

Profile Page



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Department : Civil Engineering
Qualification : PhD (IIT Roorkee)
M.Tech (S V National Institute of Technology Surat)
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Research Interests :

Geotechnical Engineering and Geoenvironmental Engineering;
Soil Stabilization;
Numerical Modelling;
Contaminant Transport

Other Profile Links :

Google Scholar Link :

Rupali Satavalekar [Click Here](#)

Personal Web Link :

Rupali Satavalekar [Click Here](#)

Journal Publications :

Year	Journal	Publication
2022	Disaster Advances	Bhat, I., Rupali, S. and Kumar, A. (2022). "Evaluation of shear strength parameters in unreinforced and shotcrete reinforced coal through experimental and numerical methods
2022	Sadhana Journal	Bhat, I., Rupali, S. and Kumar, A. (2022). "Experimental and Numerical Analysis of Constitutive Characteristics In Bituminous Coal.",
2022	Soft Computing in Civil Engineering	Jangir, H and Rupali, S. (2022). "Evaluating Adaptive Neuro-Fuzzy Inference System (ANFIS) to Assess liquefaction potential and settlements using CPT Test Data

2021	Innovative Infrastructure Solutions	Mahajan, T., Rupali, S. and Mohanty, A., "Environmental concern, Leachability and Leaching Modelling of Fly ash and Microbes: State of the Art Review."
2021	International Journal of Protective Structures	K. Senthil, R. Sharma, S. Rupali, A. Thakur, M. A. Iqbal, N. K. Gupta, Prediction of Superior Layer Configuration of Titanium Ti-6Al-4V and Aluminium 2024-T3 against Soft Projectiles
2021	International Journal of Fuzzy Logic and Intelligent Systems	Sinha, D.K., Rupali, S. and Senthil, K. (2021). "Application of Adaptive Neuro-Fuzzy Inference System for Evaluating Compressive Strength of Concrete."
2021	International Journal of Structural Engineering and Analysis	K. Senthil, Iwansh Gupta, S. Rupali, L. Pelecanos, Reviewing on the Performance of Masonry, Reinforced Concrete and Underground tunnels against Blast Loading,
2020	ISH Journal of Hydraulic Engineering	Rupali, S. and Sawant, V. A. (2020). "Study on transport of contaminant through single and parallel fractures using element-free Galerkin method
2020	Advances in Computational Design Techno Press	Kumar, A. and Rupali, S. (2020). "Prediction of UCS and STS of Kaolin Clay stabilized with Supplementary Cementitious Material using ANN and MLR
2020	Journal of Structural Engineering and Applied Mechanics	K. Senthil, Iwansh Gupta, Rupali, S. and Loizos Pelecanos. (2020). "A Review on the performance of reinforced concrete structures under blast loading
2020	Journal of Structural Engineering and Applied Mechanics	K. Senthil, Iwansh Gupta, S. Rupali, L. Pelecanos, A review on the performance of reinforced concrete structures under blast loading,
2019	Advances in Environmental Research, 7(3), 1-21	S. Rupali and V. A. Sawant, 1 D contaminant transport through unsaturated stratified media using EFGM,
2018	Material Science and Engineering, Vol. 330, pp. 1-9	K. Senthil, S. Muthukumar, S. Rupali, K.S. Satyanarayanan, Effect of various interface thicknesses on the behavior of infilled frame subjected to lateral load
2018	Journal of Materials and Engineering Structures, Vol. 5, No. 2, 137-151	K. Senthil, S. Rupali, Navjit Kaur, "The performance of monolithic reinforced concrete structure includes slab, beam and column against blast load"
2018	Journal of Materials and Engineering Structures, Vol. 5, No. 3, 46-60, (Mouloud Mammeri University of Tizi-Ouzou Publisher – ESCI, IF - 00)	K. Senthil, S. Rupali, "Crashworthiness of highway lamp post against vehicle impact"
2018	International Journal of Protective Structures, Vol. 9, No. 4, 1-18, (SAGE Publisher – SCI Journal, IF – 0.60)	K. Senthil, M.A. Iqbal, S. Rupali, Influence of impactor nature, mass, size and shape on impact strength of mild steel and ArmoX 500T steel
2017	Journal of Coupled Systems and Multiscale Dynamics, Vol. 5, No. 1, pp. 38-50	K. Senthil, S. Rupali, K.S. Satyanarayanan, Experiments on ductile and non-ductile reinforced concrete frames under static and cyclic loading
2017	International Journal of Structural Engineering and Analysis, Vol. 3, No. 2, pp. 1-16	K. Senthil, S.K. Gupta, S. Rupali, M. Gupta, A.P. Singh, Evaluation of RC frames in shifting on seismic zone 3 to 5 and retrofitting techniques using ETABS
2016	Coupled System Mechanics, Techno Press, 5(3), 203-221.	Rupali, S. and Sawant, V. A., 1 D contaminant transport using element free galerkin method with irregular nodes.
2016	International Journal of Geosynthetics and Ground Engineering, 2:14	Rupali, S and Sawant, V. A., Contaminant transport using geomembranes overlying clay and sand using element free galerkin method
2016	Indian Geotechnical Journal, 46(2), 192-205.	Satavalekar, R. and Sawant, V.A., Two dimensional contaminant transport through layered soil using element free galerkin method

2016	Advances in Concrete Construction, Vol. 4, No. 1, pp. 37-47	K. Senthil, K.S. Satyanarayanan, S. Rupali, Energy absorption of fibrous self-compacting reinforced concrete system
2014	Advances in Environmental Research, 3(2), 117-129.	Satavalekar, R. and Sawant, V.A., Numerical Modelling of Contaminant transport using FEM and Meshfree Method
2011	International Journal of Earth Sciences and Engineering, ISSN 0974-5904, 4(6), 55-58.	Satavalekar, R. and Shah, A.J., Comparison of different stabilisation methods for rock slopes at Saptshrungi Ghat roads in Nasik
	International Journal of Fuzzy Logic and Intelligent Systems	Sinha, D.K., Rupali, S. and Senthil, K. (2021). "Application of Adaptive Neuro-Fuzzy Inference System for Evaluating Compressive Strength of Concrete.",

Conference Publications :

Year	Conference	Publication
2022	International Conference on on Recent advances in sustainable construction technologies and environment (ICRASE 2022), 15-16 June 2022, Crescent Institute of Science and Technology, Chennai	Gulzar, S. and Rupali, S. (2022). "Reliable Geotechnical Design of strip foundation considering Monte Carlo simulations.",
2022	International Conference on on Recent advances in sustainable construction technologies and environment (ICRASE 2022), 15-16 June 2022, Crescent Institute of Science and Technology, Chennai	Syed A. and Rupali, S. (2022). "Sustainable utilization of dredged material from Wular lake using cement kiln dust as stabilizer"
2022	International Conference on on Recent advances in sustainable construction technologies and environment (ICRASE 2022), 15-16 June 2022, Crescent Institute of Science and Technology, Chennai	Jangir, H. and Rupali, S. (2022). "Prediction of liquefaction potential by adaptive neuro fuzzy interference system (ANFIS),"
2022	International Conference on Advanced Engineering Optimization through intelligent techniques, SVNIT Surat, January 28-30.	Jangir, H. and Rupali, S. (2022). "Evaluation of Adaptive Neuro Fuzzy interface system for forecasting soil's unconfined compressive strength."
2021	Proceedings of ICRAE, NIT Silchar, September	Burhan, M., Rupali, S. and Bhat, I. "Response of Crumb Rubber Additives on Shear Strength Characteristics of Poorly Graded Soils."
2021	Proceedings of ICRAE, NIT Silchar, September	Mahajan, A., Rupali, S. and Dogra, A. K. "Numerical Analysis of Stability in Gabion walls under the effect of surcharge load."
2021	Proceedings of Advances in Construction Technology and Management ACTM, Pune, 11-12th March	Mahajan, T., Rupali, S. and Mohanty, A. "Numerical Analysis of transport and behaviour of Microbes in the soil: A review to bioaugmentation process"
2021	Proceedings of Advances in Construction Technology and Management ACTM, Pune, 11-12th March	Kumar, S., Rupali, S., Senthil, K and Gupta, I. "Investigation of Vibration generated due to movement of underground metro train: A Review."
2020	Proceedings of Indian Geotechnical Conference, December 17-19 (IGS Vishakhapatnam)	Bhat, I., S, Rupali, and Kumar, A. "Hazard Assessment of Coal Mines Under Impact Loads Using Holmquist Johnson – Cook Constitutive Model."
2020	10th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, University of Cambridge	K. Senthil, L. Pelecanos S. Rupali, Prediction of damage intensity of reinforced concrete tunnels and soil against blast loading,

2020	10th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, University of Cambridge, UK	L. Pelecanos, K. Senthil, S. Rupali, Simplified modelling of the transient response of foundation piles due to dynamic loads generated from underground tunnels,
2019	UKIERI Concrete Congress, March 5-8, Jalandhar, India	S. Rupali and R. R. Arun, Capillary Suction, Ultrasonic Pulse Velocity And Chloride Penetration Studies On Basalt Reinforced Self-Compacting Recycled Aggregate Concrete
2019	Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering, June 16-20, Illinois, Chicago.	Bhat, I.A., Rupali, S. and Kumar, A., Environmental Impact assessment of soil stabilization materials
2019	5th International Conference on Data Science and Engineering (ICDSE), September 26-28, Patna, India.	Sinha, D.K., Rupali, S. and Bawa, S., Application of Adaptive Neuro-Fuzzy Inference System for the prediction of Early Age Strength of High Performance Concrete
2019	Indian Geotechnical Conference, 19-21, December 2019, SV NIT Surat, India	Bhat, I.A., S. Rupali and Kumar, A., Seismic Stability of Nailed Slopes for Un-drained and Drained Conditions
2019	International Conference on Experimentation and Progression in Engineering, Research and Technology, 15-16, November 2019, Lovely Professional University, Jalandhar, Punjab	K. Senthil, Iwansh Gupta, S. Rupali, L. Pelecanos, A Review on influence of blast loading on structural elements and systems
2019	7th International Congress on Computational Mechanics and Simulation, 11-13th December 2019, IIT Mandi, India	K. Senthil S. Rupali, Cryogenic Conditions on Ti-6Al-4V Plate under sharp nose hard steel projectiles,
2019	7th International Congress on Computational Mechanics and Simulation, 11-13th December 2019, IIT Mandi, India	Ajay Pratap, A. Thakur, S. Rupali, K. Senthil, Failure mechanisms along with constitutive behaviour and damage in concrete bricks and infilled frames
2019	International Conference on Experimentation and Progression in Engineering, Research and Technology, 15-16, November 2019, Lovely Professional University, Jalandhar, Punjab	K. Senthil, S. Rupali, Ajay Pratap, A. Thakur, A. P. Singh, Behaviour of concrete brick and flyash brick on infilled frame under cyclic loading
2019	5th International Conference on Data Science and Engineering (ICDSE), September 26-28, Patna, India (IEEE Conference)	Sinha, D.K., Rupali, S. and Bawa, S. "Application of Adaptive Neuro-Fuzzy Inference System for the prediction of Early Age Strength of High Performance Concrete
2019	2nd International Conference on Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering, June 16-20, Illinois, Chicago.	Bhat, I.A., Rupali, S. and Kumar, A. "Environmental Impact assessment of soil stabilization materials
2018	2nd International Conference on Advances in Mechanical Engineering, SRM University, Chennai, Tamil Nadu, India.	K. Senthil, S. Rupali, M.A. Iqbal, Impact strength of mild steel plates against flat nose impactor of large masses
2018	International Conference on Theoretical and Experimental Advances in Civil Engineering, SRM University, Chennai, Tamil Nadu, India.	K. Senthil, S. Rupali, H.S. Bhatti, A.P. Singh, Numerical studies on the behaviour of highway metallic lamp post under light vehicles impact
2018	International Conference on Theoretical and Experimental Advances in Civil Engineering, SRM University, Chennai, Tamil Nadu, India.	K. Senthil, S. Rupali, A.P. Singh, Numerical investigations on the behaviour of reinforced concrete building against blast loading
2018	Proceedings on the National Conference of Advanced Structures, Materials and Methodology in Civil Engineering, NIT Jalandhar, India	S. Rupali, R. Arvind, I. Bhat, K. Senthil, A.K. Agnihotri, "Influence of vibrations by rolling stock metro rail on pile-soil interaction"

2018	Proceedings on the National Conference of Advanced Structures, Materials and Methodology in Civil Engineering, NIT Jalandhar	Vipasha Rishi, K Senthil, S. Rupali, Jatin Anand, B. Shailja, Influence of lime and chicken mesh on compaction properties of soil
2018	Proceedings of the 11th Structural Engineering Convention, Jadavpur University, India.	K. Senthil, K.B. Gurneet, S. Rupali, L. Pelecanos, "Computation of impact resistance of 5083-H116 aluminum structures by conical impactor"
2017	International Conference on Sustainable Civil Engineering Practices, NITTTR Chandigarh, India.	K. Senthil, S. Rupali, M.A. Iqbal, Performance of retaining walls with various configurations against lateral earth pressure
2017	3rd International Conference on Advances In Steel, Power And Construction Technology, Organized by OP Jindal University, Raigarh, Chhattisgarh, India	K. Senthil, S. Rupali, S. Pradhan, Modelling and simulations on steel bridges against wheel loading
2017	8th International Conference on Structural Engineering and Construction Management, University of Peradeniya, Peradeniya, Kandy, Sri Lanka, pp. 54-60	K. Senthil, S. Rupali, M.A. Iqbal, Finite element studies on metal plates against oblique impact of cylindro-conical projectiles
2017	32nd Indian Engineering Congress, The Institutions of Engineers, Chennai, Tamil Nadu, India	K. Senthil, S. Rupali, M.A. Iqbal, K.S. Satyanarayanan, Non-linear behavior of short and long reinforced concrete column: Finite element studies
2016	6th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, IIT Roorkee, Uttarkhand, India.	K. Senthil, K.S. Satyanarayanan, S. Rupali, Behavior of RC frames under monotonic and cyclic loading
2016	10th Structural Engineering Convention, pp. 1566-1571, CSIR-SERC, Chennai, Tamil Nadu, India	K. Senthil, K.S. Satyanarayanan, S. Rupali, Behavior of fibrous reinforced concrete systems subjected to monotonic and cyclic loading
2014	Indian Geotechnical Conference Kakinada, India, December 18-20, 1265-1268.	Satavalekar, R., Sawant, V. and Pradeep Kumar, P., 2 D FEM Analysis Of Contaminant Transport In Saturated Heterogeneous Media,
2014	Int Conf on Sustainable Civil Infrastructure, India ASCE Section, Hyderabad, India, October 17-18, 453-461.	Satavalekar, R. and Sawant, V. A., 1 D Contaminant Migration in Heterogeneous Media Using Element Free Galerkin Method
2014	Proc. of National Conference Geotechnical Engg Practice and Sustainable Infrastructure Development, IGS Ludhiana Chapter, Ludhiana, India, October 11-12, 432-438.	Satavalekar, R. and Sawant, V.A., 2-d Finite Element Modelling Of Contaminant Transport In Saturated Media
2014	5th National Conference on emerging vistas of technology in 21st Century, Vadodara, India, April 4-5, 31-35.	Satavalekar, R. and Sawant, V.A., Contaminant transport in landfill liner using finite element method
2013	Proc. Of National conference Recent Trends and Innovation in civil engineering, BRCM College of engineering & Technology, Haryana, India	Satavalekar, R. and Sawant, V.A., Finite element analysis of contaminant transport in saturated media
2011	Indian Geotechnical Conference Kochi, India, December 15-17, 977-980.	Satavalekar, R. and Shah, A.J., Rockfall Analysis and Application of Available Methods of Mitigation to Saptshrungi Ghat roads

Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISS N No.	Year
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Book Chapter	Lect.Notes Mechanical Engineering, Advanced Engineering Optimization Through Intelligent Techniques	Springer Nature	Jangir, H and Rupali, S. (2023)“Evaluation of Adaptive Neuro-Fuzzy Inference System for Forecasting Soil’s Unconfined Compressive Strength”,	978-981-19-9284-1, 526604_1	2023
Book	Maharashtra” in Geotechnical Characteristics of Soils and Rocks of India	CRC Press	Chore, H.S., Rupali, S. and Kumar G.	9781003177159	2021
Book Chapter	Proceedings of the Indian Geotechnical Conference 2019, IGC-2019 Volume IV (pp.197-209), Lecture Notes in Civil Engineering, vol 138	Springer	Bhat, I. A., Rupali, S. and Kumar, A. (2021). “Seismic Stability of Nailed Slopes for Undrained and Drained Conditions		2021
Book Chapter	Lecture Notes in Civil Engineering	Springer	Bhat, I. A., Rupali, S. and Kumar, A. (2021). “Environmental Impact Assessment of Soil Stabilization Materials. In: Reddy K.R., Agnihotri A. K., Yukselen-Aksoy Y., Dubey B.K., Bansal A. (eds) Sustainable Environment and Infrastructure.		2021
Book Chapter	Advances in Structural Integrity, Lecture Notes in Mechanical Engineering	Springer	K. Senthil, S. Rupali, M.A. Iqbal, A Thakur, A.P. Singh, Influence of curvature ratio on perforation of 2024 aluminium by conical impactor	978-981-13-8767-8	2020

	Sustainable Engineering	Springer	Rupali, S. and Sawant, V. A., Studies on Transport of Reactive and Non-reactive Elements in Fractured Media		2019
Conference Proceedings	Advanced Structures, Materials and Methodology in Civil Engineering	ASMMCE 2018, Department of Civil Engineering	Editors: K. Senthil, Rajiv Kumar, S. Rupali, Amit Kumar	978-93-5321-892-8	2018

Events Organized :

Category	Type	Title	Venue	From	To	Designation
Conference	National	Advanced Structures, Materials And Methodology in Civil Engineering (ASMMCE 2018)	Dr. B R Ambedkar National Institute of Technology Jalandhar	03-11-2018	04-11-2018	Organising Secretary
STC	National	DST Sponsored One week Short Term course on "Computational Modelling: Applications in Structural and Geomechanics Problems"	NIT Jalandhar	09-07-2019	13-07-2019	Coordinator
Workshop	National	TEQIP III Sponosred One day workshop on "Current Trends and Innovations in the Industry – Metro Construction and Underground Tunnels"	NIT Jalandhar	05-05-2018	05-05-2018	Coordinator
Workshop	National	TEQIP III Sponsored One-day workshop entitled on "Project Management and Methodology – Maintenance and Vigilance Awareness"	NIT Jalandhar	25-08-2018	25-08-2019	Coordinator
Workshop	National	TEQIP III Sponsored One Day workshop on "Advances in Construction Industry - Metro Rails, Power Plants and Stadiums"	NIT Jalandhar	13-04-2019	13-04-2019	Coordinator

Conference	National	First Indian Geotechnical and Geoenvironmental Engineering Conference	Department of Civil Engineering	19-11-2021	20-11-2021	Organising Secretary
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Professional Affiliations :

Designation	Organization
Life Member	Indian Society for construction materials and structures
Life Member	Indian Geotechnical Society
Life Member	Indian Association for structural engineering
Life Member	Member of Institution of Engineers India
Life Member	Indian Society of Hydraulics (ISH)
Life Member	International Association of Engineers
Life Member	Indian Concrete Institute

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Ashish Kumar Kushwaha	Geotechnical Engineering (TBD)	Ongoing	2022	
Ankita Sawai	Modelling of COnaminant Transport (Tentative)	Ongoing	2020	
Malla Karthik Kumar	Geotechnical Earthquake Engineering (Tentative)	Ongoing	2020	Dr. K Senthil
Dhanashri Devi	Structural Engineering (TBD)	Ongoing	2020	Dr. H S Chore
Ankush Dogra	Numerical and Experimental Analysis of Damping Characteristics in Bituminous Coal Under Impact Loads	Ongoing	2019	
Ilyas Ahmad Bhat	Constitutive Modeling of Underground Mines for Dynamic Loads Using Disturbed state concept	Submitted	2018	Prof A K Agnihotri

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Asif Syed		Awarded	2022	
Himanshu Jangir		Awarded	2022	
Saaqib Gulzar		Awarded	2022	
Aniket Mahajan	Numerical Analysis of Stability in Gabion Walls	Awarded	2021	
Burhan Muzaffar Baba	Behavior of Poorly Graded Soils to Crumb Rubber Additives and 3-D Geogrid Reinforcement Using Large- Scale Direct Shear Tests	Awarded	2021	
Tmana Mahajan	Characterization and Leachability of Soil and Fly Ash	Awarded	2021	Dr. Anee Mohanty
Shubham Kumar	Numerical study of the pile subjected to dynamic loading	Awarded	2021	Dr. K Senthil
Bhanwar Chand Meena		Awarded	2020	Dr. K Senthil
Iwansh Gupta		Awarded	2020	Dr. K Senthil
Pravesh Karwarsara		Awarded	2020	Dr. K Senthil
Gaurav Chauhan		Awarded	2020	Dr. K Senthil

Deepak Kumar Sinha	Application of Adaptive Neuro Fuzzy Inference system for forecasting the compressive strength of high performance concrete	Awarded	2019	Dr. Shailja Bawa
Ajay Pratap	Studies on Fly ash and Concrete brick masonry infilled reinforced concrete frame against static cyclic loading	Awarded	2019	Dr. K Senthil
Arun Raj	Mechanical and Durability study of basalt fibre reinforced self compacting recycled aggregate concrete	Awarded	2018	
Aravind T R	Study on the influence of vibration by rolling stock on pile soil interaction	Awarded	2018	Dr. K Senthil
Rajkumar Meena	Stabilization of black cotton soil using lime and grass ash	Awarded	2018	Dr. Vaibhav Sharma
Anant Kapil	Stabilization of high plastic clay using grass ash, fly ash, lime and polypropylene fiber	Awarded	2017	Prof A K Agnihotri
Yogesh Sanjay Patil	Modelling of CBR, Liquid Limit, Plastic Limit, OMC and MDD by ANN	Awarded	2017	Prof A K Agnihotri

Patents :

Name	Reg./Ref. No.	Date of Award/Filling	Organization	Status
Estimation of Contaminant Transport through Fractured Porous Media using Element Free Garlekin Method	SW-14252/2021	03 March 2021	Copyright Office, Government of India	Awarded
Variable Head Free Falling Impact Testing Machine	337579-001	06-07-2021	Patent Office, Government of India	Awarded
Large scale soil sample extractor	345760-001	19/08/2021	Patent Office, Government of India	Awarded
Device to simulate and measure the earthquake response of small scale buildings	345811-001	30-08-2021	Patent Office, Government of India	Awarded

Admin. Responsibilities :

Position Held	Organization	From	To
GH-1 Warden	Dr. B R Ambedkar NIT Jalandhar	08-03-2021	till Present

Award and Honours :

Title	Activity	Given by	Year
'Young Woman in Engineering' Award	5th Annual Women's meet	Venus International Foundation	2020
Best Paper Award in National Conference on Emerging VISTAS of Technology in 21st Century (NCEVT),	National Conference	Parul Institute of Technology, Vadodara	2014