



Prof (Dr) Varinder S Kanwar

Chitkara University, Himachal Pradesh

With a Ph.D. in Civil Engineering, M.E. in Structural Engineering from Thapar University Patiala, Post Graduate Diploma in Rural Development from IGNOU and BE in Civil Engineering from Jawahar Lal Nehru Engineering College, Dr. Varinder S. Kanwar carries more than 25 years of Research; Teaching and Administrative Experience. He is a fellow of Institution of Engineers and senior member of IEEE.

Academics and Academic Administration

Worked with institutes like NIT Hamirpur, Government Polytechnic Hamirpur, Thapar University Patiala and Punjab Technical University Jalandhar. Apart from being a member of faculty at the above-mentioned institutions, at PTU Jalandhar his duties also involved being *a member of various inspection committees convened to grant affiliation to the University and to assess compliance with regulatory norms.*

He is Member - Governing Body, Chairman - Board of Management, Academic Council and Finance Committee of Chitkara University, Himachal Pradesh. He is an active member of various societies like IEEE, IRC, ICI, Institution of Engineers and Punjab Science Congress. He is on the panel of Board of Studies – Civil Engineering of various other Universities too. Nominated as non-official member of State Level Working Committee - Town and Country Planning Department, Government of Himachal Pradesh. Served as Chairperson as well as member in NAAC Peer Assessment Teams. Actively involved in industrial consultancy and technology development to provide suitable solutions in problems areas such as waste minimization, reuse or recycle of waste generated. Nominated by Quality Council of India to develop a criterion for the accreditation and assessment agency to be empanelled by UGC

Project Management

Incharge of overseeing the construction activities for the new University complex and held the charge of Executive Engineer in addition to his normal duties at Punjab Technical University, Jalandhar. He was In-charge of Building Center at Thapar University created to carry out the research in the construction industry.

Research

- Written 5 books on *Water Supply Engineering, Health Monitoring of Structures, Modern Temples of Resurgent India - Engineering Pilgrimage to Bhakra, Beas and Ranjit Sagar Dam, Characteristics of Asphalt Modified with Industrial Waste Sludge and on Sustainable Civil Engineering Practices*
- Written 40 Research Papers in National and International Journals
- 17 Research Papers in conferences to his credit
- Guided 2 M.E. and 4 Ph.D. students'
- Guiding 8 Ph.D. students in Civil Engineering
- Filed 9 Patents, out of which 5 Published
- Completed 7, Ongoing 6, Government funded research project worth more than 1.85 Crore INR

Major research areas are Health Monitoring of Structures and Alternate Construction Materials. He is also actively participating in joint research activities carried out by Chitkara University, Glasgow Caledonian University UK and ESTP Paris, France. In addition, another joint venture for research with Edith Cowan University and Federal University in Australia is also going on.

His present assignment involves close interaction with Department of Higher Education, Government of Himachal Pradesh, Himachal Pradesh Private Educational Institutions Regulatory Commission, University Grants Commission, AIU and other regulatory agencies.

Professional Recognition/ Award/ Prize/ Certificate, Fellowship received

1. Research paper titled, "Finite Element Modelling of Reinforced Concrete Corners Under Opening Bending Moment" awarded with best paper award by Institution of Engineers and gave E P Nicolaidis Prize (Springer Publication) in 2013.
2. Awarded "Excellent Contribution in Education Sector" by CMAI Association of India on April 2017.
3. Research paper titled, "Feasibility of using paper industry sludge containing calcium carbonate in manufacturing bricks" got the best paper award in 2nd International Conference –in August 2018
4. Awarded "National Builder Award" on September 5, 2018 by Rotary Club of India
5. Awarded under individual category for "Excellence in Promotion of Environment Conservation and Sustainable Development" by government of Himachal Pradesh. The award was given by Chief Minister of Himachal Pradesh Sh Jai Ram Thakur Ji on June 5, 2019.
6. Research paper titled, "Water Audit of Chitkara University, Himachal Pradesh – A Zero Discharge Campus" has won the best paper award at International Conference on Maintenance and Intelligent Asset Management held at Manipal Academy of Banking, Bengaluru during January 17-18, 2020.

7. Awarded “Most Innovative Vice Chancellor” by Golden Aim Awards for excellence and leadership in education on August 7, 2020
8. Awarded “Outstanding Concrete Technologist 2020” by Indian Concrete Institute and Ultratech Cement Ltd on September 19, 2020
9. Awarded “Aqua Foundation Excellence Award 2020 under the category of Sustainable Development in Construction and Infrastructure Sector” during International Conference – XIV World Aqua Congress held on October 29, 2020

Government Funded Research Projects – Ongoing

| | Name of the Project | Name of Funding Agency | Budget Sanctioned (INR: Lakhs) |
|----|---|---|---------------------------------------|
| 1. | BhuGoal: A smart weather monitoring system | Department of Science & Technology New Delhi | 50.5 (2021) |
| 2. | Capacity building and technology demonstration for the socio-economic upliftment of SC/ST population in the nearby villages of Himachal Pradesh | Department of Science & Technology New Delhi | 27.80 (2019) |
| 3. | Evolutionary studies of cultural sculptures in cultural heritage with non-destructive microwave spectroscopy | Department of Science & Technology New Delhi | 37.90 (2019) |
| 4. | XRF Evaluation of soil, water, and plants polluted with garbage and industrial sludge: remedial measures | Department of Environment, Science & Technology, Shimla | 10.00 (2019) |
| 5. | Use of Industry Sludge containing calcium carbonate for manufacturing hard grade bitumen | Department of Environment, Science & Technology, Shimla | 10.00 (2018) |
| 6. | Landslide Prone area mapping Geospatial Approach: A case study of Shimla district, Himachal Pradesh | SERB, Department of Science and Technology, New Delhi | 29.25 (2017) |

Government Funded Research Projects / Grant Received for Organising Conferences – Completed

| | Name of the Project | Name of Funding Agency | Grant Received (INR: Lacs) |
|----|---|---|-----------------------------------|
| 1. | Organizing International Conference on Sustainable Civil Engineering Practices | SERB, Department of Science and Technology, New Delhi | 1.00 (2019) |
| 2. | Organizing International Conference on Sustainable Civil Engineering Practices | Department of Science and Technology, New Delhi | 1.5 (2019) |
| 3. | Organizing International Conference on Sustainable Civil Engineering Practices | NABL, QCI, New Delhi | 1.00 (2019) |
| 4. | Alternative construction material made from industry sludge containing CaCo ₃ and a method to prepare the same | Department of Environment, Science & Technology, Shimla | 6.25 (2018) |
| 5. | Vibration analysis of RCC Framed structure | UGC Research Project | 0.10 (2002) |
| 6. | MODROBS in Concrete Structures Laboratory: Developed Nondestructive testing facility | AICTE Sponsored Project | 10.75 (2002-2004) |
| 7. | Study on use of electroplating industry sludge as construction material | UGC Research Project | 0.15 (2000) |

Detail of patents filed

| | Patent Title | Applicants Name | Patent No. | Country | Patent Published (On IPO Database) |
|----|---|-----------------------------------|-------------------|----------------|---|
| 1. | Alternative Construction Material made from electroplating industry sludge and method to prepare the same | Varinder S Kanwar | 498/DE L/2015 | India | 14-04-2017 |
| 2. | Camera accessory for photography in moving vehicle | Vinay Chadha & Varinder Kanwar | 2016110 06999 | India | 22-12-2017 |

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|----|--|--|------------------|-------|------------------------|
| 3. | Process to convert toothpaste industry waste sludge into usable form | Varinder S Kanwar Surinder Kumar | 2016110 22362 | India | 16-02-2018 |
| 4, | Method of converting lime sludge of paper industry into bricks | Varinder S Kanwar Brij Bhusan Siby John | 2017110 03597 | India | 03-08-2018 |
| 5. | Hot mix asphalt modified with toothpaste and paper industry sludge and method of preparation thereof | Varinder S Kanwar, D.C. Rana, Abhishek Kanoungo, Sanjay K Shukla | 2018110 20079 | India | 06-12-2019 |
| 6. | An Integrated System and method for Water Management | Nitish Kumar Sharma, Varinder S Kanwar | 2020110 05032 | India | Publication awaited |
| 7. | System and Device for Structural Monitoring of Sculptures | Debarshi Ghosh, Nitin Saluja, Nitika Dhingra, Varinder S Kanwar, Chanpreet Singh | 2020110 33544 | India | Publication awaited |
| 8. | Self-curing Concrete comprising of Agro-Waste” | Varinder S Kanwar, Ankush Tanta, Manvi Kanwar | 2020110 45914 | India | Publication awaited |
| 9. | Bag Filling and Supporting Device | Varinder S Kanwar Ajay Sharma Arun Lal Srivastav | 2020110 48866 | India | Publication awaited |

Details of Books Published

| Name of book | Publisher name | Year of Publication / ISSN-ISBN No. | |
|---|------------------------------|--|---|
| Sustainable Civil Engineering Practices | Springer Nature, Switzerland | 2020 ISSN 2366-2557 ISBN 978-981-15-3676-2 |  |
| Characteristics of Asphalt Modified with Industrial Waste Sludge | Lambert Publication, Germany | 2020 ISBN 978-620-0-53494-1 |  |
| Modern Temples of Resurgent India - Engineering Pilgrimage to Bhakra, Beas and Ranjit Sagar Dam | Lambert Publication, Germany | 2019 ISBN 978-613-9-44954-5 |  |
| Health Monitoring of RCC Buildings using Vibration Measurements | Lambert Publication, Germany | 2017 ISBN 978-620-2-01204-1 |  |
| Water Supply Engineering | Vikas Publication, New Delhi | 2015 ISBN 978-93259-8425-7 |  |

Written Course Material for Continuing Education Programme on the following topics

- Energy generation from waste
- Use of Library Information services as tool for enhancing the knowledge of engineering professionals

Publications in International Journals

| | Author | Title | Name of Journal | Volume | Page | Year |
|----|--|--|---|---|-------|------|
| 1. | Varinder S Kanwar, Ajay Sharma, Arun Lal Srivastav, Lata Rani | Phytoremediation of toxic metals present in soil and water environment; a critical review | “Environment Science and Pollution Research” © Springer Nature Singapore Pte Ltd. | https://doi.org/10.1007/s11356-020-10713-3 | 1-27 | 2020 |
| 2. | C. Prakasam, Saravanan R, Varinder Kanwar, M.K. Sharma, M Sharma | Assessment of Environmental Changes using GIS Applications | Elsevier, International Journal of Innovative Technology and Exploring Engineering | ISSN: 2278-3075, Volume-9 Issue-11, | 16-20 | 2020 |
| 3. | Prakasam, C., Saravanan, R., Kanwar, Varinder S | Evaluation of environmental flow requirement using wetted perimeter method and GIS application for impact assessment | Elsevier, International Journal of Ecological Indicators | Volume - 121 Issue-1 ISSN: 1470160 | 1-7 | 2020 |
| 4. | C. Prakasam, Aravinth R., Varinder S. Kanwar and B. Nagarajan | Comparative Evaluation of Various Statistical Models and Its Accuracy for Landslide Risk Mapping | Chapter in the Book on SLOPE ENGINEERING by Ali Ismet Kanlı. (ISBN 978-1-83962-924-2) | DOI: http://dx.doi.org/10.5772/intechopen.94347 SCI and Scopus indexed. | 1-18 | 2020 |

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|----|--|---|--|--|-----------|------|
| 5. | Prakasam, C., Aravinth, R., Nagarajan, B., Kanwar, Varinder S. | Site-specific geological and geotechnical investigation of a debris landslide along unstable road cut slopes in the Himalayan region | Taylor and Francis Journal on Geomatics, Natural Hazards and Risk | Vol 11 (1), https://doi.org/10.1080/19475705.2020.18271848 ISSN: 19475713 | 1827-1848 | 2020 |
| 6. | Vijay Kumar Garg, Arun Lal Srivastav, Manoj Kumar Tiwari, Ajay Sharma and Varinder Kanwar | Synchrotron based X-ray fluorescence for the elemental analysis of industrial sludge | Journal of Environmental Treatment Techniques | 2021, Volume 9, Issue 1, https://doi.org/10.47277/JETT/9(1)195 | 192-195 | 2020 |
| 7. | Nitika Dhingra, Nitin Saluja, Roopali Garg Varinder Kanwar Debarshi Ghosh | Radio frequency based material estimation of old age 3D sculptures | Elsevier publication “Materials Today Proceedings” | https://doi.org/10.1016/j.matpr.2020.05.579 Volume 28, Part 3 | 2015-2020 | 2020 |
| 8. | C. Prakasam, R. Aravinth, Varinder S. Kanwar and B. Nagarajan | Comparative Study Between Weighted Overlay and Fuzzy Logic Models for Landslide Vulnerability Mapping—A Case Study of Rampur Tehsil, H.P. | © Springer Nature Singapore Pte Ltd. 2020 229 V. S. Kanwar and S. K. Shukla (eds.), Sustainable Civil Engineering Practices, Lecture Notes in Civil Engineering | Volume 72 ISSN 2366- 2557 ISBN 978-981- 15-3676-2 https://doi.org/10.1007/978-981-15-3677-9 | 155-172 | 2020 |

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|-----|--|---|---|--|-------------|------|
| 9. | Abhishek Kanoungo, Varinder S. Kanwar and Sanjay Kumar Shukla | Evaluation of Moisture Susceptibility of HMA Modified with Waste Sludge | © Springer Nature Singapore Pte Ltd. 2020 229 V. S. Kanwar and S. K. Shukla (eds.), Sustainable Civil Engineering Practices, Lecture Notes in Civil Engineering | Volume 72 ISSN 2366-2557 ISBN 978-981-15-3676-2 https://doi.org/10.1007/978-981-15-3677-2 | 229-238 | 2020 |
| 10. | Prakasam C., Aravinth R., Kanwar V.S., Nagarajan B. | Landslide Hazard Mapping Using Geo-Environmental Parameters—A Case Study on Shimla Tehsil, HP. | In: Ghosh J., da Silva I. (eds) Applications of Geomatics in Civil Engineering., Springer, Singapore. | Vol 33. ISBN978-981-13-7066-3 | 123-139 | 2020 |
| 11. | Prakasam, C., Aravinth, R., Nagarajan, B., Kanwar, Varinder S. | Landslide Susceptibility mapping of Settlements and Transportation Corridors along the Himalayan Region | Journal of Green Engineering | Vol 10 (4), ISSN: 22454586 | 1856 – 1877 | 2020 |

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|-----|---|---|--|---|-------------|------|
| 12. | Surinder Kumar, Varinder S Kanwar, Upasana Grover | Development of Concrete by Utilizing Toothpaste Industry Sludge Containing CaCo ₃ as Partial Replacement of Cement and Fine Aggregate | International Journal of Engineering Research and Technology (IJERT) | ISSN: 2278- 0181 Volume 9, Issue 4 | 27-34 | 2020 |
| 13. | Nitish Kumar Sharma, Varinder S Kanwar and H S Kandra | Integrated Urban Water Management for Chandigarh | Test Engineering and Management (TEM) Scopus Journal | ISSN: 0193 - 4120 | 419- 429 | 2020 |
| 14. | Mr. Brij Bhushan, Ms. Upasana Grover, Dr. Siby John, Dr. Varinder S Kanwar | Feasibility of using paper industry sludge containing calcium carbonate in manufacturing bricks | Springer Lecture Notes Series Volume 35 - Advances in Sustainable Construction Materials and Geotechnical Engineering | ISSN 2366- 2557 ISBN 978-981- 13-7479-1 https://doi.org/10.1007/978-981-13-7480-7 | 15-28 | 2019 |
| 15. | Abhishek Kanoungo, Varinder S. Kanwar and Sanjay K Shukla | Effect of Aging on Characteristics of Bitumen Modified with Waste Lime Sludge | ASTM Advances in Civil Engineering Materials | doi:10.1520/AC EM20180166 Vol. 8 / No. 1 / 2019 | 298- 308 | 2019 |
| 16. | Abhishek Kanoungo, Varinder S. Kanwar and Sanjay K Shukla | Utilization of waste sludge as a potential additive in asphalt | International Journal of Mechanical and Production Engineering | ISSN: 2320- 2092, Volume-7 Issue-9 | 52-56 | 2019 |

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|-----|---|--|--|---|---------------|------|
| 17. | Kanoungo, Varinder S. Kanwar and Sanjay Kumar Shukla | Evaluation of mechanical properties of sludge modified bituminous binder | International Journal of Mechanical and Production Engineering | ISSN: 2320- 2092, Volume-7 Issue-9 | 47-51 | 2019 |
| 18. | Brij Bhushan, Varinder S Kanwar, Siby John | Expansion of Concrete by Consuming Waste from Paper Industry | Elsevier, International Journal of Innovative Technology and Exploring Engineering | ISSN: 2278- 3075, Volume-9 Issue-2 | 387- 390 | 2019 |
| 19. | Brij Bhushan, Varinder S Kanwar, Siby John | Development of Bricks by Utilizing Waste from Paper Industry | Elsevier, International Journal of Innovative Technology and Exploring Engineering | ISSN: 2278- 3075, Volume-9 Issue-2 | 377- 386 | 2019 |
| 20. | Nitish Kumar Sharma, Varinder S Kanwar and H S Kandra | “Water Balance Evaluation of Chandigarh City, India” | Elsevier, International Journal of Innovative Technology and Exploring Engineering | ISSN: 2278- 3075, Volume-8 Issue-11, | 4072- 4083 | 2019 |
| 21. | Varinder Kanwar, Er. Abhishek Kanoungo, and Sanjay Kumar Shukla | Effect of Using Sludge Waste Containing Calcium Carbonate on the Properties of Asphalt and Hot Mix Asphalt Mixture | Springer International Publishing AG, part of Springer Nature 2019 D. Chen et al. (eds.) Advancements on Sustainable Civil Infrastructures | Book ID - 465143_1_En Chapter – 9, https://doi.org/10.1007/978-3-319-96241-2_9 | 110- 120 | 2018 |
| 22. | C. Prakasam, R. Aravinth and Varindar S. Kanwar | Land Use Land Cover Change Detection & Urban Sprawl Study: A Case Study on Shimla Tehsil | International Journal of Geography, Environment and Earth Science | 16(1), ISSN: 2454-7352 https://doi.org/10.9734/JGEESI/2018/42185 | 1-13 | 2018 |

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|-----|--|--|---|--|---------------|------|
| 23. | Varinder S Kanwar | Waste to Worth - Sludge Containing Calcium Carbonate into Useful Building Materials - an Indian Context | Trends in Civil Engineering and its Architecture, Lupine Publishers, LLC | Volume 2 Issue 2 | 173- 174 | 2018 |
| 24. | Surinder Kumar, Varinder S Kanwar, Upasana Grover | Feasibility of using toothpaste industry sludge containing CaCO ₃ in manufacturing bricks | International Journal of Engineering Research and Technology (IJERT) | ISSN: 2278- 0181, Volume-7 Issue-10, October 2018 | 1-6 | 2018 |
| 25. | Varinder S Kanwar, Siby John | Use of Electroplating Industry Sludge as a Construction Material | MOJ Civil Engineering, MedCrave Publishing, Edmond, Oklahoma, USA | Volume 2 Issue 1 | 1-8 | 2017 |
| 26. | Varinder S Kanwar, R P Singh, N Kwatra, Pankaj Aggarwal | Monitoring of RCC structures affected by earthquakes | Geomatics, Natural Hazards and Risk, (Taylor & Francis, London, UK) | Vol. 7, No. 1 | 37-64 | 2016 |
| 27. | Yeshpal Vasistha, AK Gupta, Varinder Kanwar | Medium Triaxial Testing of some Rockfill Materials | Electronic Journal of Geotechnical Engineering | Vol. 18 | 923- 963 | 2013 |
| 28. | Yeshpal Vasistha, Ashok Kumar Gupta, Varinder Kanwar | Prediction of Shear Strength Parameters of Two Rockfill Materials | Electronic Journal of Geotechnical Engineering | Vol. 17 | 3221- 3232 | 2012 |
| 29. | Varinder S Kanwar, Naveen Kwatra, Pankaj Aggarwal | Use of vibration measurements in health monitoring of reinforced concrete buildings | International Journal of Structural Integrity | Vol 1, No 3, | 209- 232 | 2010 |

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|-----|---|--|---|---------------------|-------------|------|
| 30. | Varinder S Kanwar, Naveen Kwatra, Pankaj Aggarwal | Health monitoring of RCC building model experimentally and its analytical validation | International Journal of Engineering Computations Emerald Group Publishing Limited Howard House, Bingley, UK, | Vol 25, No 7 | 677- 693 | 2008 |
| 31. | Varinder S Kanwar, Naveen Kwatra, Pankaj Aggarwal, M.L. Gambhir | Damage detection of framed RCC buildings using ANN modeling. | International Journal of Damage Mechanics”, Sage Publication, USA | Volume 16, No. 4 | 457- 472 | 2007 |

National Journal

| | Complete Reference of Journal | Title |
|----|---|---|
| 1. | Special Issue: University News (Association of Indian Universities), Volume 58 No.33, pp. 45-49, ISSN-0566-2257 | “Redefining Indian Universities: An Insight of Education Sector towards Evolution of Industry 4.0 and 5.0”, |
| 2. | University News AIU Journal of Higher Education, Vol 57, No 06, 2019, pp 67-70, ISSN-0566-2257 | Strategizing Excellence in Education Across the Globe |
| 3. | Special Issue: University News (Association of Indian Universities), Volume 57 No.39, pp. 144-148, 2019, ISSN-0566-2257 | The Gandhian Ideologies for Growth and Sustainability in Contemporary India |
| 4. | J. Inst. Eng. India Ser. A (February–April 2013) 94(1): 23–33 DOI 10.1007/s40030-013-0039-6 | Finite Element Modeling of Reinforced Concrete Corners Under Opening Bending Moment |
| 5. | Journal on Today’s Ideas– Tomorrow’s Technologies, Vol. 1, No. 2, December 2013 pp. 113–122 | Effect of Steel Fibers on Reinforced Concrete Opening Corners |
| 6. | Journal of Institution of Engineers. India, Vol 88, No 7, 2008 pp 13-17 | Evaluation of dynamic parameters of a three storey RCC building model using vibration techniques |

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| 7. | RIMT Journal of Strategic management and information technology, Vol. 3 No.3. pp 43-52, 2006 | Disaster management – Vibration monitoring of RCC building mode |
| 8. | Journal of Institution of Engineers Volume 86, pp 53-57, 2005 | Nondestructive evaluation of dynamic properties of concrete |
| 9. | Journal of New Building Material and Construction World, New Delhi, Vol. 6, Issue 6, December 2000, pp. 26-37 | Various aspects of High Performance Concrete |

Papers published in Conference Proceedings

| | Title | Name and Place of Conference |
|----|---|--|
| 1. | Water Balance Model for Chandigarh Region | International Conference on Advancements in Engineering and Technology, Sangrur, Punjab, India (March, ICAET 2020). |
| 2. | Integrated Urban Water Management of Chandigarh Region, India' | Symposium on Synthesis, Characterization & Processing of Inorganic, Bio and Nano Materials Conference, Chandigarh University, Gharuan, India (December, SCPINM 2019) |
| 3. | Need for integrated urban water management in India – The way forward | International conference on Clean Technology and Sustainable Development, proceedings, NITTTR, Chandigarh, pp 28 - 30., 2018 |
| 4. | Estimation of Seasonal Variations in Land Surface Temperature Using Landsat (TIRS & OLI) through Single–Window Algorithm Method–A Case Study. | International conference on Clean Technology and Sustainable Development, proceedings, NITTTR, Chandigarh, pp 466 - 473., 2018 |
| 5. | Landslide Hazard Evaluation Methods – A Review. | Paper presented at the 4th Indian Landslide Congress, organized by Department of Earth Science, Indian Institute of Technology Bombay, |
| 6. | Land use and Land cover changes & Urban sprawl changes using geospatial techniques: A case study on Shimla Tehsil. | Paper presented at the 2nd Himachal Pradesh Science Congress on 'Science & Technology for sustainable livelihood in Indian Himalayan, Shimla, 2017 |
| 7. | Landslide studies; A review | Paper presented at the 2nd Himachal Pradesh Science Congress on 'Science & Technology for sustainable livelihood in Indian Himalayan, Shimla, 2017 |

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| 8. | Structural Health Monitoring of Civil Engineering Structures | National Conference on Sustainable Infrastructure Development held at NITTTR Chandigarh, 2014 |
| 9. | Health monitoring of actual RCC buildings by studying its dynamic parameters | International conference on Structural Engineering held at Malaviya National Instt. of Technology, Jaipur, 2012 |
| 10. | Artificial Neural Network Modeling of Wind Loads on tall rectangular buildings | Proc. 2nd National Conference on Wind Engineering, VREC Nagpur, 2004 |
| 11. | New Construction material | National Conference on Advances in Concrete Technology ACT 2004 Feb 26-27, 2004, Patiala |
| 12. | Fuel Savings in Road Improvement | National Seminar on “Challenges for Road Transportation in 21 st Century Leading to Fuel Economy”, 2001 |
| 13. | Geo-environmental Consideration During the Construction of Hilly Roads | National Seminar on “Road Transportation – Issues & Strategies” 2001 |
| 14. | Properties of High Strength Concrete | National Conference on “Advances in Concrete Technology”, 2000 |
| 15. | Economics of Operating Ready Mix Plant – A Case Study | National Conference on “Advances in Concrete Technology”, 2000 |
| 16. | A Conceptual Approach Towards Tackling the Water Logging Problem of Canal Irrigation | National Seminar on Environment Hazards & Sustainable Development, 1999. |
| 17. | Protocol for the selection of the site and technology for Municipal Sewage Treatment and Disposal | National Seminar on Environment Hazards & Sustainable Development, 1999. |

Conference organized and proceeding edited

| | Conference Title | Date and Year |
|----|---|------------------------|
| 1. | International Conference on Clean Technology and Sustainable Development – 2019 | 19 & 20 July, 2019 |
| 2. | International Conference on Clean Technology and Sustainable Development – 2018 | 23 & 24 February, 2018 |
| 3. | International Conference on Sustainable Civil Engineering Practices – 2017 | 2 & 3 March 2017 |

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| 4. | National Conference on Sustainable Civil Engineering Practices – 2016 | 18 & 19 March 2016 |
| 5. | National Conference on Sustainable Infrastructure Development-2015 (NCSID-2015) | 26 & 27 February, 2015 |
| 6. | National Conference on Sustainable Infrastructure Development-2014 (NCSID-2014) | 13 & 14 March, 2014 |
| 7. | National Conference on Advances in Infrastructure Development | 11 & 12 October, 2012 |
| 8. | National Conference on Advances in Concrete Technology | 26 & 27 February, 2004 |
| 9. | National Seminar on Challenges for Road Transportation in 21 st Century Leading to Fuel Economy (CIRT 2001) | 23 & 24 February, 2001 |
| 10. | National Conference on Road Transportation – Issues & Strategies RTIS'98 | 23 & 24 October, 1998 |

Membership of Committees / Boards

- Fellow Institution of Engineers
- Senior Member IEEE
- Life member Indian Society for Technical Education
- Life Member Punjab Science Congress
- Life Member Indian Concrete Institute
- Member Board of Studies, Civil Engineering, Panjab University, Chandigarh and Punjab Technical University, Jalandhar
- Executive Member, Indian Concrete Institute, Punjab & Haryana State Centre, Chandigarh from 2015 for five years
- Peer Reviewer for Congent Engineering Journal
- Peer Reviewer for ACI Structural and Materials Journals
- Peer Reviewer for Engineering Structures Journal (Elsevier)
- Peer Reviewer for The Open Civil Engineering Journal
- Peer Reviewer for Hindawi Journal of Advances in Civil Engineering
- Editorial Board Member and Peer Reviewer for American Association for Science and Technology Journal.

International Research Tie-ups

- Participating in joint research activities carried out by Chitkara University, Glasgow Caledonian University UK and ESTP Paris, France.
- In addition, another joint venture for research with Professors from Edith Cowan University and Federal University Australia is going on.

Research Guidance

- Supervision of awarded Doctoral Thesis: 04
- Supervision of Doctoral Thesis, under progress: 08
- Supervision of awarded M.E. dissertations: 02
- Supervision of M.E. Thesis, under progress: 02

Major Research Interests

- Alternative construction material
- Sustainable Campus Infrastructure
- Use of Industrial Waste in Construction
- Zero discharge campus