

**INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY, ROORKEE**  
**ANNUAL REPORT**

*(For the period from June 23, 2022 to November 14, 2022)*

**Dear Members,**

It gives me immense pleasure in presenting the Annual Report of the Indian Society of Earthquake Technology for the period June 23, 2022 to November 14, 2022. The salient activities of Society during this period are presented in this Annual Report.

**1. Meetings**

The last Annual General Body Meeting (51<sup>st</sup> AGM) of the Society was held online on June 23, 2022, the minutes of which are being published in the ISET Newsletter of January – December 2022 and is also posted on the ISET Website.

During the period of the report, two Executive Committee Meetings (ECM) were held as detailed below:

202 <sup>nd</sup> ECM	23 <sup>rd</sup> June, 2022 at 5:00 PM	Online mode
203 <sup>rd</sup> ECM	7 <sup>th</sup> October, 2022 at 6:30 PM	Online mode

**2. Audit Report**

The accounts of the Society for the financial year 2021-2022 have been audited by Vikas Khanna & Co., Chartered Accountants, Roorkee. The E.C. in its meeting held on 7th October , 2022 has approved the audit reports. It may be noted that in this financial year, the **total capital fund** of the Society has increased from Rs. **1,32,37,713/- to Rs. 1,40,85,768/-**.

**3. ISET Annual Lecture**

The 42<sup>nd</sup> ISET Annual Lecture was delivered by **Prof. Rajesh Dhakal**, Deputy Head of Department, Civil & Natural Resources Engineering, University of Canterbury, Christchurch, New Zealand on ‘**Beyond Life-Safety: The Quest Continues**’, online mode on June 23, 2022.

**4. Election of ISET E.C. for the term 2023-2025**

A Committee with Prof. Josodhir Das (LM-653) as its Convener, and Dr. Ajay Chourasia (LF 32) & Dr. P.K.S. Chauhan (LM 1589) as its members had been formed to supervise the election of various office bearers and members of the ISET Executive Committee for the term 2023-2025. The Secretary, ISET is being invited to the nominations in this regard (vide letter No. ISET/Election/2023-2025/ dated October 31, 2022). The last date for receipt of the nomination form was **December 05, 2022**. The last date for receipt of the withdrawal from the candidature for the ISET Executive Committee for the term 2023-2025 shall be December 22, 2022.

**5. Publications**

**ISET Journal:** The Special Commemorative issues in the Honor of Late Professor D.K. Paul of September 2021 (No. 3), December 2021 (No. 4) of Vol. 58, and issue March 2022 (No. 1) of Vol. 59 have been published recently. Soft copies have been sent to all the ISET Members. Similarly, the issues of June 2022 (No. 2) of Vol. 59 are under review, and the issues of September 2022 (No. 3), and December 2022 (No. 4) of Vol. 59 is under process.

The Special Commemorative issues in the Honor of Late Professor D.K. Paul former Deputy Director, IIT Roorkee, Head, Dept. of Earthquake Engineering is being published by Springer.

**ISET News Letter:** ISET News Letter of January - December 2022 is under process.

## 6. Membership

Since April 01, 2022, 1 Life Fellow, 12 Life Members, 11 Annual Members, 2 Student Members, and 1 Permanent Institution Member have been enrolled.

<i>Permanent</i>  <b>Financial Year</b>	<b>Individual Members</b>		<b>Life Fellows</b>	<b>Institution Members</b>		<b>Total</b>	<b>Membership Increased</b>
	<b>Life</b>	<b>Annual</b>		<b>Permanent</b>	<b>Annual</b>		
2018-2019	1734	38	58	55	7	1892	31
2019-2020	1743	39	58	55	7	1902	10
2020-2021	1788	42	58	57	7	1952	50
2021-2022	1847	43	61	58	7	2016	64
2022-2023 on 06.10.2022	1859	54	62	59	7	2042	26

## 7. ISET Awards for Significant Contributions & Research Awards for the year 2022

The details of the winners are given below:

- ❖ **ISET Biot Award** for Significant Contributions to **Earthquake Engineering with emphasis on Biot Response Spectrum Method** has been awarded to **Prof. Vinay K. Gupta**, Department of Civil Engineering, Indian Institute of Technology Kanpur, Kanpur for the year 2022. The award consists of award money of Rs. 2,00,000/- and a citation.
- ❖ **ISET V.H. Joshi Award** for Significant Contribution in **Structural Dynamic** have been awarded jointly to **Prof. Firdaus E. Udvardia**, University of Southern California, Los Angeles, USA and **Prof. Maria I. Todorovska**, Department of Civil & Environmental Engineering, Tianjin University, Tianjin, China, and **Sonny Astani** Department of Civil & Environmental Engineering, University of Southern California, Los Angeles, California, USA for the year 2022. The award consists of award money of Rs. 1,25,000/- and a citation.
- ❖ **ISET Trifunac Award** for Significant Contributions in **Strong Motion Earthquake Studies** has been awarded to **Dr. Ishwer Datt Gupta**, Ex-Director, Central Water and Power Research Station (CWPRS), Pune for the year 2022. The award consists of award money of Rs. 30,000/- and a citation.
- ❖ **ISET Shamsheer Prakash Mid-Career Research Award** for Significant Contributions in **Geotechnical Earthquake Engineering** has been awarded to **Prof. Neelima Satyam**, Professor, Dept. of Civil Engineering, IIT Indore, Khandwa Road, Simrol, Indore, for the year 2022. The award consists of award money of Rs. 51,000/-, plus Shawl and a Plaque.
- ❖ **ISET T.G. Sitharam Mid-Career Research award** for “**Innovations in Geotechnical Earthquake Engineering**” has been awarded to **Dr. Ravi S. Jakka**, Associate Professor, Department of Earthquake Engineering, IIT Roorkee, for the year 2022. The award consists of an award money of INR 30,000/-, and a Plaque.
- ❖ **ISET Shamsheer Prakash Early Career Research Award** for Significant Contributions in **Geotechnical Earthquake Engineering** has been awarded to **Dr. Supriya Mohanty**, Assistant Professor, Department of Civil Engineering, Indian Institute of Technology BHU, Varanasi, for the year 2022. The award consists of award money of Rs. 51,000/-, plus Shawl and a Plaque.
- ❖ **ISET D.K. Paul Research Award** for Best Ph.D Thesis in **Earthquake Risk Reduction** in India has been awarded to **Dr. P. Pravin Kumar Venkat Rao**, Assistant Professor, Earthquake Engineering Research Centre (EERC), International Institute of Information Technology, Hyderabad (IIIT-H), Gachibowli, Hyderabad, Telangana, India for the year 2022. The award consists of award money of Rs. 60,000/- and a citation.
- ❖ **ISET B.K. Maheshwari Research Award** for Best Ph.D. Thesis in **Soil-Structure Interaction** in India has been awarded to **Dr. Ramon Varghese**, Postdoctoral fellow,

University College Dublin, Ireland, for the year 2022. The award consists of award money of Rs. 11,000/- and a citation.

## 8. ISET Awards for the Block Years 2017-2020

The details the of winners for the Block Years 2017-2020 are given below:

Sl. N.	Award's name	Title of the paper	Particulars	Awardees	Award money
1.	<b>ISET Jai Krishna Award</b> as the best paper published in ISET publications for the block year 2017-2020.	Comparative Assessment of Seismic Fragility of RC Frame Buildings Designed for Older and Revised Indian Standards	Paper No. 534, Vol. 54, No. 1, March 2017	<p>Prof. Yogendra Singh Department of Earthquake Engineering Indian Institute of Technology Roorkee Roorkee-247667, Uttarakhand, India</p> <p>Dr. Mitesh Surana Assistant Professor Department of Civil Engineering Indian Institute of Technology Ropar Nangal Road, Rupnagar Punjab-140001, India</p> <p>Dr. Putul Halder Assistant Professor Department of Civil Engineering Indian Institute of Technology Ropar Nangal Road, Rupnagar-140001, Punjab</p> <p>Mayur Pisode Thornton Tomasetti, Mumbai, India</p>	Rs. 5000/-
2.	<b>ISET B.N. Gupta Award</b> for the best paper in <b>Seismology and Seismotectonics</b> published in ISET Journal of 2017-2020.	Probabilistic Seismic Hazard Mapping of Northwest India Using Area Sources with Non-Uniform Spatial Distribution of Seismicity	Paper No. 556, Vol. 57, No. 3, September 2020	<p>Prof. Vinay K. Gupta Department of Civil Engineering Indian Institute of Technology Kanpur Kanpur 208016</p> <p>Dr. Ishwer D. Gupta Row House 4, Suncity, Pune 411051 (formerly at CWPRS Pune and IIT Roorkee)</p> <p>Prof. A.K. Jaisal Department of Civil Engineering Indian Institute of Technology Kanpur Kanpur 208016</p>	Rs. 5000/-
3.	<b>ISET V.H. Joshi Award</b> for the best paper in <b>Soil Dynamics</b> published in ISET Journal of 2017-2020.	Effect of Soil-Structure Interaction on Base-Isolated Machine Foundations	Paper No. 535, Vol. 54, No. 2-4, June-Dec. 2017	<p>Prof. Vasant Annasaheb Matsagar Dogra Chair Professor Department of Civil Engineering Indian Institute of Technology Delhi Hauz Khas, New Delhi-110016</p> <p>Dr. Rajkumar Karmegam Department of Civil Engineering Indian Institute of Technology Delhi Hauz Khas, New Delhi-110016</p> <p>Dr. R. Ayothiraman Professor Geotechnical Engineering Section Department of Civil Engineering Indian Institute of Technology Delhi Hauz Khas, New Delhi-110 016</p> <p>Prof. Dr.-Ing. Lothar Stempniewski Institute for Reinforced Concrete Structures and Building Materials Karlsruhe Institute of Technology (KIT) Karlsruhe - 76131, Germany</p>	Rs. 5000/-
4.	<b>ISET Hanumantacharaya Joshi Award</b> for the best paper in <b>Structural Dynamics</b> published in ISET Journal of 2017-2020.	Seismic Performance of Open Ground Storey Reinforced Concrete Building with Chevron Steel Bracing Incorporating X-Plate	Paper No. 538, Vol. 55, No. 1-4, March-Dec. 2018	<p>Prof. C.K. Madheswaran Senior Principal Scientist CSIR-Structural Engineering Research Centre, Chennai-600 113, India</p> <p>Dr. N. Gopalakrishnan Chief Scientist CSIR-Structural Engineering Research Centre Chennai-600 113, India</p> <p>K. Sathishkumar</p>	Rs. 5000/-

		Damper		Senior Principal Scientist CSIR-Structural Engineering Research Centre Chennai-600 113, India	
				J. Prakashvel Senior Technical Officer CSIR-Structural Engineering Research Centre Chennai-600 113, India	
5.	<b>ISET ArbindaMukhopadhyay Award</b> for the best paper in <b>Theoretical Aspects of Earthquake Technology</b> published in ISET Journal of 2017- 2020.	<b>NO PAPER</b>			

E.C. members thanked Prof. T.G. Sitharam, Chairman, Award Committee (outstanding contributions & research awards), Prof. B.K. Maheshwari, Chairman, Award Committee (ISET research publications award), Prof. Vishwas A. Sawant, Member Secretary, and all selection committee members and experts of various awards for ISET Publication of the block year 2017-2020 for their hard work and sincere efforts in evaluating and finalizing awardees for various ISET awards.

### 9. Geotechnical Earthquake Eng. (GEE) Webinar Series (Nov. 2021 to Oct. 2022)

Dept. of Earthquake Engineering, IIT Roorkee and **Indian Society of Earthquake Technology (ISET)** as part of its Diamond Jubilee Celebration are organized the webinars during November 2021 to October 2022. Also this is supported by Indian Geotechnical Society (IGS) Roorkee Chapter and CSIR - Central Building Research Institute (CBRI), Roorkee. The webinars are also supported by TC203 of ISSMGE. Prof. Kenji Ishihara, Chuo University, Japan has inaugurated the GEE webinars on Dec. 8, 2021.

- 1<sup>st</sup> GEE Webinar Inaugural lecture has been delivered by Prof. Misko Cubrinovski, University of Canterbury, New Zealand and Chair of TC203 of ISSMGE entitled “**Mechanics-based Evaluation of Soil Liquefaction**” on December 8, 2021. While more than 366 people have registered. Total of 293 have participated in the webinar including 59 foreign delegate from 13 countries.
- 2nd GEE Webinar lecture has been delivered by Prof. Ikuo Towhata, Prof. Emeritus, University of Tokyo, Japan entitled “Ground Water is More Important in Triggering Landslides than so far Supposed” on January 27, 2022. While more than 595 people have registered. Total of 251 have participated in the webinar including 50 foreign delegate from 11 countries.
- 3rd GEE Webinar lecture has been delivered by Prof. Scott J. Brandenburg, University of California at Los Angeles, USA entitled “Seismic Analysis of Levee Systems” on February 10, 2022. While more than 686 people have registered. Total of 209 have participated in the webinar including 32 foreign delegate from 7 countries.
- 4th GEE Webinar Inaugural lecture has been delivered by **Prof. Sebastiano Foti**, Politecnico di Torino, Italy entitled “**Stochastic Analysis of Seismic Ground Response**” on March 24, 2022. While more than 700 people have registered. Total of 125 have participated in the webinar including 26 foreign delegates from 5 countries.
- 5th GEE Webinar Inaugural lecture has been delivered by **Prof. Ioannis Anastasopoulos**, ETH Zurich, Switzerland entitled “**Vulnerability Assessment and Retrofit of Existing Bridge Foundations**” on April 13, 2022. While more than 860 people have registered. Total of 155 have participated in the webinar including 29 foreign delegates from 6 countries.
- 6th GEE Webinar Inaugural lecture has been delivered by **Prof. Jonathan D Bray**, University of California, Berkeley, USA entitled “**Selection of Seismic Coefficient in Assessing Seismic Slope Stability**” on May 11, 2022. While more than 1005 people have registered. Total of 178 have participated in the webinar including 37 foreign delegates from 8 countries.
- 7th GEE Webinar Inaugural lecture has been delivered by **Prof. Deepankar Choudhury**, Prof. T. Kant Chair Professor, IIT Bombay entitled “**Design Solutions for Complex Geostructures under Dynamic Loadings: Case Studies**” on June 07, 2022. While more than 1305 people have registered. Total of 239 have participated in the webinar including 23 foreign delegates from 7 countries.

- 8th GEE Webinar lecture has been delivered by Prof. Kyle Rollins, Brigham Young University, USA entitled “Liquefaction - Induced Downdrag in Single Piles and Pile Groups” on July 28, 2022. While more than 1265 people have registered. Total of 160 have participated in the webinar including 29 foreign delegates from 12 countries.
- 9<sup>th</sup> GEE Webinar lecture has been delivered by Prof. T.G. Sitharam, Indian Institute of Technology Guwahati, India entitled “Engineering Preparedness for Earthquake Disaster Mitigation - Towards Disaster Resilience Society” on August 26, 2022. While more than 1350 people have registered. Total of 150 have participated in the webinar including 15 foreign delegates from 5 countries.
- 10th GEE Webinar lecture has been delivered by Prof. George Gazetas, National Technical Univ. of Athens, Greece entitled “Design of Rocking Foundations for Seismic Safety and Resilience” on September 20, 2022. While more than 1400 people have registered. Total of 195 have participated in the webinar including 25 foreign delegates from 5 countries.

GEE Webinar Series has been chaired by Prof. B.K. Maheshwari, Vice-President ISET and Shamsheer Prakash Chair Professor, IIT Roorkee. Details about the event can be found on the website: [www.iitr.ac.in/geewebinars](http://www.iitr.ac.in/geewebinars)

### **10. 17<sup>th</sup> Symposium on Earthquake Engineering**

Today the Department of Earthquake Engineering and the Indian Society of Earthquake Technology (ISET) are organizing the “**17<sup>th</sup> Symposium on Earthquake Engineering**” **17SEE-2022** during November 14-17, 2022 at the Department of Earthquake Engineering, IIT Roorkee.

### **11. ISET Diamond Jubilee Symposium**

On account of celebrating 60 glorious years of the Indian Society of Earthquake Technology (ISET), the Centre for Disaster Management and Research (CDMR), IIT Guwahati, North Eastern Space Application Centre (NESAC), Assam State Disaster Management Authority (ASDMA), Department of Earthquake Engineering IIT Roorkee and ISET has been jointly organized a two-day symposium “Socio-Technological Aspects of Seismic Disaster and Mitigation (STASDM)” on 23 and 24 June 2022 at IIT Guwahati. Prof. T.G. Sitharam, Director IIT Guwahati, who is also the President of ISET was the Patron of the symposium. There were plenary talks, followed by invited talks in the domain of Seismic Disaster and Mitigation by various stalwarts across the country. Talks were delivered both in online and offline mode. Various important themes such as Seismic hazard, Soil Structure interaction, seismic analysis of structures, paleoseismology, Society, Gender, and Earthquakes etc. were the prime focus of the above symposium. Students, faculty, and field engineers from different parts of North East, and other parts of the Country participated and presented their research findings. Assam is severely affected by floods at present and is very prone to earthquake shaking in general. There was a panel discussion where experts from institutes such as ASDMA, NESAC, as well as various industries participated as discussants to discuss how to deal with seismic disasters and mitigation and further direction in policy making.

### **12. 7<sup>th</sup> ICORAGEE**

7ICORAGEE contributory papers were published in 7 technical and 2 keynote volumes. 2020 papers were published in 5 technical and one keynote volumes, they were made accessible for one month on ICORAGEE virtual platform during the month of July 2021. Out of the remaining, other two technical volumes (2021 papers), were published and shared in the month of Dec. 2021. This is the 2<sup>nd</sup> and last Keynote Volume of the conference.

### **13. Membership Fee**

The Society received a sum of Rs. 3,40,075/- in the financial year 2021-2022 in the form of fee for various categories of membership of the Society.

### **14. Activity of Dept. Civil Eng., IIT Indore (Co-hosted by ISET)**

Department of Civil Engineering, IIT Indore in association with ISET has organized a short course on “Geotechnical Aspects of Earthquake Engineering” during July 21-23,

2022 in a hybrid mode. The webinar was attended online a by large number of Faculty, Engineers, Academicians and Students. The event was coordinated by Prof. Neelima Satyam, Dept. of Civil Engineering, Indian Institute of Technology Indore.

## 15. Acknowledgements

The Society would like to thank the sponsors for their generous grants to support its activities. Society is also thankful to Head, Department of Earthquake Engineering, Indian Institute of Technology Roorkee, Director, Indian Institute of Technology Guwahati, Roorkee and the Institution of Engineers (I), Roorkee Local Centre, Roorkee for extending the facilities required for the smooth functioning of the Society and carrying out its activities.

We are grateful to **Prof. Vinay K. Gupta**, Department of Civil Engineering, Indian Institute of Technology Kanpur, Kanpur for kindly accepting our invitation to deliver the 43<sup>rd</sup> ISET Annual Lecture today on '**Recent Developments in Response Spectrum-Based Modal Combination Rules**'. 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. T.G. Sitharam, President; Prof. B.K. Maheshwari, Vice-President; Prof. Vasant A. Matsagar & Dr. Ravi S. Jakka, Editors; Dr. P.C. Ashwin Kumar, Co-Editor; Prof. Gopal Madabhushi, Prof. Subhamoy Bhattacharya, Dr. Anil C. Wijeyewickrema and Dr. Sujith Mangalathu, Associate Editors, who were always willing to help and advise me in carrying out my responsibilities as the Secretary of the Society. Thanks are also due to all the E.C. members, Chairmen/Secretaries of ISET Local Chapters and ISET Forum's 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  
November 14, 2022

Prof. Vishwas A. Sawant  
Secretary, ISET