Registration

The delegates may register by returning the Registration Forum duly completed along with delegate fee as indicated below.

| Delegates & non-members of IEI | : | Rs.1000 |
|--|---|---------|
| Students | : | Rs. 250 |
| Corporate members of IEI & Engg. Faculty | : | Free |

Tariff for Advertisement

The Technical Proceedings featuring all papers which will be presented and discussed at the all India seminar will be brought out on occasion for distribution to the delegates as well as to various related organizations across the country.

| Back Cover - Outside (Colour) | Rs. 30,000 | |
|--------------------------------------|------------|--|
| Front & Back Cover - Inside (Colour) | Rs. 25,000 | |
| Inside Full Page (Colour) | Rs. 15,000 | |

Sponsorship Fee

Sponsorship is an excellent way for organizations to receive recognition. The Organising Committee extends a very warm invitation to related organisations to sponsor this important all India event in the form of Seminar kit, printing of seminar Proceedings and hosting of Lunch and Dinner. By virtue of their sponsorship, such organizations are entitled to the following privileges.

Rs.1,00,000 : 5 free delegates + display +stall + banner

Rs. 50,000 : 3 free delegates +display + banner

Rs. 25,000 : 2 free delegates + display

Innovative Exhibits & Posters are invited for products, services and projects from Entrepreneurs with a nominal fee of Rs.3000/per exhibit.

Note: Description of Project/Display with relevant sketches and exhibits dimensions are to be submitted to IEI before 5th Sept 2019. Selected exhibits can be displayed at the venue.

Payment

All payments shall be made through multicity cheques/ Demand Draft drawn in favour of **"The Institution of Engineers (India)**, **Kerala State Centre"** payable at Thiruvananthapuram. Payment can also be made online to SB a/c no.10347396254, IFC code: SBIN0007898 of SBI, Nanthencode Branch.

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Er. S.Vinaya Kumar, MIE

The Institution of Engineers (India) ("99 years of Relentless Journey towards Engineering Advancement of Nation Building")

Kerala State Centre

Inauguration of State Level Centenary Celebrations 19th September 2019

8

All India Seminar "Kerala's Water Woes-Challenges and Mitigation"

> 19th & 20th September, 2019 Thiruvananthapuram

Hosted by

The Institution of Engineers (India) Kerala State Centre

Under the aegis of Environmental Engineering Division, IEI

In association with

Kerala Water Authority Kerala Rural Water Supply and Sanitation Agency Kerala State Pollution Control Board Centre for Water Resource Development and Management Central Ground Water Board Kerala State Council for Science Technology & Environment National Bank for Agriculture and Rural Development National Centre for Earth Science Studies Indian Water Works Association, Kerala Centre

Venue

Visvesvaraya Bhavan The Institution of Engineers (India), Kerala State Centre Opp. Kanakakunnu Palace, Thiruvananthapuram - 695033

About the Institution of Engineers (India)

The Institution of Engineers (India) or IEI is the largest multidisciplinary professional body that encompasses 15 engineering disciplines and gives engineers a global platform to share professional interest. IEI has membership strength of more than 0.8 million. Established in 1920 with its headquarters at 8, Gokhale Road, Kolkata-70020, IEI has served the engineering fraternity close to a century. During this period of time, IEI has been inextricably linked with the history of modern day engineering.

In 1935, IEI was incorporated by Royal chapter and remains the only professional body in India which has been accorded this honour. Today, it's quest for professional excellence has given it a place of pride in almost every prestigious and relevant organizations across the globe. It provides a vast array of technical, professional and supporting services to the Government, Industries, Academia and the Engineering fraternity, operating through its 123 Centres located across the country and 6 overseas chapters. Besides, IEI has bilateral agreements with about 33 international bodies and membership of another 8 international bodies of the developed nations across the globe.

Being recognized as a Scientific and Industrial Research Organisation (SIRO) by the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India, IEI promotes the cause of research and development by providing Grant-in-Aid support to undergraduate, post graduate students and PhD Research Scholars of Engineering Institutions and Universities.

IEI conducts Section A&B Examinations in various engineering disciplines, (popularly known as AMIE examinations), the successful completion of which is recognized as equivalent to Degree in appropriate field of Engineering of recognized Universities of India by the Ministry of Human Resources Development, Government of India.

IEI in collaboration with Springer regularly publishes peer reviewed international journal in five series, namely, Series A, Series B, Series C, Series D and Series E covering fifteen engineering disciplines.

IEI is celebrating its Centenary year of formation from September 2019.

IEI Kerala State Centre

Kerala State Centre (KSC) is functioning from 1947 onwards and has completed 72 years of yeomen services to both academic and practicing engineers. There are 5 Local Centres of IEI Kerala State Centre–Kochi, Thrissur, Palakkad, Kozhikode and Kollam.

KSC conducts technical talks regularly on Wednesdays for the last 20 years and it is a unique activity carried out by IEI Kerala State Centre. The Kerala State Centre is located in the heart of Thiruvananthapuram city, easily accessible to engineers and public. A good technical Library, consisting of Engineering books and technical periodicals of various branches of engineering, functioning at the Kerala state centre.

Technical Workshops, Seminars, Technical exhibitions,

National seminars and Training programmes on various engineering disciplines are regularly conducted by the Kerala State Centre.

Most of the Engineering colleges in Kerala have enroled as Institutional members of IEI. Student chapters are functioning in most of the Engineering Colleges. For details please see: www.ietvm.org.

About Centenary Celebrations.

The National Level Centenary Celebrations of the IEI is being inaugurated at Chennai by the Hon'ble President of India on 13th September 2019. The celebrations at the Kerala State level is proposed to be inaugurated on 19th September 2019 in a function at the Kerala State Centre of the IEI. The Hon'ble Chief Minister of Kerala will inagurate the celebrations. A number of seminars & workshops are proposed to be conducted during the year as part of the centenary celebrations with the participation of industry and academia. As the first programme, a two day national seminar is proposed to be conducted on 19th & 20th September 2019, which will be inaugurated by Hon'ble Minister for water resources Govt. of Kerala.

About the Seminar

Kerala is situated between the Arabian Sea at the west and the Western Ghats at the east. The sea coast runs to about 580 km in length and width varies from 30 to 120 km. The topography consists of a hot and wet coastal plain gradually rising in elevation to the high hills and mountains of the Western Ghats. Kerala which depends on the monsoon for water gets an average rainfall of 3100 mm per year. This averages to about 120-140 rainy days per year. Eastern Kerala consists of land comprised in the Western Ghats includes high mountains, gorgeous and deep cut valleys. The wildest land are carried with dense forests while other regions lie under tea, coffee and other plantations. There are 44 rivers in Kerala, originating from Western Ghats, 41 of them flow westward and 3 eastward. The rivers in Kerala are small in terms of length, width and water discharge. The water in these rivers flow faster owing to the peculiar topography of hilly terrain and the shorter distance between Western Ghats and the Arabian Sea. It is identified that the water flowing from the Western Ghats reaches the sea in about 48 hours during monsoon.

Kerala has been experiencing increasing incidents of drought in the recent past due to the weather anomalies and developmental pressures resulting in the changes in land use and changed life style of the people. The increase in population, expansion in irrigated agriculture and industrial growth necessitated exploitation of more water resources. This resulted in depletion of water level in ground water resources and acute scarcity of fresh water is felt in almost all areas of the State. About 95% of annual rainfall is confined to a period of six months between June and November leaving the remaining six months as practically dry. The changes in rainfall pattern may have association with the environmental modification due to human interventions on the natural eco system. Kerala experiences seasonal drought condition during the summer months and this is severe in the midland and high land regions. This phenomena adversely affected both the rural and urban drinking water availability. Thus, for better planning of the drought management measures, the term drought has to be redefined based on the actual rainfall received and lowering of water table during summer months instead of total monsoon rainfall.

The seminar plans to address all these aspects to a great extent and bring out a suitable mitigation strategy so as to ensure safe water for all including future generations.

Sub themes:

- Water Demand Profiling
 Water Quality Control
 - Treatment of Waste Water & safe disposal
- Alternate source of water
 Awareness Programme

Call for Papers

Prospective authors intending to present their papers are invited to submit full-length papers not exceeding eight pages of A4 size with 'Abstract' of 250 words. The paper neatly typed in 12-point font size (Times New Roman) in double space, leaving 4cm space on top and 3cm space for bottom, left and right of the page, shall be sent.

| Last date for receipt of Abstract : | 18 | 'Aug 2019 |
|---|----|-----------|
| Notification for Acceptance of Abstract : | 24 | Aug 2019 |
| Last date for receipt of Full Text : | 2" | Sept 2019 |

Guidelines

Authors of accepted abstracts may submit their full paper for the India Seminar as per the Guidelines mentioned below:

- 1. Papers should be in MS-Word format, not exceeding 3000 words in length and should not carry more than 5 illustrations/ photographs in black and white.
- 2. The language of the Publication is English. The mode of presentation should be in third person.
- 3.SI units should be used wherever possible. Other units, if used, should be given only in parentheses preceded by SI units.
- 4. Mathematical symbols should be typed and care should be taken to differentiate between similar characters (e.g. 1 and I), upper and lower case letters and superscripts and subscripts.
- 5. Lengthy mathematical proofs and derivations and extensive test data are discouraged. If absolutely essential, they should be given as an appendix.

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The papers are considered for possible publication, on the understanding that these have not been submitted to any other publisher. The copyright of papers accepted for publication lies with The Institution of Engineers (India) and reproduction of the papers or any part thereof is not allowed without the permission of IEI. Contributors are required to sign a declaration to this effect while submitting their papers.

As per Bye-Law 118 of IEI, Copyright of each paper published in Institution Journals shall lie with the Institution. The Declaration Form of IEI can be downloaded from the link:

https://www.ieindia.org/webui/IEIActivities.aspx#Call_Papers



The Institution of Engineers (India) Kerala State Centre Thiruvananthapuram

All India Seminar on

"Kerala's Water Woes -Challenges and Mitigation"

19th & 20th September, 2019

The Institution of Engineers (India)

Visvesvaraya Bhavan, Opposite Kanakakunnu Palace, Thiruvananthapuram-695033

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