

Academic Staff: 13 , Students Admitted: UG/INT. M.Tech/M.Sc : Nil ; PG: 76; Ph.D: 43
Publications in: Journals : 39 , Conferences: 21 , Book/Books Chapters: Nil
Projects: Research (Rs. in Lacs): 216.40 , Consultancy (Rs. in Lacs): 1211.00

1. SALIENT FEATURES

Department of Earthquake Engineering at the Indian Institute of Technology Roorkee (erstwhile University of Roorkee) was established in 1960 as School of Research and Training in Earthquake Engineering. Four major areas of earthquake engineering viz., Structural Dynamics, Soil Dynamics, Engineering Seismology and Seismotectonics, and Instrumentation have been nurtured for the last fifty years. The department provides Master's degree in three specializations namely, Structural Dynamics, Soil Dynamics, and Seismic Vulnerability and Risk Assessment. The major functions of the Department include teaching and research, and rendering expert advice to various organizations in the area of earthquake resistant design of structures and systems, such as dams, bridges, power plants, etc. The Department has played a key role at the national level in the formulation of Indian Standard Codes of Practice for earthquake resistant design of Structures.

Several major facilities have been developed in the Department to conduct experiments related to earthquake engineering. Some of the major facilities include: recently commissioned full scale pseudo-dynamic structural test facility having 8 m tall reaction walls, a low cost shock table on railway wagons, for dynamic testing of structural models, a computer controlled shake table to stimulate strong ground motion, a quasi-static testing laboratory having servo-controlled dynamic actuator systems and servo-controlled compression testing machine, a soil dynamics laboratory equipped with liquefaction table, cyclic triaxial testing system, and resonant column apparatus, a seismological observatory having state of the art broadband seismograph to record earthquake ground motion, a strong motion network of 300 digital accelerographs deployed in the Himalayan region to measure strong ground motion due to moderate and major earthquakes and a state-of-the-art 12-station telemetered network to monitor local seismicity in the environs of Tehri Dam.

2. LIST OF FACULTY MEMBERS

I. Professors

Pankaj Agarwal, Ph.D. (IITR)
Structural Dynamics

B. K. Maheshwari, Ph.D. (Japan)
Soil Dynamics

J. P. Narayan, Ph.D. (BHU)
Engineering Seismology & Seismotectonics

M. L. Sharma, Ph.D. (IITR)
Engineering Seismology & Seismotectonics

M. Shrikhande, Ph.D. (IITK)
Structural Dynamics

Yogendra Singh, Ph.D. (IITD)
Head
Structural Earthquake Engineering, Performance Based Design, Seismic Risk Assessment

II. Associate Professors

J. Das, Ph.D. (IITR)
Seismotectonics and Remote Sensing

S.C. Gupta, Ph.D. (IITR)
Seismology and Seismotectonics

Ravi Shankar Jakka, Ph.D. (IITD)
Soil Dynamics

III. Assistant Professors

Ramanand Dubey, Ph.D.(IITR)
Structural Dynamics

P C Ashwin Kumar, Ph.D. (IITD)
Structural Dynamics

IV. Emeritus Professor

A.S. Arya, Ph.D. (Illinois)
Structural Dynamics

3. HONOURS AND AWARDS TO FACULTY MEMBERS

Dr. B. K. Maheshwari

- **Nominated Member** of following 4 Committees of **Indian Road Congress (IRC)** for 3-year period (2018-2021)
 - a. **BSS (Apex):** Bridge Specifications and Standards Committee
 - b. **B-3:** Foundation, Sub-Structure, Protective Works and Masonry Structures Committee
 - c. **H-4:** Embankment, Ground Improvement and Drainage Committee
 - d. **G-6:** Disaster Management Committee

4. PARTICIPATION OF FACULTY IN CONFERENCES/ SEMINAR/ SYMPOSIA/ WORKSHOP/ GUEST LECTURES.

Name of Faculty	Details of Conf./Semi./Symp./ Workshop/Guest Lecture	Venue	Date
M.L. Sharma	UDRP Meeting	Dehradun	10 March, 2017
B K Maheshwari	10 th meeting of Governing Body (GB) of NIDM	MHA, North Block, New Delhi	11 April, 2017
M.L. Sharma	CWC Meeting	New Delhi	01 May, 2017
B K Maheshwari	Meeting of National Platform for Disaster Risk Reduction	Vigyan Bhawan, New Delhi	15-16 May, 2017
Yogendra Singh	13 th Canadian Masonry Symposium	Halifax, Canada	5-7 June, 2017
Ravi S. Jakka	Invited Lecture, 'Uncertainties in Site Characterization using Surface Wave Methods and their Consequences over Seismic Site Response'	AOGS 14th Annual Meeting, Singapore	6 – 11 August, 2017
M.L. Sharma	AOGS 14th Annual Meeting	Singapore	06-11 August, 2017
Ravi S. Jakka	AOGS 14th Annual Meeting	Singapore	06-11 August, 2017
B K Maheshwari	Deliver a Key Note Lecture entitled "Seismic Design of Dams and Embankments including Guidelines for Dam Safety"	National Power Training Institute (NPTI), Nangal, Min. of Power, Govt. of India	2 November, 2017
M.L. Sharma	Meeting	Dehradun	22 November, 2017
B K Maheshwari	Deliver a Key Note Lecture entitled "Geotechnical issues during earthquakes in Uttarakhand"	Disaster Mitigation and Management Centre (DMMC), Dehradun	22 November, 2017
B K Maheshwari	Deliver a Key Note Lecture entitled "Disaster Management in India and Characterization for Geohazards"	IIT Guwhati	13 December, 2017
B K Maheshwari	Deliver a Key Note Lecture entitled "Nonlinear Seismic Soil-Structure Interaction"	Osmania University, Hyderabad	15 December, 2017
Ravi S. Jakka	Invited theme lecture, 'Uncertainties in Site Characterization Using Surface Wave Techniques and their Effects on Seismic Ground Response'	IGC, Guwahati	14-16 December, 2017

B K Maheshwari	Delivered two Lectures on Disaster Management and Geotech EQ Eng	DIT University, Dehradun	29 December, 2017
Ravi S. Jakka	Refresher course on “Recent Advances in Civil Engineering”	Jadavpur University, Kolkata	2-24 January, 2018
M.L. Sharma	Taiwan Visit	Taiwan	04-12 January, 2018
Ravi S. Jakka	Guest Lecture 'Earthquake Resistant Design of Foundations: Design Principles & State of Art Practices'	Indian Geotechnical Society, Kolkata Chapter	20 January, 2018
Ravi S. Jakka	Delivered 3 lectures at a short term course, ‘Seismic Vulnerability of Buildings and Retrofitting’	Continuing Education Centre, IIT Roorkee	8 – 23 January, 2018
M.L. Sharma	4th International Dam Safety Conference	Thiruvananthapuram, Kerala	24-25 January, 2018
B K Maheshwari	Meeting of B-3 Committee (Foundation, Sub-Structure, Protective Works and Masonry Structures)	Indian Road Congress, New Delhi	24 February, 2018
Manish Shrikhande	FRAGILE- Workshop on Seismic Hazard Assessment and Rehabilitation at Centre for Structural Engineering & informatics	The University of Nottingham	27-28 February, 2018
B K Maheshwari	Meeting of Board of Courses and Studies (BOCS)	IIT (ISM) Dhabad	10 March, 2018
M.L. Sharma	Taiwan Visit	Taiwan	04-12 March, 2018
M.L. Sharma	ISSET Annual Lecture	Pune	24 March, 2018
M.L. Sharma	Project Meeting	New Delhi	27-28 March, 2018

5. TOTAL NUMBER OF FACULTY MEMBERS PARTICIPATED IN SHORT TERM COURSES

NATIONAL	01
INTERNATIONAL	--

6. DISTINGUISHED VISITORS TO THE DEPARTMENT (NATIONAL/INTERNATIONAL)

Name	Designation and Affiliation	Purpose	Dates
Prof. Arbind K Singh	Department of Civil Engineering, IIT Guwahati	Talk on “Flexibility based Fibre Elements for Seismic Analysis of Frame Structures”	3 July, 2017

Prof. Subhamoy Bhattacharya	Chair in Geomechanics, University of Surrey, UK	Lecture on “Pile Design in Seismic Areas: Theory and Codes of Practice”,	07 August, 2017
Prof. P.K Basudhar	Former Professor, Indian Institute of Technology, Kanpur	Talk on ‘Pseudo Static Stability Analysis in Geotechnical Earthquake Engineering using Lower Bound Approach’	26 August, 2017

7(a). INTERNSHIPS BY IIT – ROORKEE STUDENTS

Sl. No.	Name of student	Name of the Internship Programme	Under Graduate	Post Graduate	Name of Institute Visited	Period

7(b). INTERNSHIPS OFFERED TO OTHER STUDENTS IN IIT – ROORKEE

Sl. No.	Name of student	Name of Supervisor	Under Graduate	Post Graduate	Name of Collaborative Institute	Period

8. ACADEMIC ACTIVITIES ORGANIZED BY THE DEPARMENT

Name of the conf./seminar/symp./workshop	Name of the Chairman	Sponsored by	Dates

9. SPONSORED RESEARCH PROJECTS:

Sl. No.	Project Status	Total No. of Projects	Amount (Rs. in lacs)
1	Completed Projects	01	149.00
2.	Ongoing Projects	03	67.40
3.	New Projects	-	-

10. SERVICE TO INDUSTRIES

a. Consultancy Project

Sl. No.	Project Status	Total No. of Projects	Amount (Rs. in lacs)
1	Completed Projects	16	171.00
2.	Ongoing Projects	14	520.00
3.	New Projects	14	520.00

b. Testing Services

Sl. No.	No. of Industries Served	Total outlay (Rs. in lacs)

11. SUMMARY OF MAJOR SPONSORED RESEARCH SCHEMES AND CONSULTANCY PROJECTS (Rs. 20 lacs) (A brief Write-up upto 100 words) (New Projects during the year 2016-17).

12. SCIENTIFIC AND TECHNICAL REPORTS

Title of the Projects	Participants	Authors	Remarks

(a) Scientific/technical reports prepared under Sponsored Research Projects

1. Kumar. A., A.D. Pandey, M.L. Sharma, J.P. Narayan and S.C. Gupta, EQ: 2018-08 (2018), "Seismological Network Around Tehri Region, (from Oct 2017 to Dec 2017), Department of Earthquake Engineering, IIT Roorkee
2. Kumar. A., A.D. Pandey, M.L. Sharma, J.P. Narayan and S.C. Gupta, EQ: 2018-05 (2018), "Seismological Network Around Tehri Region, (from July 2017 to Sept 2017), Department of Earthquake Engineering, IIT Roorkee
3. Kumar. A., A.D. Pandey, M.L. Sharma, J.P. Narayan and S.C. Gupta, EQ: 2018-01 (2018), "Seismological Network Around Tehri Region, (from April 2017 to June 2017), Department of Earthquake Engineering, IIT Roorkee
4. Kumar. A., A.D. Pandey, M.L. Sharma, J.P. Narayan and S.C. Gupta, EQ: 2017-24 (2017), "Seismological Network Around Tehri Region, (from January 2016 to Dec 2016), Department of Earthquake Engineering, IIT Roorkee
5. Kumar. A., A.D. Pandey, M.L. Sharma, J.P. Narayan and S.C. Gupta, EQ: 2017-12 (2017), "Seismological Network Around Tehri Region, (from Oct 2016 to Oct 2016), Department of Earthquake Engineering, IIT Roorkee
6. Kumar. A., A.D. Pandey, M.L. Sharma, J.P. Narayan and S.C. Gupta, EQ: 2017-04 (2017), "Seismological Network Around Tehri Region, (from July 2016 to Sept 2016), Department of Earthquake Engineering, IIT Roorkee

(b) Scientific/technical reports prepared under Consultancy Projects

1. Singh. Y., M. L. Sharma, M. Shrikhande, B. K. Maheshwari, J. Das and R. N. Dubey, EQ: 2018-09 (2018), Site Specific Earthquake Parameters for Mytndu Leshka H.E. Project, Meghalaya, Department of Earthquake Engineering, IIT Roorkee
2. Singh. Y., M. L. Sharma, M. Shrikhande, B. K. Maheshwari, J. Das and R. N. Dubey, EQ: 2018-07 (2018), Site Specific Earthquake Parameters for DLF-UPL Building in Motinagar, New Delhi, Department of Earthquake Engineering, IIT Roorkee

3. Singh. Y., M. L. Sharma, M. Shrikhande, B. K. Maheshwari, J. Das and R. N. Dubey, EQ: 2018-03 (2018), Site Specific Earthquake Parameters for Song Dam Project, Uttarakhand, Department of Earthquake Engineering, IIT Roorkee
4. Singh. Y., M. L. Sharma, M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and R. S. Jakka, EQ: 2018-02 (2018), Site Specific Earthquake Parameters for Pudimadaka TPP Project, Andhra Pradesh, Department of Earthquake Engineering, IIT Roorkee
5. Singh. Y., M. L. Sharma, M. Shrikhande, B. K. Maheshwari, J. Das and R. N. Dubey, EQ: 2017-23 (2017), Site Specific Earthquake Parameters for Chheligada H.E. Project, Odisha, Department of Earthquake Engineering, IIT Roorkee
6. Singh. Y., M. L. Sharma, M. Shrikhande, J. P. Narayan, R. S. Jakka and J. Das, EQ: 2017-22 (2017), Site Specific Earthquake Parameters for Talong Londa H.E. Project, Arunachal Pradesh, Department of Earthquake Engineering, IIT Roorkee
7. Singh. Y., M. L. Sharma, M. Shrikhande, J. P. Narayan, B. K. Maheshwari and J. Das, EQ: 2017-18 (2017), Site Specific Earthquake Parameters for Patratu TPP Project, Jharkhand, Department of Earthquake Engineering, IIT Roorkee
8. Singh. Y., M. L. Sharma, M. Shrikhande, B. K. Maheshwari, R. N. Dubey, J.P. Narayan, S.C. Gupta, R.S. Jakka and J. Das, EQ: 2017-17 (2017), Site Specific Earthquake Parameters for Chandrabhaga H.E. Project, Uttarakhand, Department of Earthquake Engineering, IIT Roorkee
9. Sharma, M. L., Y. Singh, S.C. Gupta, R. N. Dubey, Arup Sen, Dhiran Raj and Bharathi M, EQ:2017-16 (2017), Delhi Metro Induced Vibration Measurement on Various Buildings, DMRC, Department of Earthquake Engineering, IIT Roorkee
10. Singh. Y., M. L. Sharma, M. Shrikhande, B. K. Maheshwari, R. N. Dubey and J. Das, EQ: 2017-13 (2017), Site Specific Earthquake Parameters for Sirkari Bhyol Rupsiabagar H.E. Project, Uttarakhand, Department of Earthquake Engineering, IIT Roorkee
11. Singh. Y., M. L. Sharma, M. Shrikhande, B. K. Maheshwari, J. Das and R. N. Dubey, EQ: 2017-11 (2017), Site Specific Earthquake Parameters for Tizu H.E. Project, Nagaland, Department of Earthquake Engineering, IIT Roorkee
12. Singh. Y., M. L. Sharma, M. Shrikhande, R. S. Jakka, J. Das and S. C. Gupta, EQ: 2017-10 (2017), Site Specific Earthquake Parameters for Zungki H.E. Project, Nagaland, Department of Earthquake Engineering, IIT Roorkee
13. Sharma. M.L., M. Shrikhande, J. Das and Mr. Mitesh Surana, EQ: 2017-09 (2017), Probabilistic Seismic Hazard Assessment of the Vrindavan Chandrodaya Mandir, Mathura, U.P., Department of Earthquake Engineering, IIT Roorkee
14. Singh. Y., M. L. Sharma, M. Shrikhande, J. Das and S. C. Gupta, EQ: 2017-08 (2017), Site Specific Earthquake Parameters for Oju H.E. Project, Arunachal Pradesh, Department of Earthquake Engineering, IIT Roorkee
15. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and Daya Shanker, EQ: 2017-06 (2017), Site Specific Earthquake Parameters for Nyera Amari Project, Bhutan, Department of Earthquake Engineering, IIT Roorkee
16. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and Daya Shanker, EQ: 2017-05 (2017), Site Specific Earthquake Parameters for Trincomalli TPP Project, Srilanka, Department of Earthquake Engineering, IIT Roorkee
17. Sharma. M.L., M. Shrikhande, J. P. Narayan, B. K. Maheshwari, J. Das and Daya Shanker, EQ: 2017-01 (2017), Site Specific Earthquake Parameters for Chhatru HE Project, Himachal Pradesh, Department of Earthquake Engineering, IIT Roorkee

13. RESEARCH PUBLICATION

Sl. No.	Details	Total Number
a	Conference/Symp./Seminars	13
b	International Conference	08
c	National Journals	04
d	International Journals	35

Research Publication during the year under report (To be listed on the basis of first author only, as given below). **Separate group for Conference/Symp. /Papers and Books/Monographs be made.**

(a) Conference/ Symp. / Seminars

1. Desai, A.S., and Jakka, R.S. (2017), "Effect of Uncertainty in Soil Type on Seismic Site Response", Indian Geotechnical Conference IGC2017, Guwahati, India, 14-16 December, pp. 1-4.
2. Jakka, R.S. and Roy, N., (2017), "Uncertainties in Site Characterization Using Surface Wave Techniques and their Effects on Seismic Ground Response", Indian Geotechnical Conference IGC2017, Guwahati, India, 14-16 December, pp. 1-8.
3. Kanth A. and Maheshwari B.K., "Effect of Frequency of Loading on Pore Pressure in Solani Sand" Proc. of the Indian Geotechnical Conference, IIT Guwahati, Dec. 2017.
4. Kuri, Manoj, Manoj Arora and M.L Sharma (2018). Estimation of slope movement by PSInSAR technique at Koteshwar reservoir area, India using Sentinel-1 dataset, ctive and Passive Microwave Remote Sensing for Environmental Monitoring- SPIE Remote Sensing symposium.
5. Kuri, Manoj, Manoj Arora and M.L. Sharma (2018). Slope Stability Analysis in Nainital Town Using PS and QPS Technique, International Geoscience and remote sensing symposium, IGRASS-2018.
6. Maheshwari B.K., "Disaster Management in India and Characterization for Geohazards", Proc. of 3rd Indo-Japan Workshop on Geotechnics for Natural Disaster Mitigation and Management held at IIT Guwahati, December 13, 2017.
7. Neeraj Kumar and J. P. Narayan (2017) Comparison of 3D and 2D Site-city-Interaction effects on building Response and Free Field motion under Double Resonance Condition, ASCE India Conference, Urbanization challenges in emerging economies moving towards resilient sustainable cities and infrastructure, IIT Delhi, December 2017.
8. Neeraj Kumar and J. P. Narayan (2017) Effects of Hilly Region Topography on Rayleigh Wave, Conference on Infrastructure Sustainability in Hilly Regions (CISHR), NIT Uttarakhand, December 22-23.
9. Roy, N., Jakka, R.S. and Wason, H.R. (2017), "Effect of Test Setup Parameters on Surface Wave Dispersion", Indian Geotechnical Conference IGC2017, Guwahati, India, 14-16 December, pp. 1-4.

10. Sangeeta and Maheshwari B.K., "Evaluation of Permanent Displacement for Earthquake Induced Landslides" Proc. of the Indian Geotechnical Conference, IIT Guwahati, December 2017.
11. Sharma, M. L. (2017) Earthquake Early Warning System in North India, One-day Workshop on Disaster Resilient Infrastructure in the Himalayas: Opportunities and Challenges, Uttarakhand Government, Dehradun, Nov 21-22, 2017.
12. Sharma, M. L., S. C. Gupta, A. K. Jindal, S. K. Jain, A. Sen and N. Kumari, H. L. Arora, P. Saxena, A.P. Vyas, R. Singh and Indu Pal (2018) Seismicity Studies for HE Projects –A case study of Tehri Dam, International Dam Safety Conference 2018, Jan 23-24, 2018 Thiruvananthapuram, Kerala.
13. Sharma, P., Mouli, B., Jakka, R.S., and Sharma, M.L. (2017), "Design of Reinforced Slope using Geosynthetics", National Conference on Numerical Modeling in Geomechanics, Roorkee, India, 3-4 March, pp. 243-248.

(b) International Conference

1. Bhardwaj, Alok, Alan D Ziegler, Robert J Wasson, Winston Chow and M.L. Sharma (2017) Identification of trends in intensity and frequency of extreme rainfall events in part of the Indian Himalaya, EGU General Assembly Conference Abstracts, Vol. 19, April, 2017.
2. Jakka, R.S. (2017), "Uncertainties in Site Characterization using Surface Wave Methods and their Consequences over Seismic Site Response", AOGS 14th Annual Meeting, 6-11 August, Singapore, Extended Abstract.
3. Kumari, Neha, M. L. Sharma and I. D. Gupta (2017) Stochastic Simulation of Strong Ground Motions for Western Himalaya Region, 16th World Conference on earthquake engineering, 2286(1-2).
4. Kuri, Manoj, M.K. Arora, Atanu Bhattacharya and M.L. Sharma (2017). Microwave remote sensing based small baseline subset technique for estimation of slope movement in Nainital area, India, Image Information Processing (ICIIP), 2017 Fourth International Conference, 21-23 December, 2017, 1-6.
5. Nath, R.R., Gautam Kumar, M. L. Sharma and S.C. Gupta (2017) Estimation of Bedrock Depth for a Part of Garhwal Himalayas Using Two Different Geophysical Techniques, AOGS 14th Annual Meeting 06 to 11 AUG, 2017, Singapore.
6. Pandey, Bhavesh, Ravi Jakka, Ashok Kumar and M. L. Sharma (2017) Site Characterization and Site Amplification Studies for Strong Motion Recording Stations of Kumaun Region of Uttarakhand, AOGS 14th Annual Meeting 06 to 11 AUG, 2017, Singapore.
7. Rajput, Swati S., Mridula, Sinvhal, A. and Jakka, R. S., (2017), "Seismic Hazard and Risk Assessment of Himachal Pradesh and its contiguous area", 14th Annual meeting Asia Oceania Geosciences Society in SUNTEC Singapore from 6-11 August 2017, Abstract.
8. Sharma, P., V. A. Samant and M. L. Sharma (2017) Seismic Site Characterization of Roorkee for Deep Soil, AOGS 14th Annual Meeting 06 to 11 AUG, 2017, Singapore.
9. Padalu, P. K. V. R., Singh, Y., and Das, S. (2017). "Displacement Based Modelling of Out-of-Plane Behaviour of Vertically Spanning Unreinforced Masonry Walls", *Proceedings of 13th Canadian Masonry Symposium (CMS 2017), An International Meet*, Paper ID: 009, June 5-7, Halifax, Canada.
10. Padalu, P. K. V. R., Singh, Y., Sharma, U., Das, S., and Singh, D. (2017). "Retrofitting of a Historical Masonry Building Using RC Shear Wall and Externally Bonded FRP System", *Proceedings of International Conference on Advances in construction Materials and Systems*

(c) National Journals

1. Mayur Pisode, Mitesh Surana, Putul Haldar and Yogendra Singh (2017), “Comparative Assessment of Seismic Fragility of RC Frame Buildings Designed for Older and Revised Indian Standards,” *ISET Journal of Earthquake Technology*, 54(1), pp. 17-29.
2. Mitesh Surana, Yogendra Singh and Dominik H. Lang (2017), “Effect of Accidental Eccentricity on Collapse Probabilities of Mid-Rise RC Frame Buildings,” *ISET Journal of Earthquake Technology*, 53(1-4), pp. 15-27.
3. Neeraj Kumar and J.P. Narayan (2018) Study of 2D Basins and Site-City Interaction Effects on Ground Motion Characteristics, *Jr. Ind. Geophy. Union*, 22, 16-23.
4. Surana, M., Singh, Y., and Lang, D. H. (2017). Effect Response Reduction Factor on Peak Floor Acceleration Demand in Mid-rise RC Frame Buildings, *Journal of Institution of Engineers – Series A, India*, 98 (1): pp. 53-65.

(d) International Journals

1. Amit Goyal & Pankaj Agarwal (2017) " Use of Co-Polymer of Styrene Butadiene Rubber-A Seismically Innovative Approach towards Energy Dissipation" *Procedia Engineering* (Elsevier), 173 (2017) 1800 – 1807.
2. Amit Goyal, Pankaj Agarwal (2017) " Earthquake-Resistant Interlinked Block Masonry System with Energy Dissipator Viscoelastic Links" *Practice Periodical on Structural Design and Construction* (American Society of Civil Engineers), Vol. 22, Issue 03, pages 04017001.
3. Ansari, Md. I. and Agarwal, P. (2017) “Damage Index Evaluation of Concrete Gravity Dam Based On Hysteresis Behavior and Stiffness Degradation Under Cyclic Loading,” *International Journal of Structural Stability and Dynamics* (World Scientific; IF: 1.617), Vol. 17, No. 1, pp 1750009 (23 pages).
4. Anshu Tomar, Dilip Kumar Paul, Pankaj Agarwal (2017) " Compression and Cyclic Shear Behavior of Lime Mortar Brick Masonry," *Journal of Earthquake and Tsunami* (World Scientific Publishing Company), /doi.org/10.1142/S1793431117500154.
5. Baby, A. and Shrikhande, M. (2017), “Wavelet packet characterization of scenario earthquake ground motions”, *Journal of Earthquake & Tsunami*, 11(2):1750006-1–1750006-23.
6. Burton, H. V., Deierlein, G, Lallemand, D. and Singh, Y. (2017), “Measuring the impact of enhanced building performance on the seismic resilience of a residential community,” *Earthquake Spectra*, 10.1193/040916EQS057M.
7. Chaudhary, C. and M. L. Sharma (2017) Probabilistic Models for Earthquakes with Large Return Periods in Himalaya Region, *Pure and Applied Geophysics*, 174, 4313-4327.
8. D. Shanker, Sherif M. Ali, Manisha Singh (2017), Earthquake Hazard and Engineering Determinations for Indonesian Region Using IMS Network Data, *Geosciences* 2017, 7(5): 150-155,
9. Das, Ranjit, H. R. Wason, M. L. Sharma and G. Gonzalez (2017) Reply to “Comment on ‘Unbiased Estimation of Moment Magnitude from Body- and Surface-Wave Magnitudes’ by R. Das, H. R. Wason, and M. L. Sharma and ‘Comparative Analysis of Regression Methods Used for Seismic Magnitude Conversions’ by P. Gasperini, B. Lolli, and S. Castellaro” by J. Puj, *Bulletin of the Seismological Society of America*, 108(1), 540-547.

10. Dhiraj Raj, Yogendra Singh and Amir M. Kaynia (2018), "Behaviour of slopes under multiple adjacent footings and buildings ", International Journal of Geomechanics, ASCE, DOI: 10.1061/(ASCE)GM.1943-5622.0001194.
11. Dhiraj Raj, Yogendra Singh and Sanjay K. Shukla (2018), "Seismic bearing capacity of strip foundation embedded in c- ϕ soil slope ", International Journal of Geomechanics, ASCE, DOI: 10.1061/(ASCE)GM.1943-5622.0001142.
12. J.P. Narayan and A. Kumar (2018), Quantification of effects of shape and shape-ratio of ridge and valley on the Rayleigh wave characteristics, Jr. of Earthquake and Tsunami, (doi.org/10.1142/S1793431118500070).
13. J.P. Narayan and Kamal (2018), A scenario of ground shaking hazards in intracratonic circular basin generated surface waves: an earthquake engineering perspective, Natural Hazards, 92:1841–1857 (doi.org/10.1007/s11069-018-3284-1).
14. J.P. Narayan, Neeraj Kumar and Ranu Chauhan (2018), Insulating effects of shape and size of a hill topography on the Rayleigh wave characteristics, Pure & Applied Geophysics, (doi.org/10.1007/s00024-018-1832-y)
15. Kaloni, S. and Shrikhande, M., (2017), "Output only system identification based on synchrosqueezed transform", Procedia Engineering, 199, 1002-1007.
16. Kirar B. and Maheshwari B.K. (2017), "Dynamic Properties of Soils at Large Strains in Roorkee Region using Field and Laboratory Tests." Indian Geotechnical Journal. doi: 10.1007/s40098-017-0258-2.
17. Kumar, P. C. A., Anand, S., and Sahoo, D. R. (2017). "Modified seismic design of concentrically braced frames considering column demands", Earthquake Engineering & Structural Dynamics, 46(10), 1559-1580.
18. Kumar, P. C. A., and Sahoo, D. R., (2018), "Numerical and experimental investigations on inelastic cyclic performance of mid-span gusset plate connections", Earthquake Engineering and Structural Dynamics, DOI:10.1002/eqe.3049.
19. Kumar, P. C. A., Sahoo, D. R., and Kumar, A. (2018). "Seismic response of concentrically braced frames with staggered braces in split X configuration", Journal of Constructional Steel Research, 142(3), 5-11.
20. Maheshwari B. K. and Kirar B. (2017), "Dynamic Properties of Soils at Low Strains in Roorkee Region using Resonant Column Tests." Int. J. of Geotechnical Eng. doi: 10.1080/19386362.2017.1365474
21. Marrapu, B.M. and Jakka, R.S.* (2017), "Assessment of Slope Stability Using Multiple Regression Analysis", Geomechanics and Engineering, Technopress, 13(2): 237-254.
22. Neeraj Kumar and J.P. Narayan (2018), Quantification of site-city-interaction effects on the building response under double resonance condition, Geophysical Jr. International, 212, 422-441 (doi.org/10.1093/gji/ggx397).
23. Patra, P., Kumar, P. C. A., and Sahoo, D. R. (2018). "Cyclic performance of braces with different support connections in special concentrically braced frames", Key Engineering Materials, 763, 694-701.
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