

NEWS LETTER

INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY

<http://www.iset.org.in>, Tel. No. 01332-284491, E-mail: office@iset.org.in

ESTD: 1962

Co-Editor: P. K. S. Chauhan

April-October 2018

A BRIEF REPORT ON A HALF-DAY WORKSHOP ENTITLED “A NEW PERSPECTIVE ON NATURAL HAZARD, RISK & INSURANCE”



Prof. M. Parida, Dean, SRIC, IIT Roorkee delivering Presidential address at the Inaugural Function.

A Half-day Workshop entitled “A New Perspective on Natural Hazard, Risk & Insurance” discussing the Challenges and Innovations in Seismic disaster mitigation and managements were organized at the Department of Earthquake Engineering, IIT Roorkee on May 02, 2018. The workshop was organized by the Dept. of Earthquake Engineering, IIT Roorkee and ISET Roorkee Chapter in association with DHI Water and Environment, ERN: Risk Experts & Asian Institute of Technology. Nearly 80 registered participants including faculty, students, and several practicing Engineers attended the lecture. This workshop was inaugurated by the Chief Guest Prof. M. Parida, Dean, Sponsored Research and Industrial Consultancy (SRIC), IIT Roorkee. This workshop was chaired by Prof. M.L. Sharma, President ISET, and Prof. Yogendra Singh, Head, Dept. of Earthquake Eng., IIT Roorkee.

10 keynotes were delivered across three technical sessions and the workshop concluded with Valedictory Session by Prof. Yogendra Singh, Prof. M.L. Sharma and Mr. Tom Burkit.

ISET Roorkee Chapter News



A view of the Lecture

ISET Roorkee Chapter in association with the Department of Earthquake Engineering, IIT Roorkee organized a lecture on “**Development of Earthquake Early Warning System in Israel**” on 25th July 2018, at Department of Earthquake Engineering, I.I.T. Roorkee. The lecture was delivered by Prof. Alon Ziv, Chief Scientist, Department of Geophysics, Tel Aviv University. There were two speakers for the technical. **Mr. Amir Diner, Co-Founder and Ceo, Seismic Ai & Mr. Benny Sasson, Co-Founder and Cto, Seismic Ai** discussed on “Instrumentation”. Nearly 55 participants including faculty, students, and several practicing Engineers attended the lecture. Prof.

Alon Ziv shared his vast experience on Development of Earthquake Early Warning System in Israel. The lecture was well received with useful discussions. Prof. M.L. Sharma, President, ISET and Prof. Yogendra Singh, Head, Department of Earthquake Engineering introduced the speaker to the audience and Dr. S.C. Gupta, E.C. Member, ISET proposed the vote of thanks.

16th SYMPOSIUM ON EARTHQUAKE ENGINEERING

December 20-22, 2018, Roorkee, India

Organisers: Department of Earthquake Engineering, Indian Institute of Technology Roorkee and Indian Society of Earthquake Technology, Roorkee-247 667

KEYNOTE SPEAKERS

1. Prof. A. Boominathan, IIT Madras
2. Mr. J. K. Bothara, Miyamoto International NZ Ltd
3. Prof. Henry V. Burton, UCLA, Los Angeles
4. Prof. Sreekanta Das, Univ. of Windsor, Canada
5. Prof. S.K. Deb, IIT Guwahati
6. Prof. Rajesh Dhakal, Univ. of Canterbury, NZ
7. Prof. Harsh K. Gupta, IUGG, NGRI, Hyderabad
8. Prof. V. K. Gupta, IIT Kanpur
9. Prof. Amit Kanvinde, Univ. of California, Davis, USA
10. Prof. Dominik Lang, NORSAR, Norway
11. Prof. Bing Li, NTU, Singapore
12. Prof. G.S.P. Madabhushi, Univ. of Cambridge, U.K.
13. Prof. Ahmed Mebarki, University of Paris, France
14. Prof. H. Mutsuyoshi, Saitama University, Japan
15. Prof. S.K. Nath, IIT Kharagpur
16. Prof. Ehsan Noroozi, KGUT, Iran
17. Prof. Taichiro Okazaki, Hokkaido University, Japan
18. Prof. M. Saitoh, Saitama University, Japan
19. Prof. M.P. Singh, Virginia Tech., USA
20. Prof. T.G. Sitharam, IISc Bangalore
21. Prof. Ikuo Towahata, Tokyo University, Japan
22. Prof. Kevin Z. Truman, UMKC, USA
23. Prof. K.L. Wen, NCREE, Taiwan
24. Prof. J.H. Yin, Hong-Kong polytechnic University

TWO PRE-SYMPOSIUM WORKSHOPS

16SEE will be preceded by two Pre-Symposium Workshops on Resilient Structures and Soil-Structure Interaction both to be held on December 19, 2018 (Wednesday). A number of renowned speakers from India and abroad will deliver the state of the art talks in these workshops. There is separate registration for these workshops. Further details about these workshops can be found on 16SEE website: <https://www.iitr.ac.in/16see/workshops.html>

REGISTRATION DETAILS

The registration fee of the delegates includes registration and conference kit, as well as morning and afternoon refreshments and lunch. The Fee structure is given below (Excluding GST):

Delegate Category	Early Bird*	After Early Bird
Full Delegates from SAARC nations	Rs. 8000.00	Rs. 10000.00
ISSET Life Members/Fellows	Rs. 7000.00	Rs. 9000.00
Students and Research Scholars	Rs. 3000.00	Rs. 4000.00
Foreign Delegates	US\$ 300	US\$ 350

***Early registration window is upto October 31, 2018.**

The payment can be made online through RTGS/NEFT in the conference account (CONFR-16-SEE). For further details visit conference website: <https://www.iitr.ac.in/16see>.

SPONSORSHIP

In order to make the Symposium a success, Institutions and Organizations are requested to sponsor the Symposium. The details of Sponsorship fees is as under:

Platinum Sponsor	:	Rs. 5.00 Lakhs (06 free delegates)
Diamond Sponsor	:	Rs. 3.00 Lakhs (05 free delegates)
Gold Sponsors	:	Rs. 2.00 Lakhs (04 free delegates)
Silver Sponsor	:	Rs. 1.00 Lakh (03 free delegates)
Exhibitor/supporter	:	Rs. 0.50 Lakh (02 free delegate)

The names of sponsors will be prominently acknowledged and displayed on the conference website and at the venue of the Symposium.

ADDRESS FOR CORRESPONDENCE

Prof. B.K. Maheshwari, Organizing Secretary, 16 SEE-2018, Department of Earthquake Engineering, Indian Institute of Technology Roorkee, Roorkee 247 667, Uttarakhand, India

Tel.: +911332285228/285450, Fax: +911332273560, E Mail: 16see@iitr.ac.in, Web: www.iitr.ac.in/16see



**7th International Conference on
RECENT ADVANCES IN GEOTECHNICAL
EARTHQUAKE ENGINEERING AND SOIL
DYNAMICS
July 13-16, 2020, Bangalore, India**



Organisers:

Dept. of Civil Engineering, Indian Institute of Science (IISc), Bangalore in association with Indian Society of Earthquake Technology & Soil Dynamics Forum, IIT Roorkee

CONFERENCE THEMES

1. Field and laboratory testing of soils for the estimation of dynamic soil properties
2. Latest findings on liquefaction of soils
3. Seismic slope stability and landslides
4. Seismic design of retaining walls, marine structures, and dams
5. Seismic design of shallow and deep foundations
6. Soil-structure interaction under dynamic loading
7. Engineering seismology, strong ground motions
8. Ground response analyses and local site effects
9. Seismic hazard analyses
10. Seismic hazard zonation : microzonation projects and procedures
11. Seismic risk assessment
12. Ground improvement techniques for reduction of seismic hazard
13. Role of building codes in reduction of seismic risk
14. Wave propagation, engineering vibrations
15. Vibration problems of high-speed railways
16. Vibration absorption / isolation applications
17. Performance of constructed facilities in extreme events/case histories of geotechnical earthquake engineering
18. Reconnaissance reports of recent damaging earthquakes
19. GIS and remote sensing applications for geo-hazards
20. Sensors and satellite technology for disaster management
21. Seismic risk management and economics
22. Community preparedness and pre-earthquake disaster management
23. Innovative geotechnical applications in earthquake disaster management
24. Earthquake engineering education
25. Review of seismic design codes

IMPORTANT DATES

Abstract submission opens	1 st March, 2019
Abstract submission deadline	15 th July, 2019
Abstract acceptance notification	30 th Aug, 2019*
Submission of full length paper	30 th Nov, 2019
Submission of revised full-length paper after review (if required)	10 th Jan, 2020
Acceptance of full length paper	30 th Jan, 2020

*Decisions on the submitted abstracts and full length papers will be made on a rolling basis

REGISTRATION FEE

Delegate Category	Until Jan. 15, 2020	After Jan. 15, 2020
ISET Members	INR 6000	INR 7000
Non -ISET Members	INR 8000	INR 9000
Bonafide Students	INR 3500	INR 4500
Accompanying Persons	INR 3500	INR 3500
Foreign Delegates	US\$ 500	US\$ 600
Accompanying Persons	US\$ 250	US\$ 250

SPONSORS

Industries, Instrument Manufacturers, Builders, Contractors, Consultants, Institutions and other agencies are invited to generously sponsor the event. For sponsorship benefits, please contact the coordinator.

Platinum Sponsor : Any amount befitting the organization
 Golden Sponsor/Co-host : INR 200000
 Silver Sponsor : INR 100000
 Sponsor : INR 50000

Address for Correspondence

Prof. T.G. Sitharam, Department of Civil Engineering, Indian Institute of Science (IISc), Bangalore, India & Chairman, 7ICRAGEE. Ph. +91-80 23602261, E-mail: sitharam@iisc.ac.in.

Dr. Ravi S. Jakka, Secretary, Indian Society of Earthquake Technology (ISET), Roorkee, India and Organizing Secretary, 7ICRAGEE. Ph.: +91-9492705365, E-mail: jakkafeq@iitr.ac.in/rsjakka@gmail.com

Dr. Sreevalsa K, Amrita Vishwa Vidyapeetham Coimbatore, Organizing Secretary, 7ICRAGEE. Phone: +91-9471192250, E-mail: sreeiisc@yahoo.com/, sreevalsakolathayar@gmail.com

Secretariat: Email: conf@7icragee.org, Website: www.7icragee.org

NEWS ABOUT ISET MEMBERS

Dr. P. C. Jain (LF-56)



Dr P C Jain, Fellow of Indian Society for Earthquake Technology and a Scientist with Defence Research & Development Laboratory (DRDL) Hyderabad has been inducted as an Associate Fellow of American Institute of Aeronautics and Astronautics (AIAA). The distinguished individuals comprising the Class of 2018 Associate Fellows exemplify extraordinary accomplishments and leadership in the Global Aerospace Community. Dr Jain is the only Scientist working in India who figures in the list of 2018 Associate Fellows. Dr Jain an alumnus of IIT Roorkee, IIT Bombay and BOYSCAST (DST) Fellow from Pennsylvania State University USA is highly accomplished and internationally known expert in the areas of Structures Technologies. He is a Fellow of Indian Association of Structural Engineers, Fellow of Telangana Academy of Sciences and Fellow of Institution of Engineers India. He is also associated with Indian Institute of Technology Delhi as AICTE INAE Distinguished Visiting Professor.

He has also been conferred prestigious Homi J. Bhabha Award by Honorable Minister of Science & Technology, Government of India, Dr Harsh Vardhan during inaugural Session of 105th Indian Science Congress in recognition of his marvelous contributions in the area of Science and Technology. He has made significant contributions to DRDO Projects. **ISET family wishes Dr. Jain great success in his new endeavour.**

GLIMPSES OF 189TH E.C. MEETING AND 38TH ISET ANNUAL LECTURE



E.C. Team at the time of E.C. meeting & 38th ISET Annual Lecture



Technical Interaction with Student of Dr. Vishwanath Karad MIT World Peace University, Pune

THE 38TH ISET ANNUAL LECTURE

ISET organized the 38th ISET Annual Lecture.

Dr. I.D. Gupta, Former Director, Central Water and Power Research Station, Pune has delivered the 38th ISET Annual Lecture on '**Some Crucial Issues in Earthquake Response Analysis of Gravity Dams**' on March 24, 2018 in Saint Dnyaneshwar Hall, Library Building, Dr. Vishwanath Karad MIT World Peace University, S.No. 124, Paud Road, Kothrud, Pune. Prof. M.L. Sharma, President, ISET presided over the function. Prof. A. Boominathan, E.C. Member, ISET introduced the eminent speaker. The abstract of the Lecture is given below:

Out of nearly 57,000 large dams (15 m or higher) the world over, only about 7.8% dams are located in India as against a population of about 17%. India thus needs to construct a large number of dams in near future to meet the ever increasing requirement of water for irrigation, human consumption, industrial use, and generation of electricity. Water reservoirs created behind large dams also help in flood moderation. Two broad categories of dams are the earth and rock-fill type of embankment dams and the concrete or stone masonry type of gravity dams. A gravity dam resists the water pressure and other overturning forces by its own weight only and thus termed as gravity dam. The gravity dams are the maximum in number due



Dr. I. D. Gupta delivering the 38th ISET Annual Lecture

to a number of advantages associated with them. However, many crucial issues specific to the earthquake response analysis of such dams are often not treated appropriately.

Most of the favourable sites having been already utilized, many of the future dams in India will be sited in areas of high seismicity and complex geology, posing great engineering challenges for their safe and economical design. Many of the old dams have been designed using simplified methods of analysis with nominal seismic forces due limited availability of computers and necessary software and due to lack of detailed understanding of the seismotectonics and ground motion characteristics at that time. It is thus necessary to develop physically realistic and mathematically accurate methods of analysis for design of new dams as well as for safety evaluation of important existing dams. In addition, the input ground motion and the material properties of the dam and the foundation also play very important role in the dam design, because even most sophisticated method of analysis will be of no use if these inputs are not realistic.

Earthquake response analysis of gravity dams is a much more complex problem than that of most other structures on land. A gravity dam is a massive structure resting directly on the foundation rock and in contact with the huge reservoir of water upstream. This requires analyzing the dam, a large part of the foundation, and the reservoir of water as a complete single system under simultaneous action of horizontal (transverse) and vertical components of ground acceleration. During intense earthquake shaking, significant additional forces are at play due to interaction between the base of the dam and foundation rock and between upstream face of the dam and the reservoir water. The hydrodynamic interaction forces are also affected significantly by the thickness of the sediments deposited at the reservoir bottom. To get reliable estimate of the earthquake response of a gravity dam, all these effects need to be modeled in realistic and accurate manner.

It is proposed to discuss in some detail how the following complex issues associated with earthquake response analysis of gravity dams can be treated in practically simple ways:

- (i) Dam Foundation rock interaction effects
- (ii) Hydrodynamic forces
- (iii) Reservoir bottom absorption effects
- (iv) Stochastic nature of the response
- (v) Material properties and performance criteria

Dr. Ravi S. Jakka, Secretary, ISET proposed vote of thanks. The Annual Lecture was attended by large number of Engineers, Academicians and Students. The 38th ISET Annual Lecture was followed by 47th Annual General Meeting at the same venue. **Glimpses of 189th E.C. meeting and 38th ISET Annual Lecture can be viewed the page 04.**

NEW BOOKS PUBLISHED

The book on “**Advances in Indian Earthquake Engineering and Seismology: Contributions in Honour of Jai Krishna**” has been published by Springer. The details of the Book can be accessed from the publisher's link: <https://www.springer.com/us/book/9783319768540>.

About the Authors:

Dr. M.L. Sharma is a Professor in the Department of Earthquake Engineering at the Indian Institute of Technology, Roorkee. He earned his Masters in Applied Geophysics and his Ph.D. in Earthquake Engineering from the University of Roorkee in 1985 and 1992 respectively. He has authored or co-authored 10 books and 82 journal articles, and is a member of several professional associations including the Indian Society of Engineering Geology, the Indian Geotechnical Society, and the Seismological Society of America. His research interests include engineering seismology, seismic microzonation, seismic hazard assessment, and strong ground motion prediction.

Dr. Manish Shrikhande is a Professor in the Department of Earthquake Engineering at the Indian Institute of Technology, Roorkee. He earned his Masters in Earthquake Engineering from the University of Roorkee in 1992, and his Ph.D. from the Institute of Technology, Kanpur in 1998. He has authored 3 books, 3 book chapters, and 22 journal articles, and is a member of the Indian Society of Earthquake Technology and the Earthquake Engineering Research Institute. His research interests include earthquake resistant design, engineering seismology, and seismic damage detection.

Dr. H.R. Wason is an Emeritus Fellow and former Professor in the Department of Earthquake Engineering at the Indian Institute of Technology, Roorkee. He is also the former President of the Indian Society of Earthquake Technology (ISET), and a member of several other professional societies including the Indian Geotechnical Society and the Indian Geological Congress. He has edited 1 book, 2 book chapters, and 32 journal articles, and 36 conference papers. His areas of specialization include engineering seismology, seismic hazard and risk assessment, microearthquake networks, and theoretical seismology.

CALL FOR PAPERS

ISET Members are invited to submit their research papers for possible publication in the ISET Journal of Earthquake Technology. The PDF file of the manuscript should be submitted to the Editor electronically (editor@iset.org.in, editor.iset@gmail.com) for possible publication of an article in the Journal. The submission may alternatively be made to Associate Editors drsahoo@civil.iitd.ac.in, amurali@iitg.ac.in, and mpando@uncc.edu

FEE STRUCTURE

Life Membership	Rs. 5000/- (US\$ 500)
Annual Membership	Rs. 1000/- (US\$ 100)
Student Membership (Annual)	Rs. 500/-
Permanent Institutional Membership	Rs. 25,000/- (US\$ 2500)
Annual Institutional Membership	Rs. 6000/- (US\$ 600)
Life Fellowship (For conversion of Life Membership to Fellowship)	Rs. 2000/- (US\$ 200)
Annual Subscription of ISET Journal	Rs. 2000/- (US\$ 200)

Application form can be downloaded from Website: www.iset.org.in or obtained from Secretary, Indian Society of Earthquake Technology, Earthquake Engineering Department Building, IIT Roorkee, Roorkee -247 667.

The Membership fee can be transferred electronically to the following Bank A/c:

	Indian Overseas Bank, Roorkee	Punjab National Bank, Roorkee
Name of the Account	Secretary, Indian Society of Earthquake Technology	Secretary, Indian Society of Earthquake Technology
Account Number	035901000001269	404400 0100147706
Name of the Bank	Indian Overseas Bank	Punjab National Bank
Address	Indian Overseas Bank, Civil Lines, Roorkee	Punjab National Bank, IIT Campus, IIT Roorkee
Branch Code	0359	404400
IFSC Code	IOBA0000359	PUNB0404400

After successful payment of membership fee, please inform us the transaction details.

DONATION TO ISET

To make donation to ISET easy, payment through net banking has been operationalised. The ISET bank accounts details are as under:

	Indian Overseas Bank, Roorkee	Punjab National Bank, Roorkee
Name of the Account	Secretary, Indian Society of Earthquake Technology	Secretary, Indian Society of Earthquake Technology
Account Number	035901000001269	404400 0100147706
Name of the Bank	Indian Overseas Bank	Punjab National Bank
Address	Indian Overseas Bank, Civil Lines, Roorkee	Punjab National Bank, IIT Campus, IIT Roorkee
Branch Code	0359	404400
IFSC Code	IOBA0000359	PUNB0404400

Only 50% of the donated amount is tax exempt under 80G of Income Tax Act of 1961 and list of donors will be provided in ISET Web-Site and ISET News Letter. The detailed receipt will be emailed / posted.

We look forward to your valued support for making ISET to reach even greater heights.

ATTENTION ISET MEMBERS

Please send your email ID (Preferably gmail) and Mobile/Telephone number to the ISET office in the following format.

Name & Address	Permanent Address	
	Current Address	
Membership No.		
Email ID (preferably gmail)		
Mobile/Telephone No.		

ISET Office will update the above information in the database, and use the same for future correspondence. Please send the above information at the earliest.

Members may also send any information that they wish to get published in the next News Letter. Kindly send this information through email to: office@iset.org.in

ISSET MEMBERSHIP CORNER

The Executive Committee of ISET extends a hearty welcome to the following Members, who have been admitted to the Society during the period November 05, 2017 to October 27, 2018.

Life Members:

1. LM 1692	Dr. Meyyappan Palaniappan	CED, Kalasalingam Univ., Krishnankoil, TN
2. LM 1693	Dr. Sharadkumar P. Purohit	CED, Nirma University, Ahmedabad
3. LM 1694	Prof. Jhanvi M. Suthar	CED, Nirma University, Ahmedabad
4. LM 1695	Prof. Utsav K. Koshti	CED, Nirma University, Ahmedabad
5. LM 1696	Sri Jitendra Kumar	Builttech Services Inc, Ghaziabad
6. LM 1697	Dr. Rangaswamy Kodi	CED, NIT Calicut, Kerala
7. LM 1698	Sri Pradipta Kishore De	PWD, Agartala, Tripura
8. LM 1699	Sri Abhijit Bhattacharjee	PWD, Agartala, Tripura
9. LM 1700	Sri Partha Pratim Debnath	PWD, Agartala, Tripura
10. LM 1701	Sri Tapas Barua	Rural Development Dept., Agartala, Tripura
11. LM 1702	Dr. Rabi Narayan Behera	CED, NIT Rourkela, Odisha
12. LM 1703	Dr. Manmohan Dass Goel	Dept. Applied Mechanics, VNIT, Nagpur
13. LM 1704	Mr. Rakesh Kumar Khali	Hindustan Construction Co. Ltd, Mumbai
14. LM 1705	Dr. Ashish Premkishor Khatri	Dept. Applied Mechanics, VNIT, Nagpur
15. LM 1706	Mr. B.R. Madhusudhan	RS, CED, IIT Madras, Chennai
16. LM 1707	Dr. Gulab Singh Narwal	Bhakra Beas Management Board, Mandi
17. LM 1708	Mr. Ajinkya B. Magar	Magar Pawar Associates, Nashik
18. LM 1709	Prof. Damodar Maity	CED, IIT Kharagpur
19. LM 1710	Prof. Vijayalakshmi Akella	KS School of Eng. & Management, Bengaluru
20. LM 1711	Ms. Vasantha L. Gudasali	KS School of Eng. & Management, Bengaluru
21. LM 1712	Dr. Narender Bodige	CED, Anurag Group of Institutions, Hyderabad
22. LM 1713	Dr. Rajaram Chenna	RGM College of Eng. & Tech., Nandyal, AP
23. LM 1714	Er. Vikrant Vikram Rastogi	TETRA Tech. Delhi
24. LM 1715	Prof. Hanamant R. Magarpatil	MIT, Pune, Maharashtra
25. LM 1716	Er. Ashwani Kundal	Jammu & Kashmir
26. LM 1717	Er. Sivakumar Reddy S.	Hatch Pvt. Ltd, Andhra Pradesh
27. LM 1718	Er. Aniket Naresh Tolani	Dr. Kelkar Designs Pvt. Ltd., Maharashtra

Life Fellow:

1. LF 57	Dr. Sushil Gupta	Risk Modeling and Insurance, RMSI, Noida
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Annual Institutional Member:

1. IM 132 (A)	Principal, A.D. Patel Ins. Tech., Vidyanagar, Dist. Anand, Gujarat
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CALENDAR OF FORTHCOMING EVENTS

OCTOBER 27-28, 2018

The 8th ISEV 2018 (International Symposium on “Environmental Vibration and Transportation Geodynamics”) (formerly named as the International Symposium on Environmental Vibration) under the auspices of ISSMGE TC 202 is scheduled to be held at Changsha, China. **For more details:** E-mail: isev2018@yahoo.com, Website: www.isev2018.cn.

NOVEMBER 2-3, 2018

International Conference on “Sustainable Waste Management through Design (SWMD-2018)” is scheduled to be held at Ludhiana, India. **For more details:** E-mail: igs.ldh@gmail.com.

DECEMBER 13-15, 2018

Indian Geotechnical Conference (IGC-2018) is scheduled to be held at Indian Institute of Science (IISc), Bengaluru. **For more details:** www.igc2018.com.

DECEMBER 20-22, 2018

16th Symposium on “Earthquake Engineering (16SEE-2018)” is scheduled to be held at Department of Earthquake Engineering, IIT Roorkee. **For more details** can be viewed on page 02 of this News Letter.

JULY 13-16, 2020

7th International Conference on “Recent Advances in Geo-technical Earthquake Engineering and Soil Dynamics” is scheduled to be held at Indian Institute of Science, Bangalore. For more details can be viewed on page 03 of this News Letter.

AUGUST 10-11, 2020

International Conference in Geotechnical Engineering (ICGE 2020) is scheduled to be held at Colombo, Sri Lanka. **For more details:** E-mail: slgssecretariat@gmail.com.

ANNUAL GENERAL BODY MEETING

MINUTES OF THE 47th ANNUAL GENERAL BODY MEETING OF THE INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY HELD ON MARCH 24, 2018 AT 4:45 PM In the Saint Dnyaneshwar Hall, Library Building, Dr. Vishwanath Karad MIT World Peace University, PUNE.

- 47.0 Prof. M.L. Sharma, President ISET, welcomed the members present to the 47th Annual General Body Meeting.
- 47.1 The members confirmed the minutes of the 46th Annual General Body meeting held on March 30, 2017.
- 47.2 The action taken on the minutes of the 46th AGM were reported by the Secretary and the same was noted by the members attending Annual General meeting.
- 47.3 Reporting Items:
All the reporting items as given in the Annual Report of the Secretary (see item 47.5, Annexure-II) were considered.
- 47.4 Considered the Audited Annual Accounts of the Society for the year ending March 31, 2017 as approved by the Executive Committee and the same was approved by the General Body. A copy of the Audited Annual Accounts is enclosed in **Annexure-I**.
- 47.5 Considered the Annual Report of the Secretary for ISET activities during the period March 30, 2017 to March 23, 2018 as approved by the Executive Committee and the same was approved by the General Body. A copy of the Annual Report is enclosed in **Annexure-II**.
- 47.6 Considered the issue related to the membership of Engineering Council of India (ECI), New Delhi, as resolved by E.C. in its meeting held on Nov. 04, 2017. The General Body members resolved that more information be collected in this regards.
- 47.7 To consider the issue related to the premium on the insurance facilities to the ISET Staff on 50:50 basis, as resolved by E.C. in its meeting held on Nov. 04, 2017. The General Body members had approved the premium on the insurance facilities to the ISET Staff along with spouse on 50:50 basis.
- 47.8 **Any other items:**
- It was discussed to circulate soft copy of guidelines on earthquake resistant design of structures and other, to all local chapters & ISET members. Request their requirement for number of copies. Accordingly, the guidelines be printed and distributed at nominal cost.
 - It was discussed to create membership login & password by ISET Office, and request all the members to provide the updated information. Efforts are to be made to contact members of ISET in this regard through phone/e-mails.

The Society put on the record thanks and appreciation for MIT-WPU, Pune and ISET Pune Chapter for making all the arrangements and efforts for organizing the 189th E.C. meeting, 38th Annual Lecture and 47th Annual General Meeting. Particularly we are thankful to Prof. L.K. Kshirsagar, Prof. Mrudula Kulkarni, and Prof. Sandeep Potnis for all the excellent arrangements at MIT-WPU, Pune.

The meeting ended with a vote of thanks to the chair.

(Dr. Ravi S. Jakka)
Secretary, ISET

Annexure-II

INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY, ROORKEE

ANNUAL REPORT

(For the period from March 30, 2017 to March 23, 2018)

Dear Members,

It gives me immense pleasure in presenting the Annual Report of Indian Society of Earthquake Technology for the period March 30, 2017 to March 23, 2018. The salient activities of the Society during this period are presented in this Annual Report.

1. Meetings

The last Annual General Body Meeting (46th AGM) of the Society was held at Roorkee on March 30, 2017, minutes of which were published in the ISET News Letter of April 2017-January 2018.

During the period of report, Three E.C. Meetings (ECM) have been taken place as detailed below:

Meeting No.	Date	Venue
186 th ECM	March 30, 2017	Roorkee
187 th ECM	April 30, 2017	Roorkee
188 th ECM	Nov. 04, 2017	Roorkee

2. Audit Report

The accounts of the Society for the financial year 2016-2017 have been audited by M/s Vikas Khanna & Co., Chartered Accountants, Roorkee. The E.C. in its meeting held on **Nov. 04, 2017** has approved. It may be noted that in this financial year, the total capital fund of the Society has significantly increased from **Rs. 69,54,964.00** to **Rs. 77,46,841.00**. The excess of income over expenditure during the financial year was Rs. 73,328.00.

3. Publications

ISSET Journal: The issues of March 2015, No. 1, Vol. 52; issues of March December 2016, No. 1-4, Vol. 53; issues of March 2017, No. 1, Vol. 54 has been published. The combined issue of June-December 2015, No. 2-4, Vol. 52 could not be published due to non-receipt of manuscript of papers/annual lectures. The issue of June to December 2017, Vol. 54 is under process.

4. Membership: Since April 01, 2017, 32 Life Members, 01 Annual Institutional Member and 29 Student Members have been enrolled.

Financial Year	Individual Members		Life Fellows	Institution Members		Total	Membership Increased
	Life	Annual		Permanent	Annual		
2014-2015	1597	35	53	55	6	1744	39
2015-2016	1625	36	56	55	6	1776	32
2016-2017	1675	36	56	55	6	1826	50
2017-2018 (as on 23.03.2018)	1707	36	56	55	7	1859	33

Total Student Members: 83

5. ISET Annual Lecture

The 37th ISET Annual Lecture was delivered by Dr. N. Gopalakrishnan, Director, CSIR-Central Building Research Institute, Roorkee on 'Earthquake Resistant Design of Open-Ground Storey Structures-Challenges and Way Forward' on March 30, 2017 at Roorkee.

6. GST Number: The Society has been obtained the GST No. 05AAAA15229A1Z.

7. Commemorative Volume of Jai Krishna

Commemorative Volume on "**Advances in Indian Earthquake Engineering and Seismology: Contributions in Honour of Jai Krishna**" shall be published by Springer shortly.

8. ISET Awards for the Block Years 2009-2012 & 2013-2016

The following ISET Awards for the Block Years 2009-2012 & 2013-2016 for research publications in the field of Earthquake Technology is being processed.

- ISET Jai Krishna Award"
- ISET B.N. Gupta Award"
- ISET V.H. Joshi Award"
- ISET Hanumantacharya Joshi Award"
- ISET Arbinda Mukhopadhyay Award"

9. Various ISET Awards for Significant Contributions & Research Awards for the year 2018

Call for nominations for the following Various ISET Awards for Significant Contributions & Research Awards for the year 2018 was published in the ISET News letter of April 2017-January 2018 and are also posted on the ISET Website: www.iset.org.in The last date for receiving nominations is **April 10, 2018**.

- ISET BIOT AWARD FOR SIGNIFICANT CONTRIBUTIONS IN EARTHQUAKE ENGINEERING WITH EMPHASIS ON BIOT RESPONSE SPECTRUM METHOD – 2018
- ISET SHAMSHER PRAKASH AWARDS FOR SIGNIFICANT CONTRIBUTIONS IN GEOTECHNICAL EARTHQUAKE ENGINEERING - 2018
- ISET TRIFUNAC AWARD FOR SIGNIFICANT CONTRIBUTIONS IN STRONG MOTION EARTHQUAKE STUDIES – 2018

- ISET V.H. JOSHI AWARD FOR SIGNIFICANT CONTRIBUTIONS IN STRUCTURAL DYNAMICS- 2018
- ISET D.K. PAUL RESEARCH AWARD FOR BEST PH.D THESIS IN EARTHQUAKE RISK REDUCTION IN INDIA - 2018
- ISET B.K. MAHESHWARI RESEARCH AWARD FOR BEST PH.D THESIS IN SOIL-STRUCTURE INTERACTION IN INDIA - 2018

10. 16th Symposium on Earthquake Engineering

The Department of Earthquake Engineering and Indian Society of Earthquake Technology (ISET) are organizing the “**16th Symposium on Earthquake Engineering**” **16SEE-2018** during December 20-22, 2018 at Department of Earthquake Engineering, IIT Roorkee.

11. 7th ICRAGEE

Request has been sent to Prof. T.G. Sitharam for organizing 7th Int. Conf. on “Recent Advances in Geo-technical Earthquake Engineering and Soil Dynamics”. Prof. Sitharam has agreed to organize this event at Indian Institute of Science, Bangalore. This event will be held in July, 2020 at IISc, Bangalore.

12. Membership Fee

The Society received a sum of **Rs. 2,50,000/-** in the financial year 2016-2017 in the form of fee for various categories of membership of the Society.

13. Activities of Local Chapters

Roorkee Chapter

Roorkee Chapter organized the following lecture with the Department of Earthquake Engineering, IIT Roorkee, Roorkee.

Lecture on “Flexibility based Fibre Elements for Seismic Analysis of Frame Structures” was delivered on July 03, 2017 by Prof. Arbind K. Singh, Department of Civil Engineering, I.I.T. Guwahati.

Lecture on “Pile Design in Seismic Areas: Theory and Codes of Practice” was delivered on August 07, 2017 by Prof. Subhamoy Bhattacharya, Chair in Geomechanics, University of Surrey, U.K.

Lecture on 'Pseudo Static Stability Analysis in Geotechnical Earthquake Engineering using Lower Bound Approach' was delivered on August 26, 2017 by Prof. P.K. Basudhar, Former Professor, Indian Institute of Technology, Kanpur.

14. Activities of Student Chapters

A meeting of the Managing Committee of ISET-Vellore Students Chapter was held on 04.05.2017, the following members were unanimously elected of the Managing Committee of ISET Students Chapter, VIT University, Vellore.

Prof. Visuvasam J.	- Chairman
Mr. Iniyan Shampath C.K.	- Convener
Mr. Nirmal Prasad G.P.	- Secretary
Mr. Abdul Majid Sayem & Mr. Srivathsan H.	- Members

15. Acknowledgements

The Society would like to thank the sponsors for generous grants to support its activities. Society is also thankful to Dr. Yogendra Singh Professor & Head, Department of Earthquake Engineering, Indian Institute of Technology, Roorkee and Dr. Vishwanath Karad MIT World Peace University, Pune for extending the facilities required for smooth functioning of the Society and carrying out its activities.

We are grateful to **Dr. I.D. Gupta**, Former Director, **Central Water and Power Research Station, Pune** for kindly accepting our invitation for delivering the 38th ISET Annual Lecture today on '**Some Crucial Issues in Earthquake Response Analysis of Gravity Dams**'. The Society is also thankful to the authors and reviewers of papers published in the ISET Journal and the members of the Editorial Committee. Sincere thanks are also placed on record to all individuals and organizations, who have helped the Society directly or indirectly in furtherance of its objectives.

In the end, I would like to thank all the members of the Executive Committee, in particular, Prof. M.L. Sharma, President; Prof. T.G. Sitharam, Vice-President; Prof. Debasis Roy, Editor, and Dr. P.K.S. Chauhan, Co-Editor, who were always willing to help and advise me in carrying out my responsibilities as Secretary of the Society. Thanks are also due to all the E.C. members, Chairman/Secretary of ISET Local Chapters and for their suggestions. Also, I would like to thank the staff members of ISET Office particularly Mr. Pawan Kumar for working hard for the Society.

Roorkee
March 23, 2018

(Dr. Ravi S. Jakka)
Secretary, ISET

**Audited Annual Accounts of the Indian Society of Earthquake Technology
(for the year ending on March 31, 2017)**

VIKAS KHANNA & CO.

CHARTERED ACCOUNTANTS

1st FLOOR, PRAKASH PLAZA,
OPP. SHIV MANDIR, CIVIL LINES,
ROORKEE – 247 667, (U.A.)

TELEFAX : 91 – 1332 - 276336, MOB. 9837126223.

TO
THE MEMBERS,
INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY,
IIT, ROORKEE.

Dear Sir,

We have examined the Balance Sheet of **INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY, IIT ROORKEE** as at 31st March, 2017 and Income & Expenditure Account for the year ended on that date of the which are in agreement with the books of accounts maintained by the said society. These financial statements are responsibility of the society's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We have conducted our audit in accordance with the auditing standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides reasonable basis for our opinion.

(a) We report the following comments :

- (A) We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of the audit.
- (B) In our opinion, proper books of account have been kept by the Head Office of the assessee so far as appears from our examination of the books.

In our opinion and to the best of our information, and according to explanation given to us, the said accounts give a true and fair view:

- (1) In the case of the balance sheet of the state of affairs of the society as at 31st March, 2017 and
- (2) In the case of the income and expenditure account, of the excess of the income over expenditure of the society for the year ended on that date.

PLACE : ROORKEE
DATED : 22 SEP 2017



FOR VIKAS KHANNA & CO.
CHARTERED ACCOUNTANTS
FRN. 010213C

CA. VIKAS KHANNA
PROP.
M. No. 079929

INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY
I.I.T. ROORKEE, ROORKEE.

Balance Sheet as at 31st March, 2017.

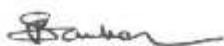
Particulars	Schedule No.	Amount (Rs.) as at 31.03.17	Amount (Rs.) as at 31.03.16
A. SOURCE OF FUND			
General Fund	1	5,057,813	4,625,936
Award Fund	2	2,679,028	2,329,028
TOTAL.		7,746,841	6,954,964
B. APPLICATION OF FUND			
Fixed Assets	3	30,341	35,257
Investment	4	7,482,441	6,763,900
CURRENT ASSETS, LOANS & ADVANCES			
Cash & Bank Balance	5	519,171	181,595
Loan to ICRAGEE		-	100,000
TDS Receivable		20,575	-
TOTAL CURRENT ASSETS		539,847	281,595
LESS: CURRENT LIABILITIES & PROVISION		125,788	125,788
JAI KRISHNA SPECIAL VOLUME		180,000	
TOTAL CURRENT LIABILITIES		305,788	125,788
NET CURRENT ASSETS		234,059	155,807
TOTAL		7,746,841	6,954,964

As per our separate report of even date.

Significant Accounting Policies &
Notes on Accounts.

10

FOR & ON BEHALF OF EXECUTIVE COMMITTEE



SECRETARY



PRESIDENT

PLACE: ROORKEE

DATED: 22 SEP 2017

FOR VIKAS KHANNA & CO.
CHARTERED ACCOUNTANTS



CA. VIKAS KHANNA
PROP.



INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY
I.I.T. ROORKEE, ROORKEE.

Income & Expenditure Account for the year ended 31st March, 2017.

Particulars	Schedule No.	Amount (Rs.) as at 31.03.17	Amount (Rs.) as at 31.03.16
A. INCOME			
Sales	6	425	2,110
Subscription & Annual Membership	7	43,500	42,100
Other Income	8	540,026	514,344
TOTAL		583,951	558,554
B. EXPENDITURE			
Administrative Overheads	9	505,706	625,390
Depreciation	3	4,916	5,735
TOTAL		510,623	631,125
C. EXCESS OF INCOME OVER EXPENDITURE (C= A - B)		73,328	-72,571

As per our seprate report of even date.

FOR & ON BEHALF OF EXECUTIVE COMMITTEE

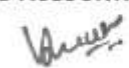

SECRETARY


PRESIDENT

FOR VIKAS KHANNA & CO.
CHARTERED ACCOUNTANTS

PLACE: ROORKEE

DATED: 22 SEP 2017


CA. VIKAS KHANNA
PROP.



Schedule Forming Part of Balance Sheet as at 31st March, 2017.

SCHEDULE - 1

Particulars	Amount (Rs.) as at 31.03.17	Amount (Rs.) as at 31.03.16
GENERAL FUND		
Opening Balance	4,625,936	4,486,272
Add:		
Life Membership	250,000	140,000
Excess of Income over Expenditure	73,328	(72,571)
Shortfall of Dr. Mauriee A. Biat Award	-	72,235
Misc. Excess credited by PNB Roorkee	10,000	-
CHAMOLI & BHUJ WORKSHOP (Excess Amount transferred to General fund)	108,549	-
TOTAL	5,067,813	4,625,936

SCHEDULE - 2

AWARD FUND & PROVISIONS		
Jai Krishna Award	20,000	20,000
Arbinda Mukhopadhyay Award	20,000	20,000
Hanumanta Charya Joshi Award	20,000	20,000
V.H. Joshi Award	20,000	20,000
B. N. Gupta Award	20,000	20,000
Trifunac Award for outstanding Contribution	223,724	223,724
SP Award for outstanding Contribution (I)	300,000	300,000
SP Award for outstanding Contribution (II)	363,617	363,617
B. K. Maheshwari Research Award	50,000	50,000
V.H. Joshi Award for Significant Contribution in Structural Dynamics	300,000	300,000
Dr. Mauriee A. Biat Award	991,687	991,687
D. K. PAUL Research Award for Best Ph.D Thesis in Earthquake Risk Reduction	350,000	-
TOTAL	2,679,028	2,329,028

SCHEDULE - 3

Fixed Assets Particulars	W.D.V as on 01.04.16	Before 30.09.16	Additions After 30.09.16	Total	Rate of Dep.	Dep.	W.D.V as on 31.03.17
Building	3,082	-	-	3,082	10%	308	2,774
Office Equipment	109	-	-	109	15%	16	93
Furniture & Fixtures	4,360	-	-	4,360	10%	436	3,924
P.C. Extension	21,514	-	-	21,514	15%	3,227	18,287
U.P.S.	6,192	-	-	6,192	15%	929	5,263
TOTAL	35,257	-	-	35,257		4,916	30,341
Previous year Figures	40,992	-	-	40,992		5,735	35,257



SCHEDULE - 4

DETAILS OF INVESTMENT AS ON 31-03-2017

SL. NO.	PARTICULARS	DATE OF INVESTEMENT	AMOUNT IN RUPEES	DATE OF MATURITY
1.	IOB No. 2014/NDRR 0168063 035904000001174	01.08.2016	500000.00	01.08.2017
2.	IOB No. 2014/NDRR 0168096 035904000001243	10.08.2016	200000.00	10.08.2017
3.	IOB No. 2014/NDRR 0168154 035904000001373	05.09.2016	2000000.00	05.09.2017
4.	IOB No. 2014/NDRR 0168161 035904000001385	07.09.2016	250000.00	07.09.2017
5.	IOB No. 511502603	01.10.2016	1400000.00	01.10.2017
6.	IOB No. 2014/NDRR 0168340 035904000001719	04.11.2016	100000.00	28.10.2017
7.	IOB No. 2014/NDRR 0168473 035904000002062	19.12.2016	400000.00	19.12.2017
8.	PNB No. 404400 PU00019139**	24.09.2014	485355.00	24.09.2017
9.	PNB No. 404400 PU00031973	01.10.2016	1147086.00	01.10.2017
10.	PNB No. 404400 PU00043118	02.11.2016	1000000.00	02.11.2017
TOTAL			7482441.00	

**FDR No. 404400 PU00019139 dated 24.09.2014 amounting to Rs. 450000.00 + (Interest 56031 – TDS 20676 = Net amount Rs. 35355) accrued during the financial year 2016-17 as per form 16 A given by Bank). Now the total amount is worked out Rs. 4,85,355.00.



INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY
I.I.T. ROORKEE, ROORKEE.

SCHEDULE - 5

Particulars	Amount (Rs.) as at 31.03.17	Amount (Rs.) as at 31.03.16
CASH & BANK BALANCES		
I.O.B.	286,061	140,616
P.N.B.	233,110	40,979
TOTAL	519,171	181,595

Schedule Forming Part of Income & Expenditure Account for the year ended 31st March, 2017.

SCHEDULE - 6

SALES		
Sales of Manuals / Proceedings / Journal	425	2,110
TOTAL	425	2,110

SCHEDULE - 7

Subscription & Annual Membership		
Subscription	21,000	32,100
Institutional Member	6,000	-
Student Membership		2,000
Annual Member	16,500	2,000
Life Fellow		6,000
TOTAL	43,500	42,100

SCHEDULE - 8

OTHER INCOME		
Interest	540,026	514,344
TOTAL	540,026	514,344



INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY
I.I.T. ROORKEE, ROORKEE.

SCHEDULE - 9

Administrative & Contingencies Expenditure

Particulars	Amount (Rs.) as at 31.03.17	Amount (Rs.) as at 31.03.16
Printing	59,487	105,096
Postage	12,544	65,888
Salary	373,968	341,268
Stationary	6,516	3,235
Bank Charges	225	241
Audit and Professional Fees	7,800	7,800
ECM/AGM	12,973	55,902
Telephone Expenses	3,080	1,622
Misc. Expenses	-	3,665
Consumable	-	5,440
Contingency	11,780	5,486
Website Expenses	17,333	17,257
Travelling Allowance	-	12,490
TOTAL	505,706	625,390



VIKAS KHANNA & CO.

CHARTERED ACCOUNTANTS

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ROORKEE – 247 667, (U.A.)

TELEFAX : 91 – 1332 - 276336, MOB. 9837126223.

TO
THE MEMBERS,
INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY,
IIT, ROORKEE.

Dear Sir,

We have examined the Balance Sheet of **INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY, IIT ROORKEE** as at 31st March, 2017 and Income & Expenditure Account for the year ended on that date of the which are in agreement with the books of accounts maintained by the said society. These financial statements are responsibility of the society's management. Our responsibility is to express an opinion on these financial statements based on our audit..

We have conducted our audit in accordance with the auditing standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides reasonable basis for our opinion.

(a) We report the following comments :

- (A) We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of the audit.
- (B) In our opinion, proper books of account have been kept by the Head Office of the assessee so far as appears from our examination of the books.

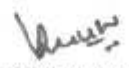
In our opinion and to the best of our information, and according to explanation given to us, the said accounts give a true and fair view:

- (1) In the case of the balance sheet of the state of affairs of the society as at 31st March, 2017 and
- (2) In the case of the income and expenditure account, of the excess of the income over expenditure of the society for the year ended on that date.

PLACE : ROORKEE
DATED : 22 SEP 2017



FOR VIKAS KHANNA & CO.
CHARTERED ACCOUNTANTS
FRN. 010213C


CA. VIKAS KHANNA
PROP.
M. No. 079929