Faculty Profile

Faculty Name	**Dr. Dhirendra Singhal**
Designation	**Professor and Head**
Qualification	**B.Tech, Ph.D.**
Email	hod.civil@piet.co.in
Area of Interest	**Structural Engineering, Civil Engineering**
Work Experience (Total)	
• Teaching	**30yrs**
• Research	**30yrs**
• Industry	**2yrs**
• Others	**0**
Courses taught at Diploma/ Post Diploma/ Under Graduate/ Post Graduate/ Post Graduate Diploma Level	Strength of Materials Design of Concrete Structures –I Design of Concrete Structures-II Structural Analysis Advanced Concrete Technology Advanced Concrete Materials Disaster Management
Membership of Professional Bodies	• **Fellow of The Institution of Engineers (India)** • **Life Member Indian Concrete Institute** • **Life Member Indian Society for Technical Education**
Research Publications	74
• List of Publications	
Book and Chapter Publications	
• Books Authored published by International Publishers	**NA**
• Books Authored published by National Publishers	**NA**
• Publication of Chapter in Edited Books	**NA**
• Editor of Book by International Publishers	**NA**

• Editor of Book by National Publishers	**NA**
• Translation Work of Book	**NA**
• List of Book and Chapter Publications	**NA**
Patents	
• Published	**One**
• Filed	**NA**
• List of filed patent(s)	**NA**
PhD Guidance	
• Degree Awarded	**07**
• Thesis Submitted	**NA**
M.Tech. Guidance	
• Degree Awarded	**40**
• Thesis Submitted	**NA**
Research Project	
• List of Research project	**02**
Consultancy	
• List of Consultancy	**1. Distt Bar Chambers Bathinda** **2. Baba Farid Medical University, Faridkot** **3. Modern Jail, Kotkapura** **4. Hostels YMCA** **5. Many MES Projects**
Awards & Honours	• Post Doctorate JSPS Fellow • CSIR Research Fellow • E.P.Nicolaides Medal for the best paper in Civil Engineering Division in The Institution of Engineers (India)

Invited lectures / Resource Person/ paper presentation in Seminars/ Conferences/full paper in Conference	
● International (Abroad)	1. International Conference on Concrete Under Severe Environment, 1995, Sapporo, Japan
● International (Within Country)	2. International Seminar on Innovative World of Concrete, 1993, Bangalore 3. International Conference on Construction Industry, Environmental and Natural Managements, Chandigarh, November 2000 4. International Conference held at Birla Institute of Science and Technology, Pilani, 25-27 Oct 2009
● National	5. National Seminar on Durability of Concrete Structures, 1990, Nagpur 6. National Seminar on Fibre Reinforced Concrete and its Appliacation, 1991, Madras 7. National Conference on Advances in Materials of Construction and Construction Methods, August1997, Tirupati 8. National Seminar on Environmental Aspects in Engineering, April1998, Jhansi 9. National Conference on Recent Advances in Civil Engineering, IT, BHU, Varanasi, 14-16 Oct 2011 10. Workshop on Innovations in Enabling Works, Formwork and Scaffolding Systems, Indian Concrete Institute, 11-12 Sept 2015, New Delhi
● List of published papers	**20**
● List of Conference/FDP/STTP committee	**NA**
Social Contributions and Sports	
● **List of Social Contributions and Sports**	**NA**

List of Publications

1. Garg A, Jangra P., **Singhal D.,** Thong M. Pham**,** Ashish D. K**.,** Durability Studies on Conventional Concrete and Slag-based Geopolymer Concrete in Aggressive Sulphate Environment', Energy, Ecology and Environment, Accepted
2. SunitaKumari, **Singhal D.**, Walia R and Munday A., Utilization of Maize Cob and Rice Husk ash in manufacturing Paver block concrete for low traffic areas" Ecology, Environment and Conservation, 2021, 806-815.
3. Garg Atul, **Singhal D.,** and Parveen, "Review on the Durability Properties of sustainable Alkali Activated Concrete" Material Today; Proceedings, July 2020
4. Jindal B.B., **Singhal D**. Sharma S. K. and Parveen, "Enhancing Mechanical and Durability Properties of Geopolymer Concrete with Mineral Admixtures", Computers and Concrete, V.21, 2018
5. Parveen, **Singhal D.,** Junaid M. T., Jindal B. B. and Mehta A., " Mechanical and Microstructural Properties of Fly ash Based Geopolymer Concrete incorporating Alccofine at Ambient Curing", Construction and Building Materials, 2018, pp 298-307
6. Jindal B. B., Parveen, **Singhal D.** and Goyal A., "Predicting Relationship between Mechanical Properties of Low Calcium Fly ash Based Geopolymer Concrete", Transactions of the Indian Ceramic Society, V. 76, 2017, pp 258-265
7. Jindal B. B., **Singhal D,** Sharma S., Yadav A. and Shubham S. "Strength and Permeation Properties of Alccofine Activated Low Calcium Fly-ash Geopolymer Concrete", Computers and Concrete, V. 20, 2017, pp 683-688.
8. Dass Sachin, Jaglan Saurabh, Aggarwal P. and **Singhal D.,** "Identification and Management of Traffic Accidents on Selected Stretch of NH73A", 2017, Journal of General Management Research,
9. Parveen and **Singhal D.,** "Experimental study on GeopolymerConcrete Prepared using High-silica RHA incorporating Alccofine", Advances in Concrete Construction, V.5, 2017, pp377-390
10. Parveen, **Singhal D.** and Jindal B.B, "Development of Mix Design Method for Geopolymer Concrete", Advances in Concrete Construction, V.5, 2017, pp345-358
11. Jindal B.B., **Singhal D.** Sharma S. K. and Parveen, "Prediction of Mechanical Properties of Alccofine Activated low Calcium Fly ash based Geopolymer Concrete", ARPN Journal of Engineering and Applied Sciences, V.12, 2017, pp 3022-3031
12. Lallotra Balwinder and **Singhal D.**, "A Compatibility Study on Design and Analysis of Reinforced Concrete Structural Design using Software", International Journal of Engineering and Technology, V.9, 2017, N.2, pp1012-1021.
13. Lallotra Balwinder and **Singhal D.**, "State of the Art Report- A Comparative Study of Structural Analysis and Design – Staadpro, SAP 2000 and Etabs Software", International Journal of Engineering and Technology, V.9, 2017, N.2, pp1030-1043.
14. Jindal B.B., **Singhal D.** Sharma S. K. and Parveen, "Suitability of Ambient Cured Alcofine added Low Calcium Fly ash based Geoolymer Concrete", Indian Journal of Science and Technology, V.10, 2017, pp 1-10
15. Jindal B.B., **Singhal D.** Sharma S. K. Ashish D.K. and Parveen, "Improving Compressive Strength of Low Calcium Fly Ash Geopolymer Concrete with Alccofine", Advances in Concrete Construction, V.5, 2017, pp17-29

16. Garg A., **Singhal D.** and Parveen, "Durability of Geopolymer Concrete Research Needs", Proceedings of NCB Seminar on **Durability and Service Life of Concrete Structures**, 7 April 2017, Paper no. TS02-05
17. Dass S, **Singhal D,** and Agarwal P "Study of Pedestrian Flow/Behavior on Indian Roads", International Organization of Scientific Research Journal, 2015. 1, pp 38-42.
18. **Singhal D.**, Kumar V. and Balkrishan, "Mix Design Method for High Performance Concrete", The Bridge and Structural Engineer, V. 44, Dec 2014, pp 106-118

19. **Singhal D.**and Singh A. P., " Permeability of Steel Fibre Reinforced Concrete Influence of Fibre Shape and Fibre Content", International Journal of Earthquake Engineering and Hazard Mitigation, V.2, No. 3, 2014
20. **Singhal D.,** Singh G. and Balkrishan, "Effect of Different Types of Rebars on Bond Strength of High Performance Steel Fibre Reinforced Concrete" The Bridge and Structural Engineer, V. 43, Dec 2013, pp 88-94

21. Parveen, Sharma A. and**Singhal D.,** "Mechanical Properties of Geopolymer Concrete: A State of the Art Report", Proceedings of 5th Asia and Pacific Young Researchers and Graduates Symposium on Current Challenges in Structural Engineering, Jaipur, Oct 2013, pp232-237
22. **Singhal D.**, Aggarwal S. and Brar J S., "Concrete Mix Design IS:10262 2009 vs IS:10262 1982", Proceedings of UKERI Concrete Congress, Innovations in Concrete Construction, 5-8 March 2013, pp 454-460
23. Singh A. P. and **Singhal D.,** "Effects of Fibre Parameters on Tensile Strength of Steel Fibre Reinforced Concrete", Proceedings of National Seminar on Innovative Challenges in Civil Engineering, PTU GZS Campus, Bathinda, 15-16 Mar 2012, pp12-17.
24. **Singhal D.**,Singla A. and Bal Krishan"Effects of Percentage Tensile Reinforcement in Ultimate Shear Capacity of High Performance Steel Fibre Reinforced Concrete", Proceedings of National Seminar on Innovative Challenges in Civil Engineering, PTU GZS Campus, Bathinda, 15-16 Mar 2012, pp18-22.
25. **Singhal D.**, Singh G. and Bal Krishan"Effects of Different types of Rebars on Bond Strength of High Performance Steel Fibre Reinforced Concrete", Proceedings of National Seminar on Innovative Challenges in Civil Engineering, PTU GZS Campus, Bathinda, 15-16 Mar 2012, pp23-29.

26. Jindal B. B. and **Singhal D.**, "Comparative Study of Design of Water Tank with reference to IS:3370", Proceedings of National Seminar on Innovative Challenges in Civil Engineering, PTU GZS Campus, Bathinda, 15-16 Mar 2012, pp30-33.

27. **Singhal D.**, Aggarwal S. and Brar J.S."A Comparative Study on Concrete Mix Design by IS:10262", Proceedings of National Seminar on Innovative Challenges in Civil Engineering, PTU GZS Campus, Bathinda, 15-16 Mar 2012, pp 34-37

28. Jindal B. B. and **Singhal D.**, "Suitability of Steel Fibre Reinforced Concrete for Water Retaining Structures", Proceedings of National Seminar on Innovative Challenges in Civil Engineering, PTU GZS Campus, Bathinda, 15-16 Mar 2012, pp184-187

29. **Singhal D.** and Bal Krihsan, "Effects of Aggressive Chloride Environment of High Perfromance Steel Fiobre Reinforced Concrete", Proceedings of National Seminar Recent Advances in Civil Engineering, Institute of Technology, BHU, Varanasi, 14-16 Oct 2011, pp 306-310.
30. Singh A. P. and **Singhal D.,** "Effects of Fibre Parameters on Tensile Strength of Steel Fibre Reinforced Concrete", Proceedings of National Seminar on Innovative Challenges in Civil Engineering, PTU GZS Campus, Bathinda, 15-16 Mar 2012, pp12-17.
31. **Singhal D.**and Singh A.P., "Permeability of Steel Fibre Reinforced Concrete-Influence of Fibre Shape and Fibre Content", International Review of Civil Engineering, V.2, 2011, pp75-83.
32. Singh A. P. and **Singhal D.,** "Strength and Permeability Relationship of Steel Fibrous Concrete", Proceedings of 35th International Conference on Our World in Concrete & Structures, Singapore, 2010, 403-409.
33. **Singhal D.** and BalKrihsan, "Shear Capacity of High Performance Steel Fibre Reinforced Concrete", International Review of Civil Engineering, V.1, 2010, 280-288
34. **Singhal D.** and BalKrihsan, "Suitability of Steel Fibre Reinforced Concrete as Construction Material for Water Retaining Structures", International Journal of Earth Sciences and Engineering, V.3, 2010, pp76-88.
35. **Singhal D.**and Bal Krishan, "Sulphate Resistance of High Performance Steel Fibre Reinforced Concrete", Civil Engineering and Construction Review, Oct 2009, pp 62-66
36. **Singhal D.** and Bal Krihsan, "Suitability of Steel Fibre Reinforced Concrete as Construction Material for Water Retaining Structures", Proceedings of International Conference held at Birla Institute of Science and Technology, Pilani, 25-27 Oct 2009.
37. Singh A.P. and **Singhal D.,** "Permeability of Steel Fibre Reinforced Concrete : Influence of Fibre Parameters", Proceedings of International Conference on Concrete : Sustainable Construction Congress, Dundee, UK., 7 July 2008, pp 427- 436
38. Balkrishna, Singh A. and **Singhal D.**, "Mix Design Method for HPC and Effect of Different Types of Cement on HPC", Proceedings of the National Conference on High Rise Buildings : Materials and Practice, New Delhi 2006, pp11-18
39. **Singhal D.** , Singh A and Balkrishna, "Structural Properties of High Performance Steel Fibre Reinforced Concrete", Proceedings of the National Conference on Civil Engineering: Meeting the Challenges of Tomorrow, Ludhiana, 2006, pp357-362
40. **Singhal D**, Agrawal R. and Nautiyal B.D., "Sulphate Resistance of Steel Fibre Reinforced Concrete", Jl of Ferro-cement, 2002, V.32, No.2, pp147-157.
41. Singh A.P., Agrawal R. and **Singhal D.**, "Permeability and Strength Characteristics of Steel Fibre Reinforced Concrete", Jl of Ferro-cement, 2002, V.32, No.2, pp127-137.
42. Bansal M. and **Singhal D.,** "Structural Properties of Clay-Fly Ash Bricks", Civil Engineering and Construction Review, 2002, V.15, No.11, pp59-64.
43. Singh A.P and **Singhal D.,** "Permeability of Steel Fibre Reinforced Concrete", Civil Engineering Divn., The Institution of Engineers, Dec2001, pp145-149.
44. Singh A. P. and **Singhal D.,** "Effect of Cement and Fibre Contents on Permeability of SFRC", Jl. of Structural Engineering, V.28, pp49-55, 2001.
45. **Singhal D.** and Singh A.P., "Effects of Fibre Content and Fibre Shape on Permeability of SFRC", Proceedings of International Conference on Construction Industry, Disaster Management and Environmental Management, Chandigarh, Nov. 2000, pp 393-402.

46. Singh A. P. and **Singhal D.**, "Effect of Concrete Strength on Permeability of SFRC", Proceedings of National Conference of Advances in Concrete Technology, Patiala, Sept. 2000, pp 17-23.
47. **Singhal D.**, Agarwal R. and Nautiyal B.D., "Effects of Chloride Environment on Steel Fibre Reinforced Concrete", Jl of the Institution of Engineers(I), Civil Engineering Division, V.80, 1999, pp 110-116.
48. Singh A.P. and **Singhal D.**, "Effect of Fibre Content on Permeability of Steel Fibre Reinforced Concrete", Proceedings of 5th International Conference on Concrete Technology for Developing Countries, V.2, Nov.1999, ppV-18 to 26.
49. Singh A.P. and **Singhal D.**, "Effect of Fibre Shape on Bond and Compressive Strengths of Steel Fibre Reinforced Concrete", Jl of the Institution of Engineers(I), Civil Engineering Division, V.79, 1998, pp 136-139.
50. **Singhal D.**, Agarwal R. and Nautiyal B.D., "Chloride Resistance of Ordinary Portland Cement Concrete", Jl of the Institution of Engineers(I), Civil Engineering Division, V.79, 1998, pp 63-66
51. Kawamura M., **Singhal D** and Tsuji Y., "Effects of ASR on Corrosion of Reinforcement in Concrete under Saline Environments", Proceedings of International Conference on the Interfacial Transition Zone in Cementitious Composites, March 1998, Hafia, Israel, pp 179-186.
52. **Singhal D.**, Agarwal R. and Nautiyal B.D., "Sulphate Resistance of Ordinary Portland Cement Concrete-Another Approach", Bulletin of Indian Concrete Institute, Madras, 62, 1998, pp 37-40.
53. **Singhal D.**, Verma V and Singh B., "Effects of Fibre Shape on Bond Strength of SFRC", Proceedings of the National Conference on Advances in Materials of Construction and Construction Methods, Tirupati, August 1997, pp 141-145.
54. Kumar V. and **Singhal D.**, "Flexural Strength of Reinforced Concrete Beams Containing Steel Fibres", Jl of Structural Engineering, India, V.23, 1996, pp 145-149.
55. Agarwal R., Singh A.K. and **Singhal D.**, "Effect of Fibre Reinforcing Index on Compressive and Bond Strengths of Steel Fibre Reinforced Concrete", Jl of the Institution of Engineers(I), Civil Engineering Division, V.77, 1996, pp 37-40.
56. **Singhal D.**, Discussion on "Durability of Reinforced Concrete in Aggressive Sabakha Environment", ACI Materials Jl, V.93, 1996, pp191-193.
57. Kumar V., **Singhal D.** and Pinto C., "Pressures for the Design of Silos-A Review", Bulletin of Indian Concrete Institute, Madras, 51, 1995, pp 25-28.
58. Kumar V., Gupta V.K., **Singhal D.** and Roy B.N., "Rotational Capacity of SFRC Beams with Equal Reinforcement on Tension and Compression Faces", Jl of Structural Engineering , Madras, V.22, 1995, pp 129-134.
59. **Singhal D.**, Agarwal R. and Nautiyal B.D., "Efficient Fibre Placement in SFRC Beams-An Experimental Study", Bulletin of Indian Concrete Institute, Madras, 49, 1994, pp 23-26.
60. **Singhal D.**, Agarwal R. and Nautiyal B.D., "Resistance of Concrete and Rebars against Sulphate and Chloride Attack-A Review(Pt.-2)" Bulletin of Indian Concrete Institute, Madras, 48, 1994.

61. **Singhal D.**and Kumar V., "Effect of Sulphate Exposure on Steel Fibre Fly-ash Concrete at Elevated Temperatures", Proceedings of 4th International Seminar on Cement and Building Materials, New-Delhi, 1994, pp X-80 to X-88.
62. Agarwal R. and **Singhal D.**, "Effect of Chloride Exposure on Steel Fibre Fly-ash Concrete at Elevated Temperatures", Proceedings of 4th International Seminar on Cement and Building Materials, New-Delhi, 1994, pp X-89 to X-96.
63. **Singhal D.**, Gupta V.K., Kumar V. and Nautiyal B.D., "Ductility of Steel Fibre Concrete Beams with Equal Conventional Reinforcement on Both Faces", Proceedings of National Seminar on Fibre Reinforced Cementitious Product, Sultanpur, 1994, pp57-61.
64. Kumar V., Agarwal R., Nautiyal B.D. and **Singhal D.**, "Structural Properties of SFRC", Proceedings of International Seminar on Innovative World of Concrete, Bangalore, 1993, Pp 3-99 to 3-109.
65. **Singhal D.**, Agarwal R. and Nautiyal B.D., Discussion on "Investigation on the Relationship between Phase Composition and Chloride Corrosion of Steel Fibre Reinforcement in Cement Mortar", ACI Materials Jl, V.90, 1993, pp 191-193.
66. **Singhal D.**, Agarwal R. and Nautiyal B.D., "Resistance of Concrete and Rebars against Sulphate and Chloride Attack – A Review", Bulletin of Indian Concrete Institute, Madras, 38, 1992, pp 38-42.
67. Kumar V., Nautiyal B.D. and **Singhal D.**, "Effect of Fineness Modulus of Coarse Aggregate on the Strength of Concrete", Civil Engineering and Construction Review, V.5, 1992, pp33-39.
68. Virdi C.S., Kumar V., Roy B.N. and **Singhal D.**, "Assessment and Repair of Fire Damaged Concrete Structures – A Review", Bulletin of Indian Concrete Institute, Madras, 39, 1992, pp 33-39.
69. **Singhal D.**, Agarwal R. and Nautiyal B.D., "Chloride Resistance of SFRC", Proceedings of 4th International RILEM Symposium, Sheffield, 1992, pp 851-859.
70. KarthikeyanO.H., Kumar V., **Singhal D.** and Nautiyal B.D., "Fibres for FRC-Their Properties, Applications and Mixing – A Review Report", Bulletin of Indian Concrete Institute, Madras, 34, 1991, pp 37-49.
71. **Singhal D.**, Agarwal R. and Nautiyal B.D., "Chloride and Sulphate Resistance of SFRC – Research Needs", Proceedings of Fibre Reinforced Concrete and Its Applications, 1991, Madras, pp11-1 to 11-10.
72. Agarwal R. and **Singhal D.**, "Non-Linear Behaviour of Steel Fibre Reinforced Concrete – A State of the Art Report", Proceedings of 14th OWICS, Singapore, 1989, pp 7-14.
73. **Singhal D.**, Nautiyal B.D. and Kumar V., "Resistance of Cement Concrete against Sulphate and Chloride Attack", Proceedings of National Seminar, Nagpur, 1990, pp III-12 to 16.
74. Nautiyal B.D. and **Singhal D.**, "Durability of Cement Concrete against Sulphate and Chloride Attack – A Review", Proceedings of National Seminar, 1990, ppIII-20 to 24.