309

Email: [siyss.international@ungaforskare.org](mailto:siyss.international@ungaforskare.org)

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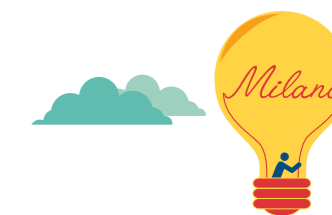
International coordinator: Anna Asratian

### SPECIAL DONATED PRIZES

The Special Donated Prizes are offered to contestants who, according to the EUCYS Jury, would benefit from the specific experience that these prizes offer. They are mostly study visits to leading scientific organisations:

#### EIROFORUM MEMBERS EACH KINDLY AWARD INDIVIDUAL PRIZES AS FOLLOWS:

- **European Organization for Nuclear Research (CERN)** – offers a project prize (for up to 3 people) of a week's visit to their Geneva site
- **EUROfusion (JET)** – home of plasma physics and fusion research, offers one contestant a one week stay at their Culham, Oxfordshire, UK site
- **The European Molecular Biology Laboratory (EMBL)** – offers one winner a one week placement at their centre for molecular biology in Heidelberg
- **European Space Agency (ESA)** – offers a single prize winner the opportunity to take part at a Space conference or a visit to ESA's technical facility in the Netherlands
- **European Southern Observatory (ESO)** – offers the winner of a single-student project, a visit to their facilities in Chile including trips to the Paranal Observatory and ESO's Scientific Centre in Santiago
- **European Synchrotron Radiation Facility (ESRF)** – operator of Europe's most powerful synchrotron radiation source, offers the leader of a winning project a one week visit to their site in Grenoble
- **The Institut Laue-Langevin (ILL)** – operator of the world's most intense neutron source, offers the leader of a winning project a one week visit to their Grenoble site
- **European X-Ray Free-Electron Laser Facility GmbH (XFEL.EU)** – offers one winner a one week placement at European XFEL in Hamburg.





**THE JOINT RESEARCH CENTRE** kindly offers a two day stay at its Ispra site in Italy for 3 projects (up to nine students).

**INTEL ISEF** kindly awards prizes for three projects (up to nine students) offering the winners the opportunity to take part at INTEL ISEF 2016 in Phoenix, AZ, USA.

**EUCHEMS** The European Association for Chemical and Molecular Sciences is pleased to offer a prize of €1000 to the best Chemistry project.

**WOLFRAM** are pleased to offer all contestants submitting projects in Mathematics a free one year licence to Mathematica and WolframAlphaPro.



**EXPO MILAN 2015** - EUCYS 2015 coincides with the Universal Exhibition EXPO which runs from 1 May to 31 October in Milan on the theme "Feeding the Planet. Energy for Life". 147 countries and international organisations have already confirmed their participation and the EXPO organisers are expecting over 20 million visitors.

The theme of EXPO addresses one of the most pressing global challenges of our time and at the same time cuts across several EU policies from agriculture to development, from food safety to environmental protection, from industry to research and innovation. The Steering Committee for the EU scientific programme for EXPO 2015 will kindly award EUCYS 2015 three prizes for projects reflecting the Expo theme "Feeding the Planet". The projects should be related to the food value chain and focus on sustainability for a better tomorrow.

The European Commission is very grateful to the organisations that offer these special prizes to the contestants.



### EIROFORUM PRIZES

EIROforum is a partnership of Europe's eight largest intergovernmental research organisations. As world leaders within their respective fields of science, the member organisations of EIROforum constitute the vanguard of European science. Operating some of the largest research infrastructures in Europe devoted to the exploration of key questions on the origin and the evolution of matter and biological life in our Universe, they enable European scientists to engage in truly cutting-edge research, and be competitive on a global scale.

In support of the EUCYS initiative, EIROforum members are pleased to offer one-week visits/placements to their organisations.

To ensure optimum value of the experience to the prize winner, these will be offered on the basis of the relevance of the activities of the organisation to the field of interest of the nominated student. (For safety and sometimes security reasons, age restrictions may apply).

EIROforum also sends experienced scientists to give a key note address to the contestants. As a courtesy to EIROforum, those students who would like to be considered for the EIROforum prizes, and their National Organiser, should endeavour to attend the EIROforum lecture during the contest.

The EIROforum organisations are:

**European Organization for Nuclear Research (CERN)**, Geneva, Switzerland, was founded in 1954. CERN's main research area is in particle physics. Complex machines such as particle accelerators and detectors are developed and used to study the basic constituents of matter. The Large Hadron Collider (LHC), a 27-kilometre underground circular machine,

began colliding particles at very high energy in 2010 giving new insights into the origin of the Universe. CERN is also famous for the invention of the World Wide Web, which was originally developed to give scientists access to data irrespective of their location. In 2012, LHC experiments discovered a new particle consistent with long-sought Higgs boson.

[www.cern.ch](http://www.cern.ch)

CERN offers a prize of a week's visit for up to three students involved in the selected project. Topics should be related to a scientific or engineering field of relevance to CERN to include a large spectrum of projects, especially on the engineering side. Minimum age: 18 years.

### EUROfusion (JET), Culham Laboratory, Oxfordshire, UK.

EUROfusion is a framework between EURATOM and various fusion research programmes in many EU countries. Its aim is to provide an infrastructure for fusion research. JET, the largest tokamak fusion reactor in the world, investigates the potential of fusion power as a safe, clean and virtually limitless energy source for future generations. It is paving the way for ITER, an engineering project currently being constructed in southern France, which is designed to be the first fusion reactor to release more energy than is needed to power it.

[www.efda.org](http://www.efda.org)

EUROfusion will award a one week stay at the JET facilities for one person. Topics include: plasma wall interaction, real time control of plasmas, computer modelling of plasmas, magneto hydrodynamics, engineering related topics to build tailored diagnostics. Minimum age: 16 years.

### The European Molecular Biology Laboratory (EMBL)

has its headquarters in Heidelberg, Germany and has four other sites in Europe. It was founded in 1974 and is the flagship of molecular life sciences in Europe. It encompasses a broad spectrum of molecular biology research, from the smallest units at the level of proteins and genes via cells and organisms up to structural biology operating beam lines. Bioinformatic services are invaluable for researchers all over the world

who may use the biological databases developed and maintained by EMBL's outstation, the European Bioinformatics Institute in the UK. In 2010, the EMBL Advanced Training Centre (ATC), a building in the form of a double helix was inaugurated at the main site in Heidelberg. It hosts world-class conferences and provides state-of-the-art training opportunities. [www.embl.org](http://www.embl.org)

EMBL will award a one week placement at their Heidelberg laboratories for one person. Eligible topics should be in the field of molecular biology. Minimum age: 18 years.

### The European Space Agency (ESA) Paris, France.

ESA's mission is to provide cooperation in space science and to ensure that this science benefits citizens in Europe and world wide. Research programmes concern, among others, Earth Observation, Human Spaceflight, Launchers, Navigation, Space Science and Engineering as well as Telecommunications. Their focus is the Solar System and the Universe in general. The development of satellite technologies serves to achieve high-level research goals and to promote European industries at the same time.

[www.esa.int](http://www.esa.int)

ESA offers a single prize winner the opportunity to take part at a Space conference or a visit to ESA's technical facility in the Netherlands.

Students must be at least 18 and have started a related discipline at university.

### The European Southern Observatory (ESO),

Garching, near Munich, Germany and Chile. ESO is the foremost intergovernmental astronomy organisation in Europe and the world's most productive ground-based astronomical observatory by far. It is supported by 15 countries, and carries out an ambitious programme focused on the design, construction and operation of powerful ground-based observing facilities enabling astronomers to make important scientific discoveries. ESO also plays a leading role in promoting and organising cooperation in astronomical research. ESO operates three unique world-class observing sites in Chile - La Silla, Paranal

and Chajnantor – and is planning a 40-metre-class European Extremely Large optical/near-infrared Telescope the E-ELT, which will become “the world’s biggest eye on the sky”.

[www.eso.org](http://www.eso.org)

Only single-student projects are eligible for ESO’s prize. The Laureate is offered a trip to ESO’s facilities in Chile with visits planned to the Paranal Observatory and ESO’s Scientific Centre in Santiago. Minimum age: 18 years.

#### **European Synchrotron Radiation Facility (ESRF)**

Grenoble, France, is supported and shared by 19 European countries. The ESRF is the most powerful synchrotron radiation source in Europe; it is a stadium-sized machine producing many beams of bright X-ray light. These are guided through a set of lenses and instruments called beamlines where the X-rays illuminate and interact with samples of material being studied. Here, at more than 40 specialized experimental stations, physicists work side by side with chemists and materials scientists. Biologists, medical doctors, geophysicists and archaeologists have become regular users. Companies also send researchers, notably in the fields of pharmaceuticals, cosmetics, petrochemicals and microelectronics. Each year 6,000 researchers travel to Grenoble where they work in a first-class scientific environment to conduct exciting experiments at the cutting edge of modern science.

[www.esrf.eu](http://www.esrf.eu)

ESRF will award the prize of a one week visit to the epn Science Campus in Grenoble, for the leader of a project in a topic related to the structural and dynamical study of condensed matter, materials and living matter using synchrotron radiation X-rays to achieve sub-nanometric resolution in both fundamental and applied research. This could be in the fields of biology, chemistry, cultural heritage, engineering, environmental sciences, materials research, medicine or physics. The visit will be undertaken in parallel with that of the winner of the ILL prize. Minimum age: 18 years.

**The Institut Laue-Langevin (ILL)**, Grenoble, France, operates the most intense neutron source in the world. It is used to examine conventional and newly created materials. The applications include the analysis of the structure of new materials for future electronic tools, the measurement of stresses in mechanical materials, and examination of the behaviour of complex molecular assemblies, particularly in a biological environment. The ILL also tackles questions relating to the fundamental properties of matter. Recent research includes the world’s first magnetic soap, great developments on gamma-ray optics and potential Alzheimer treatments.

[www.ill.eu](http://www.ill.eu)

ILL will award a prize of a one week visit to the epn Science Campus in Grenoble, for the leader of a project in a topic related to a scientific or engineering field of relevance to ILL.

The visit could include witnessing technical developments being made in connection with the neutron beams, such as detectors and optical devices, or taking part in an experimental session. Areas covered include: neutron research and technology in the disciplines of chemistry, nuclear physics, chemistry, biology, crystallography and magnetism.

The visit will be undertaken in parallel with that of the winner of the ESRF prize. Minimum age: 18 years.

**European XFEL (XFEL.EU)**, Hamburg, Germany. European XFEL is a linear X-ray laser with unique characteristics. Currently under construction, it is due to start operation in 2016. The facility will open up new research opportunities for a whole range of scientific fields, such as medicine, pharmacy, biology, chemistry, physics, materials science and nanotechnology.

[www.xfel.eu](http://www.xfel.eu)

European XFEL will award a one week placement at their site in Hamburg for one person presenting a physics project. The visit will provide insights into the process of building a new, cutting edge international research facility.

**The EIROforum organisations constitute a success story for Europe.** They:

- were created by their member states as part of a long-term strategy for the future of European research;
- attract some of the best scientists and researchers from across the world, thanks to their scientific excellence and cutting-edge facilities;
- have implemented the European Research Area (ERA) concept and contribute significantly to structuring European research in their specific scientific fields;
- link European scientific communities with the rest of the world;
- develop new technologies, instrumentation and electronic infrastructures and support innovation and technology transfer for the benefit of society at large.

The EIROforum organisations have **world-class research** infrastructures. They:

- operate major research infrastructures – unique in Europe and in some cases in the world;
- are funded by their member states, with a combined annual budget for science of around 1500 million Euros;
- are crucial to the competitiveness of European research, providing up-to-date and continually improved facilities for European scientists;
- serve more than 25 000 scientists every year (in astronomy, particle physics, fusion, space sciences, condensed matter physics, chemistry and the life sciences);
- are active in international, often global, research for the benefit of Europe;
- possess unique experience in building and operating research infrastructures of great value for the further development of the European Research Area.

EIROforum is also committed to promoting and supporting innovative science education in Europe, as demonstrated by two major science education projects.

Science on Stage (formerly Physics on Stage)

Science on Stage has built strong national networks throughout Europe – many of which are still active today. The international science teaching festival has:

- been organised five times since 2000;
- brought together over 400 science teachers at each event;
- involved 30 000 teachers in 29 countries in the preceding national events;
- helped teachers from throughout Europe to exchange ideas and experience via a vibrant teaching fair, workshops and presentations;
- inspired teachers to start national and international collaborations to share ideas and materials after the festivals;
- encouraged national initiatives.

Science in School

A quarterly journal to inspire and inform European science teachers, Science in School is:

- free in print and online ([www.scienceinschool.org](http://www.scienceinschool.org));
- written mostly by teachers and scientists;
- printed in English, with articles online in over 25 European languages;
- distributed throughout Europe (20 000 copies per issue).

Articles, many of which can be used directly in the classroom, include:

- cutting-edge science articles;
- experiments to use in the classroom;
- innovative science teaching projects;
- reviews of teaching resources.

Topics include biology, physics and chemistry and also maths, earth sciences, engineering and medicine.



### SPECIAL PRIZE DONATED BY THE EUROPEAN COMMISSION'S JOINT RESEARCH CENTRE



The Joint Research Centre (JRC) is the European Commission's in-house science service. It performs direct scientific research and provides evidence-based and independent scientific advice to European policy makers helping them to make informed decisions.

EU policies that address global and societal challenges - such as financial stability, climate change, food security, water availability or the ageing society - need to be based more and more on a solid scientific understanding. In close cooperation with international partners, the JRC elaborates models and scenarios to assess policy options while stimulating innovation through developing new methods, tools and standards.

Its work has a direct impact on the lives of European citizens. It promotes a healthy and safe environment, secure energy supplies, sustainable mobility and consumer safety, and helps improve preparedness and response to natural and man-made disasters.

Serving society, stimulating innovation, supporting legislation!

The JRC's headquarters are in Brussels and its seven scientific institutes, which host specialist and unique laboratories, are located on sites in Belgium, Germany, Italy, the Netherlands and Spain.

The JRC award will allow the participants from three successful projects to spend two days at its facilities in Ispra, Italy, shadowing scientists from all over Europe according to the interests of the prize winners.

#### **The JRC Institutes at Ispra:**

Institute for the Protection and Security of the Citizen (IPSC) in Ispra, Italy  
 Institute for Environment and Sustainability (IES) in Ispra, Italy  
 Institute for Health and Consumer Protection (IHCP) in Ispra, Italy  
 Institute for Energy and Transport (IET) in Ispra, Italy and at Petten, the Netherlands.

#### **Other JRC Institutes:**

Institute for Reference Materials and Measurements (IRMM) in Geel, Belgium  
 Institute for Transuranium Elements (ITU) in Karlsruhe, Germany  
 Institute for Prospective Technological Studies (IPT) in Sevilla, Spain.



### INTEL ISEF 2016 PRIZE

The Winners of the Intel ISEF 2016 Prize will be invited to participate at the Intel International Science and Engineering Fair (Intel ISEF), a program of Society for Science & the Public, the world's largest international pre-college science competition. The event will be held from May 8 - 13, 2016 in Phoenix, AZ (USA).



### EUCHEMS PRIZE

The European Association for Chemical and Molecular Sciences (EuCheMS) brings together over 40 chemical societies which together represent more than 160,000 chemists in academia, industry, government and professional organisations in 32 countries across Europe.

Founded in 1970, EuCheMS aims to provide a single voice on key science and policy issues, based on expert scientific knowledge and to promote chemistry as a provider of solutions in a changing world. EuCheMS Divisions cover all areas of chemistry, the central science, underpinning a wide range of other disciplines, and everyone is welcome to participate in our scientific events, such as EuCheMS Chemistry Congress.

EuCheMS is pleased to present a prize of € 1000 for the best chemistry entry in the EU Young Scientists Contest. For more information on EuCheMS please see [www.euchems.eu](http://www.euchems.eu)



**WOLFRAM**

### WOLFRAM PRIZE

WOLFRAM Research is donating a one-year Mathematica Student Edition license plus a free one-year subscription to WolframAlpha Pro for all contestants submitting projects in the field of mathematics.

[www.wolfram.com](http://www.wolfram.com)



## SPECIAL PRIZES OFFERED BY ITALIAN DONORS



The **University of Milano-Bicocca** is a young, dynamic, innovative and multidisciplinary university which trains professionals in various fields: economics and statistics, law, science, medicine, social science, psychology and pedagogy.

On the occasion of EUCYS 2015, the University is pleased to offer 3 science internships of one month to a single contestant or a team of up to three contestants, that the jury deems would benefit most from this experience.

The selected fields are the following:

- Targeting metabolism in cancer, Department of Biotechnology, Field: Systems Biology
- Synthesis of biologically relevant compounds, Department of Biotechnology, Field: Organic Chemistry
- Smart upgrading of Biogas to Bio-methane, Department of Material Sciences, Field: Chemistry, Environment.

The University of Milano-Bicocca will pay the transportation and accommodation costs, excluding meals.

Only projects from EU countries are eligible for this prize. Minimum age 18 years.

[www.unimib.it](http://www.unimib.it)



**AICA**, the Italian Association for Information and Communication Technologies is pleased to donate a financial award worth €1.500 to be shared equally between team members if the winning project is presented by more than one contestant. The prize will be awarded to a project promoting the development of digital knowledge.

Projects from all countries are eligible for this award.

[www.aicanet.it](http://www.aicanet.it)



**A2A**, the multiutility of Milan and Brescia, one of the most important players in the environment and energy sectors in Italy, announces a financial award of €2.000 to be shared equally between team members if the winning project is presented by more than one team member.

The prize will be awarded to a study which proposes practical solutions for sustainable environment, energy efficiency and renewable energies.

Projects from all countries are eligible for this award.

[www.a2a.eu](http://www.a2a.eu)



**FAST**, the Italian Federation of Scientific and Technical Association and **FOIST**, the Foundation for the Development and the Promotion of the Education and the Scientific and Technical Culture, are proud to announce the donation of a financial award of €1.000 to a project aimed at promoting science to the general public.

The award will be shared equally between team members if the winning project is presented by more than one student.

Projects from all countries are eligible for this award.

[www.fast.mi.it](http://www.fast.mi.it)



**FBK**, Bruno Kessler Foundation is based in Trento and is involved in bringing together natural and human sciences, a sign of recognition of the challenges faced by the knowledge society. With this philosophy FBK offers an internship of one week in their laboratories in Trento to an individual or a team from an EU country. The prize will be awarded to an interesting proposal for the application of science in high technology fields, including: nanotechnology, materials & microsystems, information and communication technology, innovative and renewable energy. Minimum age 18 years.

[www.fbk.eu](http://www.fbk.eu)



**IIT**, the Italian Institute of Technology promotes Italy's technological development and advanced education.

On the occasion of EUCYS 2015, the Foundation offers an internship of one week in their laboratories in Genoa to the young scientists from an EU country with a worthy project that uses high technologies, with special attention to nanotechnologies, health, robotics. Minimum age 18 years.

[www.iit.it](http://www.iit.it)



**Salveti Foundation** contributes to bringing young maintenance professionals together in order to retain this group professionally and motivate them in their careers. With this aim, the Foundation is pleased to donate a financial award worth € 1.000 to the best project related to maintenance technology.

The prize will be shared equally between team members in case the project is presented by more than one team member.

Projects from all countries are eligible for this award.

[www.salvetifoundation.com](http://www.salvetifoundation.com)



**SOL Group**, a producer of technical, pure and medical gases for industry, research and healthcare, donates a financial award of € 2.000, to be shared equally between team members in case of more than one author.

The awarded project will be preferably related to technical gas, health, or environment.

Projects from all countries are eligible for this award.

[www.sol.it](http://www.sol.it)

