



Sambalpur University: The Centre of Glorious Academic Attainments

### Programme Schedule

#### Day 1 (November 26, 2022 - Saturday)

08:30 am - 10:00 am	Registration
10:00 am - 11:30 am	Inaugural Function
11:30 am - 11:40 pm	Tea Break
11:40 pm - 12:30 pm	Keynote Address on 'Science & Technology in Combating Climate Change'
12:30 pm - 01:15 pm	Invited Lecture - I (Clean energy and green technology can save us from imminent disasters)
01:15 pm - 02:00 pm	Lunch Break
02:15 pm - 04:00 pm	Technical Sessions - I, II, III
04:00 pm - 04:15 pm	Tea Break
04:15 pm - 05:30 pm	Technical Sessions - I, II, III (to continue in parallel)

#### Day 2 (November 27, 2022 - Sunday)

10:00 am - 11:30 am	Panel Discussion (Climate change - Adaptation and mitigation measures in diverse arenas)
11:30 am - 11:45 am	Tea Break
11:45 am - 12:30 pm	Invited Lecture - II (Sixth Extinction - A reality or a myth)
12:30 pm - 01:20 pm	Invited Lecture - III (Exploring extra-terrestrial life - Is it vital?)
01:20 pm - 02:10 pm	Lunch
02:10 pm - 03:00 pm	Poster Session
03:00 pm - 03:45 pm	Invited Lecture - IV (Artificial intelligence regulating human life)
03:45 pm - 05:15 pm	Valedictory Function



Samaleswari Temple



Hirakud Dam

## 23<sup>rd</sup> OBPC Committee

### Chief Patron

Vice-Chancellor, Sambalpur University

### Patrons

Prof. Sundara N Patro, President, Orissa Environmental Society  
Prof. Sanjukta Das, Chairman, PG Council, SU

### Co-Patrons

Dr. Nruparaj Sahu, Registrar, Sambalpur University  
Prof. Sanjat Kumar Sahu, Chair Prof., Sci. and Tech., SU

### Conveners

Dr. Jaya Krushna Panigrahi, Secretary, Orissa Environmental Society  
Dr. Amaresh Mishra, HoD, School of Chemical Sciences, SU

### Joint Convener

Dr. Malaya K Mahananda, PG Dept. of Env. Sciences, SU

### Organizing Secretary

Dr. Smaranika Patnaik, School of Life Sciences, SU

### Advisory Body

Prof. B C Tripathy, Former VC, Ravenshaw University  
Prof. Sudhakar Panda, Director, NISER Bhubaneswar  
Dr. B K Sahu, Regional Manager, NRDC, Govt. of India, New Delhi  
Dr. Sanghamitra Pati, Director, RMRC-ICMR, Bhubaneswar  
Prof. Suddhasatwa Basu, Director, IMMT, Bhubaneswar  
Dr Karuna Kar Nanda, Director, IOP, Bhubaneswar  
Prof. K V R Chary, Director, IISER Berhampur

### Organizing Committee

Prof. Surya Narayana Nayak, HOD, School of Physics, SU  
Prof. E Kariali, HOD, School of Life Sciences, SU  
Prof. Sanjay Kumar Pattanayak, HOD, School of Environmental Sciences  
Dr. Jagadish Tripathy, Dept. of Earth Sciences, SU  
Dr. Bijay Ketan Patnaik, Vice President, OES  
Dr. Lala A K Singh, Vice President, OES  
Prof. B Sitaram Patro, Treasurer, OES  
Er. Manoranjan Mishra, Joint Secretary, OES

### General Correspondence

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23<sup>rd</sup>

## Odisha Bigyan 'O' Paribesh Congress

November 26-27, 2022

National Seminar On

Science & Technology in  
Combating Climate Change



Organizers

Orissa Environmental Society  
Sambalpur University, Burla



Venue

Biju Patnaik Auditorium, Sambalpur University  
Jyoti Vihar, Burla, Odisha - 768 019



## Background

The Odisha Bigyan 'O' Paribesh Congress (earlier Orissa Bigyan Congress) had its genesis in the year 1997 to create and foster an apt platform for the scientific community of the State to reflect and deliberate upon the advances of science and technology in diverse frontiers. Since then it is being organized as an annual event in reputed universities/ institutions of Odisha with the objective of bringing to a common forum the scientists, academics, technologists and environmentalists of the State as well as from other parts of the country for sharing their experiences and innovations. On the occasion of the Congress, a national seminar is being organized on a theme of current significance. Noted scientists and academics of the State are also felicitated during the Congress for their lifetime contributions, while young researchers are awarded prizes for best oral and poster presentations. This year, the theme has been purposefully kept as '**Science and Technology in Combating Climate Change**' to focus on climate change issues, the gravest challenges mankind is confronting at the present juncture, in the light of the local issues and plausible solutions. The 23<sup>rd</sup> session of the Congress is organized under the joint auspices of the Orissa Environmental Society, Bhubaneswar and the Sambalpur University, Burla, Odisha.

## Focal Theme

Never before in the history had no other creature caused so much devastation to the Mother Nature than the mankind, which is reflected in the form of diverse environmental disasters at the present juncture. The colossal amount of fossil fuels used by humanity as the source of energy has been progressively engendering increased emission of greenhouse gases culminating in global warming and consequential climate change. Such human-induced climate change has been the greatest worrying challenge at the moment that inflicts a great deal of detrimental impacts not only on the lives and livelihoods of human beings across the globe, but also the very existence of the living system in the world. It is potentially the most distressing problem that brings about enhanced extreme weather events and disasters, and various ecological disruptions. Keeping such happenings and the current state of sea-level rise, biodiversity depletion and species extinction, food security, poverty, health problems and many other issues in view, the foremost task is to diminish the GHG emissions for restricting the rising temperature. Though the Paris Agreement (2015) has put the objective of keeping the rise within 1.5°C, the global temperature records, to our dismay, are being broken consistently.

The world's plan to shun the climate change catastrophe varies from tree planting and afforestation to high tech direct carbon-capture devices for sucking out carbon dioxide from the atmosphere and reducing the use of fossil fuels to achieve net-zero emissions. Transforming energy and land-use systems, and industrial and agricultural processes, besides ceasing loss of forests, accelerating decarbonization and capping the GHG sources, can help fighting this gigantic challenge. Our dependence on alternate, renewable energy sources, instead of fossil fuels, needs a rapid revolution. The most vulnerable people in the low- and middle-income nations have been the worst victims of this greatest environmental crisis and its continuance at current pace may lead to creating at least twenty crore climate

refugees by 2050. In this scenario, sooner our preparedness comprising apposite adaptation and mitigation strategies are put in place, the better is for the existence of this living planet. The 23<sup>rd</sup> session of the OBPC intends to deliberate scrupulously on diverse aspects of climate change laying emphasis on the role of science and technology in combating its impacts.

## Call for Papers

Research papers from all branches of Science and Technology in respective fields of work are invited for oral/poster presentations in the technical sessions of the seminar. Selected abstracts will be published in the proceedings of the 23<sup>rd</sup> OBPC. Soft copies of the abstracts in English (within 400 words) in MS-Word format (Times New Roman, font size 12) with names of authors, their affiliations, corresponding author's email and key words may be submitted to the Organizing Secretary by email ([obpc23@suniv.ac.in](mailto:obpc23@suniv.ac.in)) latest by **November 05, 2022**. Best presentations (oral/poster) will be awarded in the Congress. The research papers selected by a panel of experts will be published separately as a journal proceeding with ISBN subsequent to the OBPC. The authors will be communicated for submitting the full papers after the seminar. The registration fee must accompany the submitted abstracts.

## Technical Sessions

- **Research Advances in Life Sciences - I**  
(Animal, Plant, Agricultural, Medical Sciences, etc.)
- **Research Advances in Physical Sciences – II**  
(Physics, Chemistry, Mathematics, Geology, etc.)
- **Research Advances in Technological Sciences – III**  
(Engineering, Technology and Applied Sciences)

## Accommodation

Delegates are requested to make their own arrangements for their stay during the Congress. However, limited accommodation arrangements can be made for delegates in university campus on request.

## Orissa Environmental Society Bhubaneswar

Website: [www.odishaenvironment.org](http://www.odishaenvironment.org)

E-mail: [oesbbsr@gmail.com](mailto:oesbbsr@gmail.com)

The Orissa Environmental Society was founded in 1982 with the prime objective of promoting awareness towards protection of the fast-deteriorating environment and conservation of the depleting natural resources of the State by way of undertaking diverse activities. It has also been preaching the principles of sustainability based on ecologically, economically and socially sound practices. In recognition of the services rendered by it, the Society is represented in various state as well as national level committees and forums on environment, wildlife and science & technology. It has made landmark contributions in respect of Similipal Biosphere Reserve, Chilika lagoon, Mahendragiri hill terrain and Angul-Talcher industrial area, to name the prime realms of its work, by way of research, education and awareness promotion. The Society has brought out several publications on diverse aspects of environment and natural resources. With about 800 life members in its roll, it has earned the unique distinction of enjoying the accreditations of some national and international organizations. It played the pivotal role in the opening of the Bhubaneswar Chapter of the Indian Science Congress Association in 1996.

## Sambalpur University , Burla, Odisha

Website: <https://www.suniv.ac.in>

The long cherished dream of the people of Western Odisha for establishment of a University got translated into reality when the Sambalpur University started functioning on 1<sup>st</sup> January, 1967. Though the university was operating initially in a government building at Ainthapali, Sambalpur, it was shifted to the present campus at Jyoti Vihar, Burla in the year 1973. The captivating beauty of the campus with hilly environs, lush green trees and gorgeous skies captures the attention of the visitors. The territorial jurisdiction of the University covers six districts of the state, namely Sambalpur, Sundargarh, Jharsuguda, Deogarh, Bargarh, Boudh and Athamallik Sub-Division of Angul District. The University provides Post-Graduate education in 32 subjects through 25 Post-Graduate Departments. These departments offer degrees two-year study programmes for the degrees of M.A., M.Sc., LL.M., Business Administration, M.Lib. & Inf. Science; one-year study programmes for M.Phil. degrees; one-year P.G. Diploma Course in Computer Science & Application; Diploma Course in Sambalpuri Studies; and Executive M.B.A. The P.G. Departments of Chemistry, Life Sciences, Physics, History, Economics and Mathematics have been conferred on autonomous status by the University. They adopt semester system based on continuous evaluation and devise their own curricula. In addition, the University also awards Ph.D. and D.Sc./D.Litt. degrees in respective subjects.

There are 11 PG hostels within the university campus, including five ladies hostels. The university provides an admirable academic ambience in its campus to bring out the inner potential of the students for achieving excellence. The established Directorate of Distance and Continuing Education, Private Education Cell (PEC), Nodal Computer Centre, UGC-HRDC, University Yoga Centre and Central Library are carrying forward the wheels of the university system towards the attainment of the desired goals. The infrastructural facilities provide all the contemporary requisites, including state-of-the-art laboratories, departmental libraries, auditorium, community centre and other service-providing amenities. The University has been assessed and accredited with Grade-A by the NAAC.

## How To Reach

The Sambalpur University campus at Jyoti Vihar, Burla is situated 15 km from Sambalpur city, which is well connected by direct train links with New Delhi, Kolkata, Chennai, Bhubaneswar and Raipur. The nearest airports are Jharsuguda (60 km), Raipur (270 km) and Bhubaneswar (320 km). Besides, the nearest railway station is Hirakud, which is about 3 km from the Sambalpur University campus.

## Places to Visit

The Hirakud Dam, built across the Mahanadi River in 1957, is about 5 km from the Sambalpur University. The dam is one of the world's longest earthen dams and the reservoir is extended 55 km long. On the bank of the river Mahanadi, mother goddess Samaleswari is worshipped from ancient times in Sambalpur City.

**23<sup>rd</sup> Odisha Bigyan 'O' Paribesh  
Congress**

*Dates: November 26-27, 2022*

*National Seminar on*

**'Science & Technology in  
Combating Climate Change'**

**Venue: Biju Patnaik Auditorium**

**Sambalpur University**

**Burla – 768 019**

**REGISTRATION FORM**

**Name:**.....

Designation:.....

Institution (if any): .....

.....

Mailing Address:.....

.....

City: ..... Pin Code: .....

Phone: Off:.....Mob:.....

E mail : .....

Title of the paper (Oral/ Poster):.....

.....

.....

**Payment details:**

Amount: Rs.....

D.D. No..... Date .....

Bank: .....

**Registration Fee:**

Delegates (Academic/Industry)      Rs. 500/-

Student Delegates                              Rs. 300/-

Date.....Signature.....

N.B.: Demand draft to be drawn in favour of the **Orissa Environmental Society**, payable in any nationalized bank at Bhubaneswar. One can transfer the amount online to SBI A/c No. 10128787612; IFSC: SBIN0007045 (IRC Village Branch) and send the screenshot to the WhatsApp No. 9853406575 stating name and place.

Please send this registration form along with the bank draft to the Convener, 23<sup>rd</sup> OBPC, Orissa Environmental Society, ND-4, VIP Area, Bhubaneswar - 751015 so as to reach on or before **5<sup>th</sup> November**, 2022.