

NEWS AND NOTES

11th International Earth Science Olympiad (IESO), Cotê d' Azur, Nice, France.
Hema Achyuthan, Coordinator IESO (*E: hachyuthan@yahoo.com*) and K.S. Godhavari (*E: gsocind@gmail.com*)



The International Earth Science Olympiad (IESO) conducted every year offers higher secondary school students from all around the world an opportunity to participate in the earth science competition in a country decided upon every year. The 11th IESO took place in France during August 2017 at the Sophia Antipolis Science & Technology Park (Côte d' Azur), Nice, France. The objective of this competition is to promote discussions and exchange ideas to find collective solutions to the earth's problems. The members of the Geo Azur Scientific laboratory were involved in organizing the 11th IESO program. The organisers of this high level event were Mr. Eric Petit-head of the International Center for Valbonne, Mr. Thierry Lanz, Director of the Cote d'Azur observatory and Co-ordinated by M.M. Jean-Luc Berenguer, Professor of Earth and Life Sciences (Sciences de la Vie et de la Terre) and Fabrice Jouffray – Professor at the University of Nice Sophia Antipolis. One of the main aims of the Olympiad programme is also to promote the cross-curricular dimensions of Geoscience, mainly in English language. The IESO offers a perfect opportunity for young students to discover the culture of the host country and also other countries through interactions with fellow participants. The agenda and the programme of the IESO-2017 was designed including trips to cultural, natural sites of interest and festive events.

The theme logo of IESO-2017, Nice, France is "Earth and its several spheres" such as biosphere, hydrosphere, geosphere, atmosphere and the space environment. The theme logo depicts saving the earth, atmosphere and space for future generation.

Selection of four students as Team India through Indian National Earth Science Olympiad (INESO) to participate in International Earth Science Olympiad every year is one of the major outreach programmes of Ministry of Earth Science (MoES) and the Geological Society of India. The IESO program is organised to create student awareness and interest in earth sciences, to enhance earth science learning and to create public awareness. Having deep knowledge of our earth is essential to protect it from future disasters, also seek measures to mitigate natural hazards and predict future risks. With this in mind the students and the teachers are trained to be the ambassadors of a reinforced scientific culture that will train future citizens of the world and to be the future leaders responsible for our development.

The IESO at France was conducted during 22-29 August 2017.

Students from over 30 countries participated to compete and above all to exchange ideas, communicate and collaborate that characterise both the scientific community and the community of our planet's citizens. Each country sent four students as their National Team representative accompanied by two mentors. In addition several countries were also represented by guest students along with their national team. These guest students were allowed to go through all the activities of the Olympiad but were not eligible to win a medal.

Team India was represented by Advait Ganapathy (The Doon School, Dehradun), Raghav Sharma (Nalanda Academy, Kota), Hiya Kwatra (Bharatiya Vidya Bhavan, Chandigarh) and Punya Pratyusha Sethi (D.A.V. Public School, Bhubaneswar). The team was led by two mentors Prof. Hema Achyuthan (National co-ordinator) and Dr. K.S. Godhavari (Secretary, Geological Society of India) to France for the participation in IESO-2017. These four students representing the team India were selected through the National Entrance Test which was conducted on 22nd January 2017 at centres across the country (80 centres identified).

The first 25 students were selected based on the merit (registered students: 3100) for 3-week intensive training in Earth Science from 11th to 31st May 2017. Teachers and scientists from various Universities, Government Departments, National Laboratories etc., were invited to train these students both in theory, practical and field methods following the IESO syllabus prescribed by the IESO committee. The topics covered were largely from the five main branches of Earth Sciences (Geology, Hydrology, Meteorology, Oceanography and Astronomy). On the 30th May 2017 the Indian National Earth Science Olympiad was conducted at Anna University to select four students to represent Team India.

Pre-departure training to revise the earth science topics for six days was imparted from 15th to 20th August 2017 to these four selected students at Anna University, Chennai.

The IESO Programme at Université Cotê d' Azur started with a march past of students representing their country with their respective National Flags on 22nd August 2017 at the Polytech Nice-Sophia-Valbonne an Engineering school of the University of Nice-Sophia Antipolis. At the opening ceremony, Thierry Lanz, Director of the Cote De Azur Observatory gave a warm welcome to all the participants



(a) Team India was represented by Advait Ganapathy, Punya Pratyusha Sethi, Raghav Sharma and Hiya Kwatra. (b) Team India students interacting with the National Coordinator. (c) Arrival of Team India at Nice Airport.



Flag ceremony



Team India students with Helina, a German volunteer.

of 11th IESO. He opined that it is important to work together in a big international team scientifically and to work as one universe. He expressed that working in teams should bring out / discover new geological features on French soil. The organiser of the IESO program Prof. Jean Luc Berenguer expressed that we should learn to work in a team and he said that the IESO is the only Olympiad that trains the younger generation to work in a team.

The President of University of Cote d'Azur, Prof. Jean-Marc Gambaudo expressed that IESO is an exception as it reflects a neat demonstration of the next generation's enthusiasm for science, scientific dynamism and intensive research. He expressed that as human beings we should start working with others from different countries for the progress of the mankind. Mr. Bertrand Pajot, Inspection Generale, Ministere de' Education Nationale said that geoscientific community is a special community in the world and geoscience is very important in terms of energy, mineral resources etc. Mr. M. Jean Pierre Mascare, Communaute d Agglomerate, Sophia Antipolis addressed the gathering and expressed that the polytechnique school was the right venue to conduct such an international event as the school imparts high level earth science education to polytechnic students. Moreover, the best exposures of geological lithology with the geological boundary between Permian and Triassic was exposed in the nearby Alps. Since the French scientists have made remarkable strides in extra-terrestrial planetary sciences, the inaugural function was followed by a lecture delivered by Prof. Dr. Uwe Meierhenrich, University of Cote d'Azur on "Living with a Comet". The lecture was

very stimulating that ended with several students asking various questions related to the topic of cometary and its surface environments and the Prof. Meierhenrich answered these questions patiently. The inaugural function ended with the thanks to the speakers and once again welcoming all participants to have a rewarding competition. Each country sent a maximum of four students as its national team accompanied by two mentors. Several countries such as the USA were also represented by guest students in addition to its national team.

In the IESO-2017 competition the students had written and practical examination in all the four main branches of Earth Science (geology, meteorology, oceanography and astronomy). These written and practical examinations carried gold medals (10% of the student's participants), silver medals (20%) and bronze medals (30%) for the winning candidates in addition to a best country team Award. The written test was conducted in the forenoon of 23rd and 24th August 2017. The practical tests were conducted at several sites around Nice. The presentations of the field work in the form of project presentation were carried out at the Satellite research laboratory where mentors of all countries participated as evaluators of the project presentations. The moderation of answer sheets of written and practical tests of the students were carried out by the Mentors and Observers of the respective countries.

In addition, team competitions were conducted by forming a joint team of students from six to eight different countries to carry out team investigations like International Team Field Investigation (ITFI) and Earth Science Project (ESP). The objective for conducting such team



Mentors/O bservers at French Alps



(a) Cultural activity on farewell day. (b) Gold medal winners - ITFI team. (c) Team India - Closing ceremony

competitions is to harness team spirit and working in harmony with international students as a team.

While the students wrote these tests, for the mentors and observers, visit to Antibes Centre, Cannes, Nice, Monaco, S^{TE} Marguerite Island and the observatory on the Observatoire de la Côte d'Azur, France|Saint-André-de-la-Roche, Nice mountains and Ski station Auron, La Garde, were organised.

A visit to Sophia Labs was organised for the students. The students were also taken to Franko Italian Aerospace Industry- 'Thales Alenia Space' to observe the Satellite assembly - recognized worldwide that are used for navigation services, monitoring environment and the oceans, climate change etc. A visit to Calern Observatory to study special relationship between Astronomy and Geophysics, including laser range finding (of distance), time transfer, space geodesy and satellite tracking was organised. A cultural trip was arranged to Corniche d' or de l'Esterel to study the local culture.

Finally, a farewell and cultural party was organised at the School itself in the evening of 29th August 2017, wherein all the student teams

presented a brief cultural performance.

The valedictory and the award-winning function was organised in the forenoon of 30th August 2017. The results of the written, practical test, ITFI and ESP were announced and the Gold, Silver and Bronze medals were awarded to student winners by the dignitaries. Ms. Pratyusha Sethi won a bronze in the individual event and a gold medal in the team activity on ITFI project.

The prize distribution function ended with vote of thanks by Prof. Luc Jean Berenguer. He thanked all the participants of the 11th International Earth Science Olympiad for making this a memorable event with great success.

The Geological Society of India, Bangalore, is grateful to all the resource persons/scientists from various Universities, National Laboratories, IIT's, Government Departments, Center Co-ordinators, Invigilators, faculty members and research scholars for their unflinching support that helped in selecting Team India. Further, the Geological Society of India is grateful to MoES, New Delhi, for whole heartedly supporting this programme as part of its outreach activity.