## About **Bhubaneswar**:

Bhubaneswar, the capital city of modern state of Odisha is located in the south eastern part of India. Bhubaneswar derived its name from Tribhubaneswar, which literally means the Lord (Eeswar) of the Three World (Tribhuban), which refers to hindu lord Shiva. Bhubaneswar has been known by names such as Toshali, Kalinga Nagar, Ekamra Kanan, Ekamra Khetra and Mandira Malini Nagari. It is the largest city in Odisha and is a centre of economic and religious importance in Eastern India. It is known as the temple city of India. Places of interest in and around Bhubaneswar include: Lingaraj Temple, Raja-Rani Temple, Shanti Stupa, Khandagiri-Udayagiri, Nandan Kanan, Sun Temple (Black Pagoda), Konark and Lord Jagannath Temple, Puri and the silver city Cuttack.



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# NATIONAL SEMINAR ON THE ROLE OF MICROALGAE IN WASTE-WATER TREATMENT

-: Venue:-Convention Hall, Campus -II, SOA University Date: 21st February 2017



## **Organized by:**

## **Multi-Disciplinary Research Cell** Siksha 'O' Anusandhan University

(A Deemed University Declared U/S 3 of UGC Act, 1956) Khandagiri Square, Bhubaneswar-751030, Odisha, India

> Website http://www.soauniversity.ac.in/events/

## Back ground

Waste water treatment is gaining much importance in recent years with the intension of reusing it. For this purpose large amount of materials are to be supplemented. Nutrient rich wastewater instead of discharging into the environment is supplemented for the growth of algae in the wastewater treatment. Thus nutrients can be reused and waste water can be treated resulting in reducing the negative impacts. As the algae takes up N and P as their nutrients, the waste water can be treated with algae. The present day necessities and requirements have emphasized the need for a renewable and alternate energy source is very high. Besides, the present day energy resources pose potential threat to the environment by emitting Greenhouse gases (GHGs) etc. An integrated process which involves a model of the waste water High Rate Algal Ponds (HRAPs) near the industries and establishment of Biodiesel plants nearer to these ponds to produce algal biodiesel along with other byproducts is very much important. Waste water HRAP also help in sequestering the CO2 emitted by the industries and is used by the microalga for their photosynthesis in turn providing oxygen to the bacterial population which accumulates and degrades the toxic compounds present in the industrial effluents. This integrated process involving cheaper treatment of industrial effluents, production of algal bio-diesel, accumulation of toxic compounds, sequestration of CO<sub>2</sub> and various other non-fuel applications contribute to an effective energy management system. Wastewater grown algae have many other potential uses other than the biodiesel produced from the neutral lipids. They can be used as animal & fish feed, chemicals & fertilizer, bio-polymers & bio plastics, paints, dyes, colorants, lubricants, uranium/plutonium sequestration and fertilizer runoff reclamation. The Eco-physiology of any algae growing environment can now be understood by establishing correlation between physio-chemical conditions and identification of their algal community structure by genomic and metagenomic analysis through high throughput next generation sequencing methods. Besides, business opportunities for both technologists and the common man exist in this new fields. The objective of the seminar is to provide a platform to the researchers, academicians, professionals and industries for exchange of latest scientific achievements in the field and understand the trends of the technology for future developments

#### The themes of the seminar are:

- 1. Microalgae, Taxonomy, Selection of Strains, Mutations, GM Strains.
- 2. Genomics and Metagenomics Study of Algal Community and their Ecophysiology
- 3. Culture of Microalgae: (Laboratory, Pilot Plant, Commercial Scale).
- 4. Microalgae for Food and Feed.
- 5. Biofuel Production.
- 6. Harvesting of Microalgae, Separation, and Purification of Biochemicals.
- 7. Economic Assessment and Microalgal Biotechnology.
- 8. Algal-Bacterial Systems for Wastewater Treatment

#### Submission of Papers

Abstracts (500 to 800 words) related to the above areas are invited through email in Ms-Word format. Acceptance of the abstract will be communicated to the author.

## Important dates:

Conference	:	21.02.2017
Abstract submission	:	31.12.2016
Intimation on Acceptance	:	05.01.2017
of Abstracts		
Full Length Paper submission	:	15.01.2017
Registration Fee		
Industry	:	Rs3500/-
Faculty/Scientists	:	Rs 1000/-
Student/Research scholar	:	Rs 500/-

Registration fee may be paid as demand draft in favour of 'RMWT-2017' payable at Bhubaneswar along with filled registration form.

### Accomodation and Transport

Accomodation will be arranged at the hotels and guest houses as per the entitlement and choice of the delegates on payment basis.

## **About SOA University**

Siksha 'O' Anusandhan deemed to be University, Bhubaneswar, declared u/s 3 of UGC Act, 1956, has a distinct identity in the realms of professional education. The University is ranked the 16th best University in the country by the National Institutional Ranking Framework (NIRF) of the Ministry of HRD, Govt. of India. Over the years, the university has nourished the vision and mission of offering contemporary programmes in Engineering, Medical Science, Dental Science, Nursing, Pharmaceutical Science, Biotechnology, Business Management, Hotel Management, Agriculture and Law. The programmes, from undergraduate level to Ph.D degree, are global in their perspectives and socially beneficial as well. The landscaped infrastructure is spread over 300 acres in the temple city, Bhubaneswar, with 4.5 million sq ft built-in area, the University owns 38 multi-storied buildings, 16 state-ofthe-art conference/ seminar halls and modern facilities of e- library,

Wi-Fi campus with 1 GBPS bandwidth and 24x7 hours CCTV security surveillance etc. About 1350 faculty members, 300 research scholars, 3500 administrative staffs and 10,000 students live and work in unison towards their objectives and fulfillment. If today's trend is collaboration and sharing across borders, the university lives up to it by common memorandum with reputed research centres and universities. Presently, multidisciplinary research initiatives with 10 advance research centres in Basic Sciences, Biotechnology, Bio-Mechanical Science, Nano Science and Nanotechnology, Medical Science and Health Science have seen 2873 research publications. Further, 74 sponsored major research projects worth Rs. 16.74 cores have been undertaken. To regulate the research activities, an Interdisciplinary Research Council has been formed. These highlights define the name and soul of Siksha 'O' Anusandhan University. Inclusive training and personality development programmes in various disciplines, industry- academia interface, quality teaching, innovative research and extension activities, etc. leading to consistently high placement record are indicative of holistic character building of the learners in this University. As such SOA University has a known reference for guality technical education and contemporary innovative research in the country. Due to its all-round development and intellectual

evolution, SOA University has been awarded 'A' grade by the NAAC and ISO-9001-2000 certificate by URS, UK.

> SIKSHA'D'ANUSANDHAN UNIVER ଶିଷା ଓ ଅନ୍ଯହାନ ତିଣ୍ଡିତ୍ୟାଳସ

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