

Profile Page



Name : Dr Navdeep Singh

Designation : Assistant Professor Grade-i

Department : Civil Engineering

Qualification : PhD Civil Engineering (NIT Jalandhar)
MTech Structures (NIT Jalandhar)
BTech Civil Engineering (PTU Jalandhar)

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Research Interests :

Concrete, Recycled materials, Natural Wastes, Long Term Behaviour, Non Destructive Testing, Field Investigation, QA/QC, Microstructural Analysis

Consultancy projects like vetting of structural design of RCC buildings, steel structures, material testing etc.

Other Profile Links :

Google Scholar Link :

Dr Navdeep Singh [Click Here](#)[Dr Navdeep Singh Click Here](#)

Journal Publications :

Year	Journal	Publication
2022	Construction and Building Materials	Manali Rathee, Navdeep Singh (2022), “Durability properties of copper slag and coal bottom ash based I-shaped geopolymer paver blocks”
2022	Journal of Building Engineering 60 (2022) 105150	Navdeep Singh, Akhil Singh, Nitin Ankur, Parveen Kumar, Mahesh Kumar, Tarun Singh, “Reviewing the properties of recycled concrete aggregates and iron slag in concrete”
2022	Journal of Building Engineering 63 (2023) 105447	Amardeep Meena, Navdeep Singh, S P Singh (2022) ‘ “High-Volume Fly Ash Self Consolidating Concrete with Coal Bottom Ash and Recycled Concrete Aggregates: Fresh, Mechanical and Microstructural Properties”
2022	Case Studies in Construction Materials, Vol 16, e00944	Roz-Ud-DinNassar, Navdeep Singh, S Varsha, AR Sai, M Sufyan-Ud-Din (2022) “Strength, electrical resistivity and sulfate attack resistance of blended mortars produced with agriculture waste ashes”
2021	Renewable and Sustainable Energy Reviews, Elsevier Sciences,	Nitin Ankur, Navdeep Singh (2021) ‘Performance of Cement Mortars and Concretes Containing Coal Bottom Ash: A Comprehensive Review’

2020	Journal of Building Engineering	Pawan Kumar, Navdeep Singh (2020) "Influence of recycled concrete aggregates and Coal Bottom Ash on various properties of high volume fly ash-self compacting concrete"
2020	Magazine of Concrete Research - ICE Virtual Library	Navdeep Singh, Roz-ud-Nassar, Shehnazdeep Kaur, Anjani Bhardwaj (2020), "Microstructural Characteristics and Carbonation Resistance of Coal Bottom Ash Based Concrete mixtures"
2019	Journal of Building Engineering	Navdeep Singh, 'Electrical resistivity of self consolidating concretes prepared with reused concrete aggregates and blended cements'
2019	Resources, Conservation & Recycling	Navdeep Singh 'Utilization of coal bottom ash in recycled concrete aggregates based self-compacting concrete blended with metakaolin'
2019	Indian Concrete Journal	'Improving the carbonation resistance of self-compacting concrete containing recycled concrete aggregates using blended cements'
2019	Journal of Building Engineering, 26 (2019) 100882	Navdeep Singh, Pawan Kumar, Paresh Goyal (2019) 'Reviewing the behaviour of high-volume fly ash based self-compacting concrete'
2019	Construction and Building Materials, 233 (2020) 117276	Navdeep Singh, Shehnazdeep, Anjani Bhardwaj 'Reviewing the role of coal bottom ash as an alternative of cement'
2019	Lecture Notes in Civil Engineering. Springer, pp. 169–178.	Assessing the performance of self-compacting concrete made with recycled concrete aggregates and coal Bottom ash using ultrasonic pulse velocity,
2018	Resources, Conservation & Recycling, Elsevier Science	Influence of coal bottom ash as fine aggregates replacement on various properties of concretes: A Review
2018	Construction and Building Materials, Elsevier Science	Evaluating the performance of self-compacting concretes made with recycled coarse and fine aggregates using non-destructive testing techniques
2018	European Journal of Environmental and Civil Engineering	Validation of carbonation behavior of self- compacting concrete made with recycled aggregates using microstructural and crystallization investigations
2018	Journal of Sustainable Cement-Based Materials	Carbonation resistance of self-compacting recycled aggregate concretes with silica fume
2016	Construction Building Materials	N Singh, SP Singh; Carbonation and Electrical Resistance of Self Compacting Concrete made with Recycled Concrete Aggregates and Metakaolin
2016	Construction Building Materials	N Singh, SP Singh; Carbonation resistance and microstructural analysis of Low and High Volume Fly Ash Self Compacting Concrete containing Recycled Concrete Aggregates
2016	Journal of Materials and Engineering Structures	N Singh, SP Singh; Evaluating the Carbonation Resistance of Self Compacting Concrete made with Recycled Concrete Aggregates
2016	Journal of Materials and Engineering Structures	N Singh, SP Singh; Reviewing the Carbonation Resistance of Concrete

Conference Publications :

Year	Conference	Publication
2023	4th UKIERI Concrete Congress; Concrete-The Global Builder, Dr B R Ambedkar National Institute of Technology Jalandhar 144 011, India, 2022	Abhishek Kumar and Navdeep Singh, "Mechanical Performance of Iron Slag Concretes: A Brief Review"
2023	4th UKIERI Concrete Congress; Concrete-The Global Builder, Dr B R Ambedkar National Institute of Technology Jalandhar 144 011, India, 2022	Akhil and Navdeep Singh, "A Review on The Microstructural Characterisation of Iron Slag Concretes"

2023	4th UKIERI Concrete Congress; Concrete-The Global Builder, Dr B R Ambedkar National Institute of Technology Jalandhar 144 011, India, 2022	Gagan G S and Navdeep Singh, “Reviewing The Performance of Concrete Comprising Recycled Coarse Aggregates Using Non-Destructive Tests”
2023	Second International Conference on Construction Materials and Structures, National Institute of Technology Calicut (NITC), 2022	Ragini Dutt Sharma and Navdeep Singh, “Optimizing The Compressive Strength Behaviour of Iron Slag and Recycled Aggregate Concretes”
2022	International Conference on Advances in Construction Materials and Structures, 3624- 3637, 62 2022	Navdeep Singh, M M Haque, Akshit Gupta, “A review on the influence of copper slag as a natural fine aggregate replacement on the mechanical properties of concrete” Materials Today: Proceedings,
2022	International Conference on Advances in Construction Materials and Structures” 1449-1458, 65, 2022	Navdeep Singh, M M Haque, Akshit Gupta, “Reviewing Mechanical Performance of Geopolymer Concrete Containing Coal Bottom Ash” Materials Today: Proceedings,
2022	International Conference on Advances in Construction Materials and Structures, 1467-1477, 65, 2022	Navdeep Singh, Tarun Singh, Mahesh Kumar, Akhil Singh, Parveen Kumar, “Investigating the Fresh State Performance of Concrete Containing Iron Slag and Recycled Concrete Aggregates” Materials Today: Proceedings,
2022	7th International Conference on Civil Structural and Transportation Engineering, Toronto Metropolitan University, 233-1-233-8, 233, 2022	Navdeep Singh, Nitin Ankur, M M Haque, Akshit Gupta, “Influence of Coal Bottom Ash and Copper Slag on Permeation of Fly Ash Based Geopolymer Concrete”
2022	Second International Conference on Construction Materials and Structures, National Institute of Technology Calicut (NITC), 2022	Akhil and Navdeep Singh, “Microstructural Behaviour of Iron Slag Concretes: A Brief Review”
2022	Second International Conference on Construction Materials and Structures, National Institute of Technology Calicut (NITC), 2022	Sachin Rajput and Navdeep Singh, “Comparative Study of Different Infill Materials In Confined Masonry Using Analytical Model”
2022	Second International Conference on Construction Materials and Structures, National Institute of Technology Calicut (NITC), 2022	Shuvom Dutta and Navdeep Singh, “A Brief Review on Workability Characteristics Iron Slag Concrete”
2022	3rd International Conference on Sustainable Environment Energy & Construction ICSEEC 21, Hindustan Institute of Technology and Science Padur, Chennai	Amardeep Meena, Navdeep Singh and S P Singh, “Influence of Coal Bottom Ash and Recycled Concrete Aggregates on Mix Proportioning of High-Volume Fly Ash Self Compacting Concrete”
2022	Second International Conference on Construction Materials and Structures, National Institute of Technology Calicut (NITC), 2022	Roz-Ud-Din Nassara , Danish Saeedb , and Navdeep Singhc, Strategies to Enhance the Moisture-Barrier Qualities of Concrete Mixtures to Improve their Durability
2021	International Emerging Trends in Engineering and Management (ICETEM-2021), January 23, 2021, Lyallpur Khalsa College Technical Campus, Jalandhar	Navdeep Singh, Bhawna Sharma, Manali Rathee (2020), “A Brief Review on Introduction of Industrial By-Products in Concrete”.
2021	International Conference on Materials, Reliability, Safety and Environmental Issues (IMRSE 2021) June 25-27th, 2021 at NIT Jalandhar Punjab.	Rasgotra Saahil Sharma, Navdeep Singh and S P Singh (2021), ‘Mechanical Behaviour of Geopolymer Paving Mortar Blocks Using Industrial Waste Materials’
2021	International Conference on Materials, Reliability, Safety and Environmental Issues (IMRSE 2021) June 25-27th, 2021 at NIT Jalandhar Punjab.	Navdeep Singh, Ariboina Ravindra Sai and Samridhi Varsha (2021), ‘Electrical and Sulfate Resistance of Binary Blended Mortars Containing Industrial Wastes’

2021	International Conference on Materials, Reliability, Safety and Environmental Issues (IMRSE 2021) June 25-27th, 2021 at NIT Jalandhar Punjab.	Navdeep Singh, Samridhi Varsha and Ariboina Ravindra Sai, 2021, Electrical and Sulfate attack resistance of Blended mortars containing Corn cob ash and Wood ash
2020	Second ASCE India Conference on Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies	Navdeep Singh, Ashik Yashi P and Sunny Gupta 'Shrinkage Behaviour of Binary Masonry Mortars Blended with Industrial By-Products '
2020	Second ASCE India Conference on Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies	Navdeep Singh, Sunny Gupta and Ashik Yashi 'Water Absorption Resistance of Binary Mortars Blended with Agricultural By-Products '
2020	3rd International Conference on Interdisciplinary Global Applied Research ICIGAR-2020	Roz-Ud-Din Nassar, Navdeep Singh 'Effect of foaming agent dosage and fine aggregate content on characteristics of foamed concrete'
2020	In Proceedings of: 5th International Conference on Industrial Efficiency 2020 Sveavägen 98, IV S-113 50 Stockholm, Sweden	Navdeep Singh, Marlene Arens (2020), Utilization of Industrial and Agricultural By-Products in Blended Cement Mortars – Creating an Effort of Circular Economy in Indian Cement Industry,
2019	4th UKIERI Concrete Congress; Concrete-The Global Builder, an International Conference	Anjani Bhardwaj, Navdeep Singh (2019), 'Effect of coal bottom ash on fresh properties of normally vibrated concrete''
2019	4th UKIERI Concrete Congress; Concrete-The Global Builder, an International Conference	Navdeep Singh, Paresh Goyal (2019) "Influence of recycled concrete aggregates and coal bottom ash on green properties of high volume fly ash based self compacting concrete"
2019	4th UKIERI Concrete Congress; Concrete-The Global Builder, an International Conference	Navdeep Singh, Pawan Nahar (2019) "Behaviour of recycled concrete aggregates and coal bottom ash on fresh properties of high volume fly ash based self compacting concrete"
2019	4th UKIERI Concrete Congress; Concrete-The Global Builder, an International Conference	ShehnazDeep, Navdeep Singh, (2019), "Workability of low and high volume coal bottom ash based concretes"
2019	International Conference on Resource Sustainability, 1-3 July 2019, University of Adelaide Australia	Navdeep Singh, Anjani Bhardwaj "Utilization of Coal Bottom Ash As Replacement of Cement in Concrete: A Review & Preliminary Results"
2018	International Conference on Resource Sustainability, June 27-29, 2018 Beijing Normal University, Beijing, China	Navdeep Singh, Shubham Arya and Mithul Raj M (2018), "Utilization of Coal Bottom Ash in Recycled Concrete Aggregates based Self Compacting Concrete blended with Metakaolin"
2015	UKIERI Concrete Congress	N Singh, SP Singh; Ultrasonic pulse velocity and electrical resistivity of Self compacting concrete made with Recycled concrete aggregates
2015	3rd DAV National Congress	N Singh, SP Singh; Assessing the Performance of Self Compacting Concrete made with Recycled Concrete Aggregates using Ultrasonic Pulse Velocity Measurements

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISS N No.	Year
Research article	A Review on the Life Cycle Assessment Phases of Cement and Concrete Manufacturing	Springer Nature Switzerland AG 2022	Nitin Ankur, Navdeep Singh		2022

Reference book	Understanding the Basics of Coal Bottom Ash: A Vital Coal Combustion Product	Eliva Press Publishing Group, Chisinau, Republic of Moldova MD;	Navdeep Singh, Nitin Ankur, Shubham Arya, Mithul Raj M, Anjani Bhardwaj, Shehnazdeep	ISBN No: 978-163-6-48545-4	2022
Dictionary	Comprehensive Glossary of Engineering	Ministry of Education (Department of Higher Education)	Navdeep Singh (Subject Expert)		2022
	Mechanical properties of polypropylene fiber reinforced geopolymer composites: A review	Springer			2021
	Split tensile behaviour of HCFA based SCC including CBA and RCA	Springer			2021
	Performance of Green Self Compacting Concrete Using Industrial Wastes	Nova Science Publishers, Inc, New York			2021
	Reviewing the role of coal bottom ash as an alternative of cement	Edited by Maryann C. Wythers, Published by Nova Science Publishers, Inc, New York	Navdeep Singh	ISBN Number 978-1-53618-730-4	2020
Research article	Performance of Blended Mortars Containing Industrial and Agricultural By-Products	Springer	Navdeep Singh, Nitin Ankur, Ashik Yashi P, Sunny Gupta		2020
	Assessing the performance of self-compacting concrete made with recycled concrete aggregates and coal Bottom ash using ultrasonic pulse velocity	Springer			2019
	Book: Coal Bottom Ash Based SCC: Carbonation and Electrical Resistivity, International Book Market Service Limited Mauritius	LAP Lambert		978-620-0-00798-8	2018

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
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Principal Investigator	EMR	Waste utilization in Self-compacting Concrete: Optimization and Assessment of Environmental Benefits	CSIR-New Delhi	30-12-2019	13-08-2021		Completed	Dr Amit Kumar, MNIT Jaipur
Co-PI	Research	Development of Low Cost Geopolymer Bricks and Paving Blocks using Waste Materials	TEQIP-III					
Principal Investigator	Consultancy	Vetting of Structural design, steel design, material testing	Various government and private agencies.			25 lakhs	Completed	
Principal Investigator	Consultancy	Vetting of Structural design, steel design, material testing	Various government and private agencies.			3 Lakhs	Ongoing	

Events Organized :

Category	Type	Title	Venue	From	To	Designation
STC	National	'Recent Research and Innovations in Civil Engineering in the Department of Civil Engineering	NIT Jalandhar	16-07-18	20-07-2019	Coordinator
Workshop	National	Application of superplasticizers and air entraining agents in concrete industry	NIT Jalandhar	02-02-19	02-02-19	Coordinator
Workshop	National	Organized Industry Interaction Program 'Understanding Role of Superplasticizers in Concrete' by Er Aman Seghal Senior Technical Head BASF India Limited	NIT Jalandhar	15 Feb 2019	15 Feb 2019	Coordinator

STC	National	Recent Advancements in Concrete Technology' at National Institute of Technology Jalandhar	NIT Jalandhar	15-09-20	19-09-20	Coordinator
STC	National	Sustainable Concrete Construction- Issues and Challenges' at National Institute of Technology Jalandhar	NIT Jalandhar	26-10-20	30-10-20	Coordinator
Webinar	National	Slope Stability and Innovative Solutions in Practice- A Webinar	NIT Jalandhar	25-06-21	25-06-21	Coordinator
Conference	International	UKIERI Concrete Congress	Online	14-03-2023	17-03-2023	Congress Secretary
STC	National	GIAN course on 'Recycled Aggregates: Characteristics and Use in Concrete, incorporating Case Studies, Standards/Specifications and Environment Impact Considerations'	Online	28-11-22	02-12-22	Coordinator

Professional Affiliations :

Designation	Organization
Life member	ICI
Member	IAENG
Member	American Society of Civil Engineers
Member	Indian Concrete Journal

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Gurpreet Singh	Concrete composites	Ongoing	2021	
Sahibdeep Singh Setia	Concrete composites	Ongoing	2021	
Nitin Ankur	CBA based concretes	Ongoing	2019	
Amardeep Meena	CBA and RCA based SCC	Ongoing	2018	Prof S P Singh

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Akshit Gupta 20202103	Carbonation and Electrical Resistance of Geopolymer Concrete	Completed	2022	
Mahesh Kumar 20202112	Permeation Behavior of Concrete Containing Iron Slag and Recycled Concrete Aggregate	Completed	2022	
Parveen Kumar 20202119	Evaluating the Performance of Concrete Containing RCA and Iron Slag Using Non-Destructive Techniques	Completed	2022	

Akhil Singh 20202102	Chloride and Sulphate Resistance of Concrete Containing Iron Slag and Recycled Concrete Aggregates	Completed	2022	
Tarun Singh 20202130	Carbonation Resistance of Concrete Made with Iron Slag and Recycled Coarse Aggregates	Completed	2022	
Md Marghoobul Haque 20902145	Permeation Behavior of Fly Ash-Geopolymer Concrete Containing Copper Slag and Coal Bottom Ash as Natural Fine Aggregates	Completed	2022	
Bhawna Sharma 19202113	Carbonation Resistance of Blended Mortar Made with Industrial By-Products	Completed	2021	
Manali Rathee 19202122	Durability Behavior of Geopolymer Paving Blocks Using Waste Materials	Completed	2021	
Samridhi Varsha 19202132	Electrical and Sulfate Attack Resistance of Blended Mortars Containing Agricultural By Products Ashes	Completed	2021	
Aasif Amin Bhat 19202101	Compressive Strength and Drying Shrinkage Behaviour of Mortar Blended with Coal Bottom Ash	Completed	2021	
A Ravindra Sai 19202109	Electrical Resistivity and Sulphate Attack Resistance Of Blended Mortar Made With Industrial By-Products	Completed	2021	
Rasgotra Saahil Sharma 19202128	Mechanical Behaviour of Geopolymer Paving Blocks Using Waste Materials	Completed	2021	Prof S P Singh
Ashik Yashi P 18202105	Shrinkage behaviour of binary and ternary masnory mortars blended with industrial by-products	Completed	2020	
Sunny Gupta 18202126	Evaluation of mechanical and durability properties of masonry mortars blended with agricultural wastes	Completed	2020	
Anjani B	Evaluation of Mechanical And Durability Properties Of Concrete Made With Coal Bottom Ash As Replacement Of Cement And Fine Aggregates	Completed	2019	
Shehnazdeep	Carbonation Resistance and Microstructure Analysis of Coal Bottom Ash Based Concrete	Completed	2019	
Paresh G	Effect of Recycled Concrete Aggregates And Coal Bottom Ash On The Durability Properties Of High Volume Fly Ash Based Self-Compacting Concrete	Completed	2019	
Pawan K	Evaluation of Green And Mechanical Properties Of High Volume Fly Ash Based Self Compacting Concrete Made With Coal Bottom Ash And Recycled Concrete Aggregates	Completed	2019	
Sarabeet K	Strength behaviour of self compacting and masonry mortar made with different level of Coal Bottom Ash	Completed	2019	
Shubham A	Influence Of Recycled Concrete Aggregates On Strength And Durability Properties Of Self Compacting Concrete Made With Coal Bottom Ash	Completed	2018	

Mithul Raj	Strength And Durability Evaluation Of Self Compacting Concrete Made With Recycled Concrete Aggregates And Coal Bottom Ash	Completed	2018	
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Admin. Responsibilities :

Position Held	Organization	From	To
Coordinator- Concrete Technology Laboratory	NIT Jalandhar	25-01-18	till date
Coordinator- Academic (B Tech First and Second Year)	NIT Jalandhar	25-01-18	till date
Coordinator	UBA-2019	25-04-2019	10-02-2020
Anti ragging Committee	NIT Jalandhar		
Physical Verification Committee for Estate Office - Member	NIT Jalandhar		
Co-Coordinator	NIT Jalandhar (Water management and Waste Disposal)		

Award and Honours :

Title	Activity	Given by	Year
Special Appreciation Award		Government Primary School, Jalandhar, India	2021
Outstanding Contribution in Reviewing		Construction and Building Materials Journal, Elsevier	2020
Young Concrete Technologist Award of year-2020		ICI-UltraTech	2020
Outstanding Contribution in Reviewing		Construction and Building Materials Journal, Elsevier	2019
Won the Research Ratna Awards 2019	For excellence in 'Evaluating the performance of self compacting concretes made with recycled coarse and fine aggregates using non-destructive testing techniques'	RULA Awards Powered by- World Research Council & United Medical Council	2019
Outstanding Contribution in Reviewing		Construction and Building Materials Journal, Elsevier	2018