



## **CONFERENCE PUBLICATIONS**

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**(Last updated 11 March 2020)**

### ***CONFERENCE (INTERNATIONAL)***

1. **Bhalla, S.** (2019), "Fusion of Smart Materials And Concrete Technologies: Present And Futuristic Applications", **Keynote address**, Proceedings UKIERI Concrete Congress, 05-08 March, NIT Jalandhar.
2. Balgavhar, S. and **Bhalla, S.** (2018), "Green Energy Harvesting Using Piezoelectric Material From Bridge Vibrations", Proceedings of International Conference on Vibration Problems (ICGEA), 24-26 March, Nanyang Technological University, Singapore. (**Won Best Paper Presentation Award**)
3. **Bhalla S.** (2018), "Piezoelectric Materials: Futuristic Applications in the Field of Structural Health Monitoring, Energy Harvesting And Bio-Mechanics" **Keynote paper**, Proceedings of International Conference on Advances in Concrete, Structural and Geotechnical Engineering (ACSGE), 26-28 February, BITS Pilani.
4. **Bhalla S.** and Balgavhar, S. (2017), "Tapping Structural Vibrations for Piezoelectric Energy Harvesting: Potential And Path Forward" **Keynote paper**, Proceedings of International Conference on Vibration Problems (ICOVP 2017), 29 Nov-02 Dec, IIT Guwahati.
5. Sumit and **Bhalla S.** and (2016), "Issues in Piezoelectric Energy Harvesting From Civil Structures" Invited talk, 8<sup>th</sup> International Symposium on NDE in Aerospace, 03-05 Nov, IISc Bangalore.
6. West, R., Bhalla, S. and Bhagat, D. (2016), "Flexural Response of Epoxy-Bamboo Frames", Proceedings of Civil Engineering Research in Ireland (CERI) 2016, 29-30 August 2016. (**Won Best Paper Award**)

7. Joshi, B., Adhikari, S. and **Bhalla, S.** (2016), "Damage Sensitivity Investigations of EMI Technique on Different Materials Through Coupled Field Analysis", Proceedings of SPIE Conference on Smart Structures and NDE, 20-24 March, Las Vegas, California, SPIE Vol. 9803, pp. 98032J-1
8. Srivastava, S., **Bhalla, S.**, Madan, A. and Bhalla, S. (2016), "Finite Element Modelling of Non-Bonded Piezo Sensors for Biomedical Health Monitoring of Bones Based on EMI Technique", Proceedings of SPIE Conference on Smart Structures and NDE, 20-24 March, Las Vegas, California, SPIE Vol. 9805, pp. 98052X-1.
9. **Bhalla, S.**, Srivastava, S., Suresh, R., Moharana, S., Kaur, N. and Gupta, A. (2015), "Application of Structural Health Monitoring Technologies to Bio-Systems: Current Status and Path Forward", Proceedings of SPIE Conference on Sensors and Smart Structures Technologies for Civil, Mechanical and Aerospace Systems, 8-12 March, San Diego, California, SPIE Vol. 9438, pp. 943826-1-6. DOI: 10.1117/12.2084399  
Click here to open ---> <http://dx.doi.org/10.1117/12.2084399>
10. Moharana, S. and **Bhalla, S.** (2015), "Modelling of Shear Lag Effect for Piezo-Elastodynamic Structure for Electro-Mechanical Impedance Technique", Proceedings of SPIE Conference on Sensors and Smart Structures Technologies for Civil, Mechanical and Aerospace Systems, 8-12 March, San Diego, California, SPIE Vol. 9435, pp. 94352J-1-12. DOI: 10.1117/12.2084266  
Click here to open ---> <http://dx.doi.org/10.1117/12.2084266>
11. Kaur, N. and **Bhalla, S.** (2014), "New Paradigms in Piezoelectric Energy Harvesting from Civil Structures", Proceedings of 9<sup>th</sup> Biennial Conference on Structural Engineering Convention (SEC 2014), 22-24 December, New Delhi, pp. 2609-2613.
12. Negi, P., Kaur, N., **Bhalla, S.** and Chakraborty, T. (2014), "Experimental Strain Sensitivity Investigations on Embedded PZT Patches in Varying Orientations", Proceedings of 9<sup>th</sup> Biennial Conference on Structural Engineering Convention (SEC 2014), 22-24 December, New Delhi, pp. 2615-2620.
13. Gupta, M., **Bhalla, S.**, Bhagat, D., West, R. P. and Nagpal, A. (2014), "Pre-Engineered Construction Using Bamboo Portal Frame", Proceedings of 9<sup>th</sup> Biennial Conference on Structural Engineering Convention (SEC 2014), 22-24 December, New Delhi, pp. 371.

14. **Bhalla, S.**, West, R., Bhagat, D., Gupta, M and Nagpal, A. (2014), "Pre-Engineered Bamboo Structures: A Step Towards Sustainable Construction", **Keynote address**, Proceedings of International Conference on Sustainable Civil Infrastructure, ASCE Indian Section, 17-18 October, Hyderabad, pp. 145-150.
15. Kaur, N., Singmasetty, S., Dasari, M. and **Bhalla, S.** (2014), "Piezoelectric Energy Harvesting Potential Through Built Up and Simple Configurations Under Mechanical Vibrations", Proceedings of 9<sup>th</sup> International Symposium on Advanced Science and Technology in Experimental Mechanics (9<sup>th</sup> ISEM' 14), 01-06 November, New Delhi, paper **no 053**.
16. Naskar, S. and **Bhalla, S.** (2014), "Recent Developments in Metal Wire Based Electro-Mechanical Impedance Technique for Structural Health Monitoring", Proceedings of 9<sup>th</sup> International Symposium on Advanced Science and Technology in Experimental Mechanics (9<sup>th</sup> ISEM' 14), 01-06 November, New Delhi, paper **no 055**.
17. **Bhalla, S.**, Kaur, N. and Naskar, S. (2014), "Virtual Smart Structures and Dynamics Lab: Towards Teaching Advanced Concepts Online", Proceedings of 9<sup>th</sup> International Symposium on Advanced Science and Technology in Experimental Mechanics (9<sup>th</sup> ISEM' 14), 01-06 November, New Delhi, paper **no 054**.
18. Suresh, R., **Bhalla, S.**, Tjin, S. C. and Hao, J. (2014), "Plantar Stress Monitoring Using Fiber Bragg Grating Sensors", Proceedings of 9<sup>th</sup> International Symposium on Advanced Science and Technology in Experimental Mechanics (9<sup>th</sup> ISEM' 14), 01-06 November, New Delhi, paper **no 061**.
19. Srivastava, S., **Bhalla, S.**, Madan, A. and Gupta, A. (2014), "Bio-medical applications of Smart Piezoelectric Materials", Proceedings of 9<sup>th</sup> International Symposium on Advanced Science and Technology in Experimental Mechanics (9<sup>th</sup> ISEM' 14), 01-06 November, New Delhi, paper **no 064**.
20. Dhawan. S., **Bhalla, S.**, and Bhattacharjee, B. (2014), "Reinforcement Corrosion in Concrete Structures and Service Life Predictions -A Review", Proceedings of 9<sup>th</sup> International Symposium on Advanced Science and Technology in Experimental Mechanics (9<sup>th</sup> ISEM' 14), 01-06 November, New Delhi, paper **no 064**.
21. Naskar, S. and **Bhalla, S.** (2014), "Experimental Investigations of Metal Wire Based EMI Technique for Steel Structures" Proceedings of 7<sup>th</sup> ISSS Conference on Smart Materials Structures and Systems (ISSS 2014), 08-11 July, Bangalore, paper **no 1569922649**.

**Click here to open --->** <http://web.iitd.ac.in/~sbhalla/ISSS649.pdf>

22. Kaur, N. and **Bhalla, S.** (2014), "Monitoring Strength Gain and Fatigue Damage of RC Structure Using Embedded PZT Sensors" Proceedings of 7<sup>th</sup> ISSS Conference on Smart Materials Structures and Systems (ISSS 2014), 08-11 July, Bangalore, paper no **1569922207**.

**Click here to open --->** <http://web.iitd.ac.in/~sbhalla/ISSS207.pdf>

23. Moharana, S. and **Bhalla, S.** (2014), "Review of Power Consumption and Energy Efficiency for Electro-Mechanical Impedance Technique" Proceedings of 7<sup>th</sup> ISSS Conference on Smart Materials Structures and Systems (ISSS 2014), 08-11 July, Bangalore, paper no **1569923205**.

**Click here to open --->** <http://web.iitd.ac.in/~sbhalla/ISSS205.pdf>

24. Talakokula, V., **Bhalla, S.**, Gupta, A. and Bhattacharjee, B. (2014), "Recent Trends in Corrosion Assessment Using Piezo Sensors Via Electro-Mechanical Impedance Technique", Proceedings of SPIE Conference on Sensors and Smart Structures Technologies for Civil, Mechanical and Aerospace Systems, 8-12 March, San Diego, California, SPIE Vol. 9061, pp. 906139-1-10. DOI: 10.1117/12.2041654

**Click here to open --->** <http://dx.doi.org/10.1117/12.2041654>

25. Srivastava, S., **Bhalla, S.**, Madan, A. and Gupta, A. (2014), "Bio-Medical Applications of Smart Piezo Sensors Based on EMI Technique", Proceedings of International Conference on Stem Cell Research, Cancer Biology and Applied Biotechnology (Biotech 2014), 03-04 May, Jawaharlal Nehru University (JNU), New Delhi (Published in special edition in the International Journal of Basic and Applied Biology, Vol 1, No. 2), pp.48-50.

26. Singamsetty, S., Kaur, N. and **Bhalla, S.** (2014), "Energy Harvesting from Structural Vibrations Using Piezotransducers", Proceedings of 3<sup>rd</sup> International Conference on Sustainable Innovative Techniques in Architecture, Civil and Environmental Engineering (SITACEE): Civil Engineering Systems and Sustainable Innovations (ISBN: 978-93-83083-78-7), 26-27 April, Jawaharlal Nehru University, New Delhi, pp. 331-334.

27. Talakokula, V., Dhawan, S. K., Srivastava, S., Kaur, N. Moharana, S., **Bhalla, S.**, Bhattacharjee, B. and Gupta, A. (2013), "Recent Advances in Structural Health Monitoring Based on EMI Technique", Paper no 11501, Proceedings of International Conference on

Trends and Challenges in Concrete Structures, 19-21 December, Ghaziabad, pp. 590-597.

28. Talakokula, V. and **Bhalla, S.** (2013), "Carbonation Corrosion Assessment in Reinforcement of Normal and Flyash Concrete Using Piezo Sensors", Proceedings of International Conference on Corrosion, CORCON 2013, 30September- 03 October, New Delhi, paper no 13RCC23.
29. Naskar, S. and **Bhalla, S.** (2013), "Investigation into Metal Wire Based Variant of EMI Technique for Structural Health Monitoring", Proceedings of International Conference on Advances in Mechanical, Automobile and Aerospace Engineering (AMAAE - 2013) 21-22 September, Jawaharlal Nehru University, New Delhi, (Published in special edition in the International Journal of Engineering Research and Technology, Vol 6, No. 6 pp. 795-800).
30. **Bhalla, S.** and Moharana, S. (2013), "Modelling of Piezo-Bond Structure System for Structural Health Monitoring Using EMI Technique", Proceedings of 10<sup>th</sup> International Conference on Damage Assessment of Structures (DAMAS 2013), 08-10 July, Trinity College, University of Dublin, Dublin, Ireland, published in Key Engineering Materials, Vol. 570, pp. 1234-1240. **DOI: 10.4028/www.scientific.net/KEM.569-570.1234**  
**Click here to open --->**  
<http://dx.doi.org/10.4028/www.scientific.net/KEM.569-570.1234>
31. Bhagat, D., Gupta, M. and **Bhalla, S.** (2013), "Composite Bamboo Junction Elements for Structural Applicaitons", Proceedings of Innovative Techniques in Civil and Environmental Engineering (SITCEE-2013), 05-06 June, Jawaharlal Nehru University, New Delhi, (Published in special edition in the International Journal of Civil Engineering and Applications, Vol 3, No. 7) pp. 36-41.
32. Gupta, M., Bhagat, D. and **Bhalla, S.** (2013), "Design and Strength Analysis of Steel-Bamboo Fixtures for Pre-Engineered Bamboo Portal Frame", Proceedings of Innovative Techniques in Civil and Environmental Engineering (SITCEE-2013), 05-06 June, Jawaharlal Nehru University, New Delhi, (Published in special edition in the International Journal of Civil Engineering and Applications, Vol 3, No. 7) pp. 42-46.
33. **Bhalla, S.** and Shaw, A. (2013), "Engineering Characterization of Bamboo as A Sustainable Alternative to Steel", Proceedings of UKIERI Congress on Innovations in Concrete

Construction, 05-08 March, B. R. Ambdekar National Institute of Technology, Jalandhar, paper no UCC-490.

34. Kaur, N., Gupta, N., Jain, N. and **Bhalla, S.** (2013), "Integrated Global Vibration and Low-Cost EMI Technique for Structural Health Monitoring of RC Structures Using Embedded PZT Patches", Proceedings of UKIERI Congress on Innovations in Concrete Construction, 05-08 March, B. R. Ambdekar National Institute of Technology, Jalandhar, paper no UCC-488.
35. Moharana, S. and **Bhalla, S.** (2013), "Review of Non-Destructive Evaluation of Concrete Structures Using Electro-Mechanical Impedance Technique", Proceedings of UKIERI Congress on Innovations in Concrete Construction, 05-08 March, B. R. Ambdekar National Institute of Technology, Jalandhar, paper no UCC-491.
36. Visalakshi, T. and **Bhalla, S.** (2013), "Experimental Study to Detect Corrosion in RC Structures Using Piezo-Ceramic Sensors", Proceedings of UKIERI Congress on Innovations in Concrete Construction, 05-08 March, B. R. Ambdekar National Institute of Technology, Jalandhar, paper no UCC-492.
37. Bhagat, D., Maheshwari, A. and **Bhalla, S.** (2013), "Composite Bamboo Beam Elements for Structural Applications", Proceedings of UKIERI Congress on Innovations in Concrete Construction, 05-08 March, B. R. Ambdekar National Institute of Technology, Jalandhar, paper no UCC-494.
38. Bhagat, D. and **Bhalla, S.** (2013), "Composite Bamboo Column Elements for Structural Applications", Proceedings of UKIERI Congress on Innovations in Concrete Construction, 05-08 March, B. R. Ambdekar National Institute of Technology, Jalandhar, paper no UCC-495.
39. **Bhalla, S.**, Chaudhry, D. K. and Kajjam, S. (2012), "Remote Structural Health Monitoring Using Global Vibration and Low-Cost Version of EMI Technique in Synergy", Proceedings of Third International Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), 05-08 December, IIT Delhi, pp. 315-317.

40. Kajjam, S., Chaudhry, D. K., **Bhalla, S.** and West, R. (2012), "Fabrication and Testing of Built-Up Bamboo Columns for Structural Applications", Proceedings of Third International Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), 05-08 December, IIT Delhi, pp. 433-436.
41. Visalakshi, T. and **Bhalla, S.** (2012), "Early Detection of Corrosion in RC Structures Using EMI Technique", Proceedings of CORCON 2012, 26-29 September, Goa, paper no RI13 (**won best paper award**)
42. Pesce, G. L., Kurchania, R., Bowen, C. R., **Bhalla, S.** and Ball, R. J. (2012), "Monitoring Hydration in Lime-Metkaolin Composites", Proceedings of Congress of Innovation on Sustainable Construction (CIN-COS'12), 20-22 September, Aveiro (Portugal), pp. 319-328.
43. Pesce, G. L., Ball, R. J., Bowen, C. R., Kurchania, R. and **Bhalla, S.** (2012), "Monitoring Hydration in Lime-Metkaolin Composites", Proceedings of 32<sup>nd</sup> Cement and Concrete Science Conference, 17-18 September, Queen's University, Belfast, pp. 116-121.
44. **Bhalla, S.** (2012), "Fatigue Life Assessment of Structures Using Electro-mechanical Impedance Technique", Proceedings of the 25<sup>th</sup> International Congress on Condition Monitoring and Diagnostic Engineering, 18-20 June, University of Huddersfield, UK, Journal of Physics Conference Series **364**, paper no. 012127. DOI: 10.1088/1742-6596/364/1/012127  
**Click here to open ---> <http://dx.doi.org/10.1088/1742-6596/364/1/012127>**
45. Shanker, R., **Bhalla, S.** and Gupta, A. (2012), "Prediction of Presence and Severity of Damages Using Experimental Mode Shape", Proceedings of the 25<sup>th</sup> International Congress on Condition Monitoring and Diagnostic Engineering, 18-20 June, University of Huddersfield, UK, Journal of Physics Conference Series **364**, paper no. 012126. DOI: 10.1088/1742-6596/364/1/012126  
**Click here to open ---> <http://dx.doi.org/10.1088/10.1088/1742-6596/364/1/012126>**
46. Visalakshi, T., **Bhalla, S.** and Bhattacharjee, B. (2011), "Detection and Quantification of Corrosion using Electro-Mechanical Impedance (EMI) Technique", Proceedings of International Conference on Advances in Civil Engineering (ACE 2011), KL University, Vijayawada, 21-23 October, pp. 889-891.

47. **Bhalla, S.** and Bhattacharjee, B. (2011), "Smart Materials in Structural Health Monitoring and Non-Destructive Evaluation of Concrete Structures", Proceedings of International UKIERI Concrete: New Developments in Concrete Construction, 8-10 March, Indian Institute of Technology Delhi, pp. 251-260.
48. Singh, A. P., Singh, S. P., Modhera, C. D., Shah, D., **Bhalla, S.** and Bhattacharjee, B. (2011), "Enhancing Structural Performance: Utilising Fibres", Proceedings of International UKIERI Concrete: Concrete for High Performance Sustainable Infrastructure, 8-10 March, Indian Institute of Technology Delhi, pp. 153-176.
49. Vishalakshi, T. and **Bhalla, S.** (2010), "Review of Electro-Mechanical Impedance Based Structural Health Monitoring", Proceedings of 6<sup>th</sup> International Conference on Vibration Engineering and Technology of Machinery (VETOMAC-VI), 13-15 December 2010, Indian Institute of technology Delhi, pp. 550-558.
50. Mohrana, S. and **Bhalla, S.** (2010), "Numerical Study of PZT-Structure Interaction for Electro-Mechanical Impedance (EMI) Technique", Proceedings of 6<sup>th</sup> International Conference on Vibration Engineering and Technology of Machinery (VETOMAC-VI), 13-15 December 2010, Indian Institute of technology Delhi, pp. 571-578.
51. **Bhalla, S.**, Gupta, S., Puttaguna, S. and Suresh, R. (2008), "Bamboo as Green Alternative to Concrete and Steel for Modern Structures", Paper 966, Proceedings of International Congress of Environmental Research, 18-20 December, Goa.
52. Panigrahi, R., Gupta A. and **Bhalla S.** (2008), "Damage Assessment of Tensegrity Structures using Piezo-Transducers", Paper no SMASIS2008-355, Proceedings of ASME Conference on Smart Materials, Adaptive Structures and Intelligent Systems, 28-30 October, 2008, Ellicott City, Maryland, USA.
53. Shanker, R., **Bhalla S.** and Gupta A. (2008), "An Integrated Approach for Health Monitoring of Multi Storey RC Frame Structures", Paper no SMASIS2008-382, Proceedings of ASME Conference on Smart Materials, Adaptive Structures and Intelligent Systems, 28-30 October, 2008, Ellicott City, Maryland, USA.
54. Panigrahi, R., Gupta A. and **Bhalla S.** (2008), "Parametric Study on Tensegrity Grid Structures", International Conference on Computational Engineering and Experimental Sciences (ICCES'08), Honolulu, Hawaii, USA, March 16-21, 2008, pp. 1105-1112.



55. Ramesh Babu, K. H., **Bhalla, S.** and Neeraj, V. (2007), "Infrastructure Health Monitoring for Management", Proceedings of Structural Engineering World Congress (SEWC-2007), 02-07 November, Bangalore, pp. 52.
56. Sudhakar, P., Gupta, S. and Kordke, C., **Bhalla, S.** and Satya, S. (2007), "Report of Conceptual Development of Bamboo Concrete Composite Structures at a typical tribal belt in India", Proceedings of International Conference on Modern Bamboo Structures, CRC Press, 28-30 October, Changsha, China, pp. 65-73.
57. **Bhalla, S.**, Sudhakar, P., Gupta, S. and Kordke, C. (2007), "Wind Analysis of Bamboo Based Shed Structure and Design of Base Connection for Bambcrete Column", Proceedings of International Conference on Modern Bamboo Structures, CRC Press, 28-30 October, Changsha, China, pp. 259-265.
58. **Bhalla, S.** and Gupta, A. (2007), "Health Monitoring of Civil Structures- Current Status and Perspectives", Proceedings of 4<sup>th</sup> International Conference on Construction in the 21<sup>st</sup> Century (CITC-IV), 11-13 July, Gold Coast, paper no. 45, pp. 381-387.
59. Panigrahi, R., Gupta A. and **Bhalla S.** (2006), "A New Design Approach for Tensegrity Structures Based on Artificial Neural Networks", Proceedings of INCITE World Conference, 16-18 November, New Delhi, pp. 105-111.
60. Gupta, A., Panigrahi, R. and Bhalla, S. (2006),"Development of Low-Cost Tensegrity Structure based on Cable Mode of Deployment, Proceedings of 8<sup>th</sup> International Conference on Steel, Space and Composite Structures, 15-17 May, Kuala Lumpur, Malaysia, pp. 495-502, edited by S. P. Chiew.
61. Panigrahi, R., Gupta, A., **Bhalla, S.** and Arora, K. (2005), "Application of Artificial Neural Network for Form Finding of Tensegrity Structures", Proceedings of 2<sup>nd</sup> Indian International Conference on Artificial Intelligence (IICAI-05), December 20-22', Pune, India, pp 1950-1962.
62. Gupta, A., Panigrahi, R. and **Bhalla, S.** (2005), "Behaviour of Foldable Tensegrity Structures", Proceeding of 3<sup>rd</sup> Specialty Conference on the Conceptual Approach to Structural Design, 25 - 26 August, Singapore, pp. 9-16.
63. **Bhalla, S.**, Yang , Y. W. and Soh, C. K. (2005), "Structural Health Monitoring and Non-Destructive Evaluation of Concrete Structures Using Piezo-Impedance Transducers", Proceedings of fourth International Conference on Smart Materials, Structures and Systems, July 28-30, Bangalore, India, pp. SB 22-28.

64. Panigrahi, R., Gupta, A. and **Bhalla S.** (2005), “Comprehensive Monitoring of Tensegrity Structures Using Self-Sensing Piezo Transducers”, Proceedings of fourth International Conference on Smart Materials, Structures and Systems, July 28-30, Bangalore, India, pp. SB 91-98.
65. **Bhalla, S.**, Naidu, A. S. K., Yang, Y. and Soh, C. K. (2003), “An Impedance-Based Piezoelectric-Structure Interaction Model for Smart Structure Applications”, Proceedings of Second MIT Conference on Computational Fluid and Solid Mechanics, June 17-20, Cambridge, 107-110. (This paper was awarded **Young Researcher Fellowship Award by MIT**).
66. Naidu, A. S. K., **Bhalla, S.** and Soh, C. K. (2002), “Incipient Damage Localization in Structures Using Smart Piezoceramic Patches”, Proceedings of SPIE Conference on Smart Structures, Devices and Systems , 16-18 December, Melbourne, SPIE Vol. 4935, pp. 495-502.
67. **Bhalla, S.**, Naidu, A. S. K., Ong, C.W. and Soh C. K. (2002), “Practical Issues in the Implementation of Electro-Mechanical Impedance Technique for NDE”, Proceedings of SPIE Conference on Smart Structures, Devices and Systems, 16-18 December, Melbourne, SPIE Vol. 4935, pp. 484-494.
68. **Bhalla, S.**, Naidu, A. S. K. and Soh C. K., (2002), “Influence of Structure-Actuator Interactions and Temperature on Piezoelectric Mechatronic Signatures for NDE”, Proceedings of ISSS-SPIE International Conference on Smart Materials, Structures and Systems, 12-14 December, Bangalore, pp. 213-219.
69. Naidu, A. S. K. and **Bhalla, S.** (2002), “Damage Detection in Concrete Structures with Smart Piezoceramic Transducers”, Proceedings of ISSS-SPIE International Conference on Smart Materials, Structures and Systems , 12-14 December, Bangalore, pp. 639-645.
70. Ong, C. W., Yang, Y., Wong, Y.T., **Bhalla, S.**, Lu, Y. and Soh, C. K. (2002), “The Effects of Adhesive on the Electro-Mechanical Response of a Piezoceramic Transducer Coupled Smart System”, Proceedings of ISSS-SPIE International Conference on Smart Materials, Structures and Systems, 12-14 December, Bangalore, pp. 191-197.
71. Naidu, A. S. K., **Bhalla, S.** and Soh, C. K. (2002), “Damage Location Identification in Smart Structures Using Modal Parameters;” Proceedings of 2<sup>nd</sup> International Conference on Structural Stability and Dynamics ,16–19 December, Singapore, 737-742.

72. **Bhalla S.**, Soh C. K., Tseng, K. K. H and Naidu, A. S. K (2001), "Diagnosis of Incipient Damage in Steel Structures by Means of Piezoceramic Patches", Proceedings of 8<sup>th</sup> East Asia-Pacific Conference on Structural Engineering and Construction, 5-7 December, Singapore, paper no 1598.
73. Tseng, K. K. H. , Soh, C. K., Gupta, A. and **Bhalla S.** (2000), "Health Monitoring of Civil Infrastructure Using Smart Piezoceramic Transducer Patches", Proceedings of 2<sup>nd</sup> International Conference on Computational Methods for Smart Structures and Materials, 19-20 June, Madrid, pp. 153-162.

### **CONFERENCE (NATIONAL)**

1. **Bhalla, S.**, Suresh, R., Moharana, S., Talakokula, V., Naskar, S. (2015), "Multi-Disciplinary Applications of Piezo-Sensors: Structural Health Monitoring, Bio-Mechanics and Energy Harvesting", **Invited Talk**, National Conference on Recent Advances and Future Prospects on Civil Engineering (RAFPC-15), Bhubaneswar, pp. 3-7.
2. **Bhalla, S.** and Shanker, R. (2012), "Structural Health Monitoring Via Low and High Frequency Vibrations Through Piezo-Transducers", **Keynote Lecture**, Proceedings of 8<sup>th</sup> Biennial Conference on Structural Engineering Convention (SEC 2012), 19-21 December, Sardar Vallabhai National Institute of Technology, Surat, pp. li-liv.
3. **Bhalla, S.** (2011), "Fatigue Life Determination Using Piezo-Sensors", **Keynote Lecture**, National Conference on Advances in Science and Technology (NCRAS-11), Synergy Institute of Engineering and Technology, 30 Sep-01 Oct, Dhenkanal, pp. 01.
4. Maheshwari, A. and **Bhalla, S.** (2011), "Low-Cost Techniques for Health Monitoring of Structures", **Invited Lecture**, Proceedings of National Conference on Repair and Rehabilitation of Concrete Structures, 06-07 May, NOIDA (UP), pp. 466-474.
5. **Bhalla, S.**, and Suresh, R. (2010), "Concept of Relativity in Light of Vedic Scriptures", Proceedings of All India Students' Conference on Science and Spiritual Quest, 15-17 January, MNNIT Allahbad, pp. 55-59.
6. Agrawal, A., Taneja, S., **Bhalla, S.** and Gupta, A. (2006), "Tunnel Monitoring Using Piezo-Impedance Transducers and Strain Gauges", Proceedings of National Conference on Civil Engineering: Meeting the Challenges of Tomorrow (CEMT-2006), 24-25 November, Ludhiana, pp. 563-570.
7. Pande, H., Prakash, A., Panigrahi, R., **Bhalla, S.** and Gupta, A. (2006), "Fabrication and

Testing of Low Cost Foldable Structures for Mass Sheltering.”, Proceedings of National Conference on Civil Engineering: Meeting the Challenges of Tomorrow (CEMT-2006), 24-25 November, Ludhiana, pp. 667-672.

8. **Bhalla, S.**, Gupta, A. and Shanker, R. (2006), “Instrumentation for Dynamic Characterization of structures”, Proceedings of National Conference on High Rise Buildings: Materials and Practices, 30-31 October, New Delhi, pp. 563-570.
9. Naidu, A. S. K., **Bhalla, S.** and Soh, C. K. (2004), “Recent Developments in Smart Systems Based Structural Health Monitoring”, Proceedings of National Conference on Materials and Structures (MAST), 23-24 January, Warangal, pp. 273-278.

### **WORKSHOPS (INTERNATIONAL)**

1. Soh, C. K., Annamdas, V. G. M. and **Bhalla, S.** (2015), “Applications of Structural Health Monitoring Technology in Asia”, Proceedings of 10<sup>th</sup> International Workshop on Structural Health Monitoring, 01-03 September, Stanford University, Stanford, CA.
2. Kaur, N. and **Bhalla, S.** (2013), “Feasibility for Energy Harvesting from Surface Bonded/ Embedded Piezo-Patches in Addition to Structural Health Monitoring”, Proceedings of 9<sup>th</sup> International Workshop on Structural Health Monitoring, 10-12 September, Stanford University, Stanford, CA., pp. 2600-2605
3. Moharana, S. and **Bhalla, S.** (2013), “Investigation of Shear Force Mechanism in Electro-Mechanical Impedance (EMI) Technique for Structural Health Monitoring”, Proceedings of 9<sup>th</sup> International Workshop on Structural Health Monitoring, 10-12 September, Stanford University, Stanford, CA.

### **WORKSHOPS (NATIONAL)**

1. **Bhalla, S.** and Kaur, N. (2013), “Feasibility of Energy harvesting from Thin Piezo Sensor Patches via Strain Actuation Mode”, Proceedings of International Workshop on Interactive Systems, Nanosolar Photovoltaics and Coatings for a Sustainable Built Environment, 10-11 January, Maulana Azad National Institute of Technology, Bhopal.
2. **Bhalla, S.** (2012), “Fatigue Life Assessment of Structures Using Electro-Mechanical Impedance Technique”, Proceedings of Workshop on Structural Health Monitoring and

Rehabilitation", Birla Institute of Technology and Science (BITS) Pilani, 19-20 September  
Paper TS VIII.

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