CURRICULUM VITAE

Dr. Pradeep K. Goyal Professor Department of Civil Engg. Delhi Technological University, Delhi, India Mobile No.:+91-9783937314 E-mail: pkgoyal@dtu.ac.in

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Areas of Interest

Cyclone disaster mitigation, Microzonation, Hazard analysis and risk assessment, Relibility Analysis, performance based design, materials, soft computing techniques.

Education

- Ph.D., Indian Institute of Technology Delhi, India (2010)
 Thesis Title: Vulnerability Assessment of Rural Houses due to Cyclonic Wind
- M.E., Malviya National Institute of Technology, Jaipur, Rajasthan, India (1999)
 Specialization: Civil Engineering (Structural Engineering)
- B.E., M.B.M. Engineering College, Jodhpur, Rajasthan, India (1996)
 Specialization: Civil Engineering

Professional Experience

- Professor, Delhi Technological University, Delhi (1st Nov.2021 to continue)
- Associate Professor, Delhi Technological University, Delhi (1st Nov. 2018 to 31st Oct.2021)
- Associate Professor: Govt. Engineering College, Ajmer, Raj. (13th Otc.2011- 31Oct. 2018))
- Reader: Govt. Engineering College, Ajmer, Raj. (7th Aug. 2010 12th Otc.2011)
- Lecturer (Selection grade):Govt. Engg College, Ajmer, Raj. (13th Oct. 2008 6^{th1st} Aug. 2010)
- Lecturer (Senior scale):Govt. Engineering College, Ajmer, Raj. (13th Oct. 2003 12th Oct. 2008)
- Lecturer:Govt. Engineering College, Ajmer, Raj. (13th Oct. 1998 12th Oct. 2003)

Adminisrative Responsibilities

➢ Govt. Engineering College Ajmer

- Head, Department of Civil Engineering (Aug. 2011- 31 Oct. 2018)
- Co-ordinator, Industrial Consultancy Cell (Sept. 2015-31Oct. 2018)
- Chief Co-ordinator, Industry Institute Interaction Cell (Aug. 2013-Nov.2014)
- Co-ordinator, AICTE-RTU related work (Nov. 2011-March.2013)
- Faculty Adviser, ISTE Student Chapter (Feb 2010- Feb.2013)
- Head (Acting) Training and Placement Dept. (Jan. 2009-June. 2009)
- Proctor (Aug. 2000-July 2005)
- Asstt. Proctor (Sept. 1999-Aug. 2000)
- Member, Training and Placement Dept.(Sept. 2001-Dec.2004)
- Member, Standing Discipline Committee (1999-2005)
- Member, BOG, Engineering College Society, Ajmer (Jan 1999-Jan.2000)
- Served as Centre of Superitendent in University Examination (Many Times)
- Served as Deputy Centre of Superitendent in University Examination (Many Times)
- Member, Board of Studies (Civil Engineering), Rajasthan Technical University Kota
- Member, DRC (Civil Engg.), Rajasthan Technical University Kota
- Chairperson, Board of Studies (Civil Engineering), Bikaner Technical University Bikaner, Rajasthan
- Member, Board of Studies (Civil Engineering), Bikaner Technical University Bikaner, Rajasthan

> DTU Delhi

- Director (HRDC)
- University Co-coordinator for AICTE-UHV program
- Co-coordinator, Centre for Excellence for the Science of Happiness
- Coordinator, Field and Outreach activities
- Co-PI, Unnat Bharat Abhiyan
- Dept. Time Table In charge
- Dept. Time Table, Co-Incharge
- Departmental TEQIP Coordinator
- Dept. Twinning Coordinator, TEQIP
- Member, BOS of Civil Engg. Dept.
- Member, DRC, Dept of Civil Engineering
- Lab Incharge, Mechanics of Solid Lab
- Lab Co-In charge, Wind Engineering Lab
- Departmental Faculty Coordinator (outreach and Extension activities)
- Member, University Library Committee

- Faculty Coordinator, CE395(Entrepreneurship& Venture Development)
- Member of different committees at dept and University Level.

Outside University

- Member, Academic council, Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra (State University of Govt. of Maharashtra)
- Chairperson of Board of Studies committee, Civil Engg, Bikaner Technical University.
- Coordinator, Evaluation for Translation work of Civil Engg constituted by University of Delhi

Reaserch Guidance

	Completed	In progress
M.TECH	30	3
Ph.D	2	7

Membership of Professional Societies

• Life member, Indian Society for Technical Education, New Delhi

Book

• Disaster Management published by AICTE New Delhi

Book Chapter:

- **Pradeep K. Goyal** (2024) "Cyclone Disaster Mitigation and Management in India: An Overview" Disaster Risk and Management Under Climate Change, Disaster Resilience and Green Growth, Springer
- Manish Chakrawarty, Pradeep K. Goyal, Yaman Hooda (2024) "Comparative seismic assessment of existing structures using P-delta effect in Indian context" Industry 4.0 with Modern Technology, Taylor& Francis
- Yaman Hooda and P.K. Goyal (2023) "Comparison of the vulnerability assessment of step-back configuration and set-back configuration structures on hill slopes" Multi-Hazard Vulnerability and Resilience Building.

List of Publications

(A) <u>Journals</u>

- Goyal P.K. and Datta T.K. (2011). "Probability Distributions for Cyclone key Parameters and cyclonic wind speed for the east coast of Indian Region", *The International Journal of Ocean and Climate Systems*, Vol.2 (3), Multi science, UK
- Goyal P.K. Datta T.K. and Vijay V.K. (2012). "Vulnerability Assessment of Rural Houses to Cyclonic wind" *International Journal of Disaster Resilience in the Built Environment*, Vol.3 (1), Emerald
- Goyal P.K. and Datta T.K. (2012). "Cyclonic Microzonation", *Natural Hazards*, Vol.61(3), Springer
- Goyal P.K. and Datta T.K. (2013). "Effect of wind directionality on the vulnerability of rural houses due to cyclones" Natural Hazard Review, ASCE, 14(4), pp.258–267.
- Goyal P.K. Datta T.K. (2013). "Statistical Modelling of Key Cyclone Parameters for the East Coast of India" Journal of Wind and Engineering. Vol. 10 (2), pp.41-49.
- Sharma S. and Goyal P.K. (2014) "Cost Overrun Assessment Model in Fuzzy Environment" American Journal of Engineering Research, Vol.3 (7), pp.44-53.
- Sharma S. and **Goyal P.K.** (2014) "Cost Overrun Factors and Project Cost Risk Assessment in Construction Industry- A state of the art review" International Journal of Civil Engineering, Vol.3(3), pp. 139-154. ISSN (P):2278-9987.
- Sharma S. and **Goyal P.K.** (2015). Fuzzy logic: An Appropriate Techniques for Effective Risk Analysis and Decision Making for Construction Projects" International Journal of Emerging Technology and Advanced Engineering, ISSN 2250-2459, Vol.5(12)pp.71-77.
- Goyal P.K. (2015) "State of art of Damage Assessment of Rural Houses for Cyclonic Wind" International Journal of Current Engineering and Technology, Vol.5 (6),pp. 3768-3772.
- Mathur A. and Goyal P.K.(2015). "A Study for Suitability of Quarry Dust from different Mineralogical Sources for Replacement of Fine Aggregate, International Journal of Research in Engineering and Technology, pISSN: 2321-7308, pp.362-65.
- Mathur A. and Goyal P.K.(2015) "Effect on Strength and Durability Properties of Concrete incorporating Granite and Marble Residue as Fillers" International Journal of Civil Engineering, Vol.6(11),pp.173-183.

- Prajapati R. and **Goyal P.K.** (2016) "Reduction of Environmental Impacts of Construction Industry using Green Technologies" International Journal of Engineering Technology Science and Research Vol.3 (5), pp.47-49.
- Prajapati R. and Goyal P.K. (2017) "Prediction of Compressive Strength of Concrete using Artificial Neural Network: A case study" International Journal of Engineering Technology Science and Research ISSN 2394 3386 Volume 4, Issue 3, pp.276-280.
- Dhaka R.K. and Goyal P.K.(2017) "Structural Analysis of Arch Bridge with a span of 350m using STAAD.Pro: A case study" International Journal of Advance Engineering and Research Development, ISSN(P):2348-6406,Vol.4(11), pp.926-932.
- Goyal P.K. (2018) "Apda Prabandhan" Vigyan Garima Sandhu, Vol. 106, Commission for Scientific and Technical Terminology, Ministry of Education, Govt of India, ISSN: 2320-7736.
- Sharma S. and Goyal, P.K., (2019) "Fuzzy Assessment of the Risk Factors Causing Cost Overrun in Construction Industry" Evolutionary Intelligence, springer.
- Savita Sharma, **Pradeep K. Goyal** (2019)." Analyzing the causes of cost overrun in life cycle of construction projects: Contractor's perception" International Journal for research in engineering application & management.
- Savita Sharma and **Pradeep K. Goyal** (2019). "Applying "Fuzzy Techniques" in Construction Project Management" International Journal on Emerging Technologies 10(2): 384-391(2019).
- Savita Sharma, **Pradeep K. Goyal** and R.C. Chhipa (2020). "Forecasting the Probability of Cost Overrun Risk of Indian Construction Projects using Fuzzy Model" International Journal on Emerging Technologies **11**(1): 10-22(2020).
- Savita Sharma, P.K. Goyal, R,C.Chhipa (2020) "Application of fuzzy logic for the cost overrun analysis in construction project" Our Heritage, ISSN:0474-9030
- Rohit Misra, Jagbir Singh, Sheetal Kumar Jain, Sachin Faujdar, Muskan Agrawal, Arin Mishra, **Pradeep Kumar Goyal** (2020) "Prediction of behavior of triangular solar air heater duct using V-down rib with multiple gaps and turbulence promoters as artificial roughness: A CFD analysis" International Journal of Heat and Mass Transfer, Volume 162, Elsevier.
- Gaur, N., Raj, R. & **Goyal, P.K.** (2021) "Interference effect on corner-configured structures with variable geometry and blockage configurations under wind loads using CFD. *Asian J Civ Eng, Springer* 22, 1607–1623.

- **Pradeep K. Goyal**, Manish Goyal (2021). "Stability analysis of underground reservoir for the critical condition: a case study" Journal of Emerging Technologies and Innovative Research (JETIR), Volume 8, Issue 9, ISSN-2349-5162.
- Pradeep K. Goyal, Akhilesh Chauhan (2021)." Crumb rubber concrete formation by partial replacement of fine aggregates with crumb rubber and cement with silica fumes" International Research Journal of Engineering and Technology (IRJET), ISSN: 2395-0072.
- P. K. Goyal, S. Kumari, S. Singh, R. K. Saroj, R. K. Meena, and R. Raj (2022) "Numerical study of wind loads on Y plan-shaped tall building using CFD," Civil Engineering Journal, vol. 8, no. 2, pp. 263–277.
- Pradeep K. Goyal, Andualem E. Yadeta (2022) "Review on Chloride Ingress in Concrete: Chloride Diffusion and Predicting Corrosion Initiation Time" International Journal of Civil Engineering, Volume 9 Issue 4, 8-14, ISSN: 2348 8352.
- Andualem E. Yadeta, Pradeep K. Goyal, (2022), "Lessons Learned from COVID-19 Impact: Construction Contracts and Future Strategies" International Journal of Mechanical Engineering, ISSN: 0974-5823.
- Pradeep K. Goyal (2022) "Cyclonic damage assessment of rural houses for the east coastal region of India, Progress in Disaster Science, Volume 15, Elsevier
- Andualem Yadeta, Pradeep Goyal, Raju Sarkar (2023) "Modeling the Influence of Ground-Granulated Blast Furnace Slag on Hydration of Cement", Advances in Civil Engineering, vol. 2023, Article ID 9064303, 10 pages, 2023. https://doi.org/10.1155/2023/9064303
- Andualem Yadeta, Pradeep Goyal, Raju Sarkar (2023) "Prediction of microstructural evolution in fly ash-modified cementitious system: A computational study" Materials Science-Poland, 41(4), 2023, pp. 68-77.
- Radhey Shyam Tyagi; S. K. Singh; P. K. Goyal (2024) "Interceptor sewer for abatement of pollution in surface water" Water Practice & technology, IWA Publishing (SCIE, I.F.1.6)
- Radhey Shyam Tyagi; S. K. Singh; P. K. Goyal (2024) "Rejuvenation of water bodies with recycled water" Water Practice & technology, IWA Publishing (SCIE, I.F.1.6)

- Diksha, Dev, N., & Goyal, P. K. (2024) "Prediction of Compressive Strength of Alcoofine-Based Geopolymer Concrete" Iranian Journal of Science and Technology, Transactions of Civil Engineering, Springer
- Diksha, Dev, N., & Goyal, P. K. (2024). Utilizing an enhanced machine learning approach for geopolymer concrete analysis. Non-destructive Testing and Evaluation, 1–28. https://doi.org/10.1080/10589759.2024.2334434

(B) <u>International Conferences</u>

- Goyal P.K. Datta T.K. and Vijay V.K. (2008). "Impact of Climate change on Tropical Cyclones: Current Issues and Strategies" *International Conference on Renewable Energy Asia-2008*, IIT, Delhi ,pp.1200-1206
- Goyal P.K. and Datta T.K. (2008), "Fragility Analysis of Rural Houses due to Cyclonic Wind" 4th National Conference on Wind Engineering, SERC Chennai
- Goyal P.K. and Datta T.K. (2011). "Probabilistic cyclonic microzonation using cyclone track" 13th International *Conference on Wind Engineering, 10-15 July 2011, Amsterdam The Netherland.*
- Goyal P.K. and Datta T.K. (2012). "A Method for Preliminary Estimate of Vulnerability of Rural Houses to Cyclonic Wind" 4th International Conference on Structural Stability and Dynamics (ICSSD-2012) 4-6 January,2012, MNIT, Jaipur in collaboration with TEXAS A&M University, USA.
- Goyal P.K. and Datta T.K. (2013). "Cyclonic damage estimate of rural houses considering wind directional effect" 11th International Conference on Structural Safety and Reliability (ICOSSAR 2013), 16 – 20 June 2013, Columbia University, NY, USA.
- Goyal P.K. and Datta T.K.(2014) "Probabilistic damage estimate of rural houses due to Cyclonic wind" Second International Conference on Vulnerability and Risk Analysis and Management (ICVRAM) and the sixth International Symposium on Uncertainty Modeling and Analysis (ISUMA), 13 16 July 2014, University of Liverpool, UK, ASCE, pp.1475-1483.
- Goyal P.K. and Datta T.K. (2015) "Probabilistic Assessment of Cyclonic Damage of Rural houses considering Wind Directional Effect" 14th International Conference on Wind Engineering, 21-26 June 2015, Brazil.

- Prajapati R. and Goyal P.K. (2016) "Management of Waste Material in Construction Industry" 4th International Conference on Innovative Ädvancement in Engineering and Technology, JNU, Jaipur, April 2016, ISSN: 2277-4904(P), ISSN: 2277-4912(Online).
- Kamal Singh, Dilip Gehlot, P,K,Goyal (2018) "Application of Artificial Neural (ANN) for analysis of abrasive jet machining" 4th International conference on Industrial Engineering, NIT Surat
- "Innovative Solution to StubleBurning: A case study from Haryana" 2nd International Conference on Sustainable Technologies for Environmental Management" DTU Delhi
- Savita Sharma, P.K. Goyal, R,C.Chhipa (2020) "Application of fuzzy logic for the cost overrun analysis in construction project" International conference on Engineering and Technology, Jaipur
- H.Priyadarshi, P.K.Goyal, Sarv Priya, Ashish Jain (2020). "Water quality assessment using physic chemical parameters of ground water in Beswan an IGLAS town Aligarh Distret, U.P." 8th International symposium on fusion of science and technology, YMCA Faridabad.
- Andualem E. Yadeta, P.K.Goyal (2021). "Lesson learned COVID-19 Impact: Construction contracts and Future strategies" 9th International conference on recent challenges in engineering and technology, Bali, Indonesia
- Naveen Suthar and **Pradeep K. Goyal** (2021) "Comparison of Response of Building Against Wind Load as per Wind Codes [IS 875 (Part 3) 987] and [IS 875 (Part 3) 2015]" International conference on community Based Research and Innovation in Civil Engineering from 18th -19th March 2021. Papers published in IOP Conf. Series: Earth and Environmental Science **796** (2021) 012006-2007(Scopus Index).
- Yaman Hooda and Pradeep K. Goyal (2021) "Seismic Assessment of a Hospital Building: A Case Study" International conference on community Based Research and Innovation in Civil Engineering from 18th -19th March 2021. Papers published in IOP Conf. Series: Earth and Environmental Science 796 (2021) 012006-2007(Scopus Index).
- Prakhar Joshi, Prashant, Pritesh Goyal and Pradeep K. Goyal (2022) "Coastline
 Protection using a rubber mound seawall" 1st International Conference on

- Construction Materials and Environment, JUIT, Solan,H.P., June 3rd -4th June 2021. Lecture Notes of Civil Engineering (Springer).
- Prabhat Kala, Shivam Upadhya, Pradhyumna Asthana and Pradeep K. Goyal (2022) "Prediction of Compressive Strength of Rubberized Concrete using Ordinary Least Squares Regression Model" 1st International Conference on Construction Materials and Environment, JUIT, Solan, H.P., June 3rd -4th June 2021. Lecture Notes of Civil Engineering (Springer).
- Pradeep K. Goyal and Akhilesh Chauhan (2022) "Crumb Rubber Concrete Formation by Partial Replacement of Fine Aggregates" 1st International Conference on Construction Materials and Environment, JUIT, Solan, H.P., June 3rd -4th June 2021. Lecture Notes of Civil Engineering (Springer).
- P K Goyal, S Sharma (2022) "Evaluating Cost Contingency for Construction Projects: A Fuzzy Risk Analysis Approach" Ambient Communications and Computer Systems, springer.
- Hooda, Y., Goyal, P.K. (2023). "Comparative Analysis of Bracing Configuration for Retrofitting of Existing Structures on Hill Slopes." In: Marano, G.C., Rahul, A.V., Antony, J., Unni Kartha, G., Kavitha, P.E., Preethi, M. (eds) Proceedings of SECON'22. SECON 2022. Lecture Notes in Civil Engineering, vol 284. Springer, Cham. https://doi.org/10.1007/978-3-031-12011-4 15.
- Priya, S., Goyal, P.K. (2023). Wind Hazards on the Indian Power System and Challenges for the Future: A Review. In: Pal, I., Kolathayar, S., Tawhidul Islam, S., Mukhopadhyay, A., Ahmed, I. (eds) Proceedings of the 2nd International Symposium on Disaster Resilience and Sustainable Development. Lecture Notes in Civil Engineering, vol 294. Springer, Singapore. https://doi.org/10.1007/978-981-19-6297-43.
- Goyal, P.K., Suthar, N. (2023). Comparison of Response on Building Due to Wind Load as Per Wind Codes [IS 875—(Part 3)—2015] and [AS/NZ1170.2-2011]. In: Sil, A., N. Kontoni, DP., Pancharathi, R.K. (eds) Recent Trends in Civil Engineering. Lecture Notes in Civil Engineering, vol 274. Springer, Singapore. https://doi.org/10.1007/978-981-19-4055-2 25.
- Sharma, S., Goyal, P.K. (2023). Fuzzy Assessment of Infrastructure Construction Project Performance. In: Devedzic, V., Agarwal, B., Gupta, M.K. (eds) Proceedings of the International Conference on Intelligent Computing, Communication and Information Security. ICICCIS 2022. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-99-1373-2 34.
- Hooda, Y., Goyal, P.K. (2023). "Assessment of Structures with Floating Column on Sloping Ground Against Seismic Load" International Conference on Structural Engineering and Construction Management, Lecture Notes in Civil Engineering, Springer, Singapore.

(C) National Conferences

- Goyal P.K. Datta T.K. and Vijay V.K. (2008). "Fragility Analysis of Rural Houses due to Cyclonic Wind" 4th National Conference on Wind Engineering, SERC, Chennai, pp.337-344, 2007.
- Goyal P.K. Datta T.K. (2012). "Statistical Modelling of Cyclone Key Parameters for the East Coast of India" 6th National Conference on Wind Engineering, 14-15 Dec. 2012, CRRI, New Delhi.
- Sharma, M.C, Goyal, P.K., Bharti S.D., Shrimali, M.K. (2012). "Damage Assessment of Houses Subjected to Cyclonic Wind using Fuzzy Logic" 8th Biennial Conference on Structural Engineering Convention (SEC-2012), 19-20 Dec. 2012 S.V. National Institute of Technology, Surat, pp.896-903.
- Goyal, P.K., Sharma S. (2017). "Environmental Safety through Value Education" National Seminar on Human Values in Education, 29-30 March, 2016, Govt. Engineering College, Published by RBSE, Ajmer. (ISBN:978-81-933273-2-6)
- Goyal, P.K., Jain S. (2017). "Preventing Corruption in disaster Management through Value Education" National Seminar on Human Values in Education, 29-30 March, 2016, Govt. Engineering College, Ajmer, Published by RBSE, Ajmer. (ISBN:978-81-933273-2-6)
- Goyal, P.K., Prajapati,R. (2017). "Reconstruction of Value Oriented Education System in India" National Seminar on Human Values in Education, 29-30 March, 2016, Govt. Engineering College, Ajmer, Published by RBSE,Ajmer. (ISBN:978-81-933273-2-6)
- Goyal, P.K. and Prajapati, R.(2017). "Prediction of Compressive Strength of Concrete using Aritificial Neural Network: A case study" National Conference on Innovations in Science and Technology 2017 (NCIST-17), MIT Manipur20-21 March 2017

Conducted Short Term Courses/Seminar/Worshops/Conferences

> Engineering College Ajmer

- National Seminar on Human Values in Education
- Short term courses on Disaster Management
- National Workshop on Earthquake Dynamics and Design of RC Buildings
- Workshop on Ethics in Technical Education and Personality Development

- Short term course on Computational Techniques in engineering
- National Conference on Engineering Trend in Civil and Mechanical Engineering
- National seminar on School education: Present condition and future direction
- Session Co-chair: 11th International Conference on Structural Safety and Reliability Columbia University, NY, USA.

> DTU Delhi

- Coordinator, FDP on Disaster Mitigation and Management organized by Dept of Civil Engineering, DTU Delhi during Nov. 25-29.2019.
- Coordinator, One week National Training Program on Disaster Risk Vulnerability Assessment and Management joint organized by Dept of Civil Engg, DTU and NIDM Delhi during June 29th -July 3rd, 2020.
- Coordinator, Faculty Development Program on Ethics and Values in Technical Education in Context of National Education Policy-2020, Delhi Technological University, Delhi, April 15th -19th, 2021.
- Coordinator, National Webinar on Principal and working of oxygen concentrator" Delhi Technological University, Delhi, June 20th, 2021
- Coordinator, Faculty Development Program on Leadership Mastry through Self-Management, Delhi Technological University, Delhi, July19th -23rd ,2021.
- Organizing Secretary "Conference cum Training Programme on Disaster Risks,
 Climate Change and Resilient Development" Organized jointly by Dep. of Civil
 Engg., Delhi Technological University &National Institute of Disaster
 Management 5th April 7th April, 2022.
- Coordinator "Workshop on Innovative and Emerging Construction Technologies for Affordable Housing" on 2 Nov. 2023, organized by Dept. of Civil Engineering with IIC-DTU.
- Organizing Secretary "1st National Conference on Social Responsibility of Educational Institutions in Context of NEP2020" on 12th Jan 2024 organised by OEA in association with AICTE and AIU.
- Coordinator "National Technology Day" organised by Dept. of Civil Engg in association with IIC-DTU on 13th May 2024.
- Convener "One week Faculty Development Program on Advance Teaching Pedagogy and Outcome based education in context of NEP2020" organised by HRDC in association with NITTER Bhopal from 27th May 2024 to 31St May 2024.