Curriculum Vitae

Dr. Pijush Samui, FICDM, FESI

Associate Professor Department of Civil Engineering NIT Patna, Patna – 800005 Bihar, India. And, Adjunct Professor Ton Duc Thang University Ho Chi Minh City, Vietnam



Title of Docent Tampere University, Finland.

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Education

1. Indian Institute of Science (Bangalore, India)

PhD (Geotechnical Engineering)

-Dissertation: Geotechnical Site Characterization and Liquefaction Evaluation Using Intelligent Models

2. Indian Institute of Science (Bangalore, India) January, 2002-March, 2004

M.Sc. (Geotechnical Engineering)

-Dissertation: Stability Numbers for Slopes with Associated and Non-Associated Flow-

Rule and Shake Table Liquefaction Studies

3. Bengal Engineering and Science University (Howrah, India)

B.E. (Civil Engineering)

June,1996-June,2000

March, 2004-January, 2008

Work Experience

1. University of Pittsburgh (USA)			
Postdoctoral Associate	May, 2008-January, 2009		
-Numerical Modelling of Rock cutting and	Drilling		
-Application of Support Vector Machine (SVM) in Geotechnical Engineering			
2. Tampere University of Technology (Finland)			
Postdoctoral Associate	May, 2009-January, 2010		
-Stability of Railway Embankment			
-Reliability Analysis of Slope			
- Geotechnical Site Characterization			
3. VIT University (India)			
Associate Professor	March, 2010-August, 2012		
4. VIT University (India)			
Professor	September, 2012-November, 2015		
5. VIT University (India)			
Director in charge	May,2012- November, 2015		
6. NIT Patna (India)			
Associate Professor	December, 2015-Present		
7. Far Easter Federal University(Russia)	September, 2017		
Visiting Professor			
8. Ton Duc Thang University(Vietnam)	May, 2018-present		
Adjunct Professor			

Research Interests

- Geohazards
- Earthquake Geotechnical Engineering
- Concrete Technology
- Pile Foundation
- Slope Stability
- Application of Artificial Intelligence in Civil Engineering
- Site Characterization

Books

1. Slope Stability and Liquefaction, Pijush Samui, VDM Publishing House Ltd, Germany, 2010.

 Intelligent models in geotechnical engineering, Pijush Samui and T.G. Sitharam, LAP LAMBERT Academic Publishing AG & Co. KG, Germany, 2010.

3. Soft computing in geotechnical engineering, Pijush Samui, Sarat Das, and T.G. Sitharam, VDM Publishing House Ltd, Germany, 2010.

4. Artificial Intelligence in Earthquake Engineering, Pijush Samui, LAP LAMBERT Academic Publishing AG & Co. KG, Germany, 2010.

5. Data Driven Models, Pijush Samui, VDM Publishing House Ltd, Germany, 2011.

6. Machine Learning in Concrete Technology, Pijush Samui, S.K. Sekar, Kallyan Kulkarni, VDM Publishing House Ltd, Germany,2011.

7. Artificial Intelligence in Civil Engineering, Pijush Samui and D.P. Kothari, VDM Publishing House Ltd, Germany,2012.

8. Handbook of Research on Advanced Computational Techniques for Simulation-Based Engineering, Pijush Samui, IGI global, 2015.

9. Modeling and Simulation Techniques in Structural Engineering, Pijush Samui, Subrata Chakraborty and Dookie Kim, IGI global, 2016.

10. Handbook of Neural Computation, Pijush Samui Sanjiban Sekhar Roy Valentina E. Balas, Elsevier, 2017.

11. Integrating Disaster Science and Management Global Case Studies in Mitigation and Recovery, Pijush Samui Dookie Kim Chandan Ghosh, Elsevier, 2018.

12. Handbook of Research on Predictive Modeling and Optimization Methods in Science and Engineering, Dookie Kim, Sanjiban Sekhar Roy, Tim Länsivaara, Ravinesh Deo and Pijush Samui, IGI Global, 2018.

 Big Data in Engineering Applications, Roy, S.S., Samui, P., Deo, R., Ntalampiras, S., Springer, 2018.

14. Handbook of Deep Learning Applications, Valentina Emilia Balas, Sanjiban Sekhar Roy, Dharmendra Sharma, Pijush Samui, Springer, 2019.

15. Samui, Pijush, Dieu Tien Bui, Subrata Chakraborty, and Ravinesh Deo, eds. Handbook of probabilistic models. Butterworth-Heinemann, 2019.

16. Samui, Pijush, Sunita Kumari, Vladimir Makarov, and Pradeep Kurup, eds. Modeling in Geotechnical Engineering. Academic Press, 2020.

17. Samui, Pijush, Barnali Dixon, and Dieu Tien Bui, eds. Basics of Computational Geophysics. Elsevier, 2020.

18. Lee, Kun Chang, Sanjiban Sekhar Roy, Pijush Samui, and Vijay Kumar, eds. Data Analytics in Biomedical Engineering and Healthcare. Academic Press, 2020.

19. Samui, Pijush, Dookie Kim, Nagesh R. Iyer, and Sandeep Chaudhary, eds. New Materials in Civil Engineering. Butterworth-Heinemann, 2020.

20. Deo, Ravinesh, Pijush Samui, and Sanjiban Sekhar Roy, eds., Predictive Modelling for Energy Management and Power Systems Engineering. Elsevier, 2020.

21. Deo, Ravinesh C., Pijush Samui, Ozgur Kisi, and Zaher Mundher Yaseen, eds. Intelligent data analytics for decision-support systems in hazard mitigation: Theory and practice of hazard mitigation. Springer Nature, 2020.

Book Chapters

1. Applications on hazard assessment and liquefaction, L.Govindaraju, A. J. Brennan, Pijush Samui, Subhamoy Bhattacharya, NICEE, India, 2007.

2. Example of a site response analysis for a location in Kolkata, Barnali Ghosh, Pijush Samui and Subhamoy Bhattacharya, NICEE, India, 2007.

3. Applicability of statistical learning algorithms for predicting skin friction capacity of driven piles in clay, Pijush Samui, Nova Publishers, USA, 2008.

4. Prediction of Ultimate Capacity of Laterally Loaded Piles in Clay: A Relevance Vector Machine Approach. Advances in Soft Computing, Pijush Samui, Gautam Bhattacharya and Deepankar Choudhury, Springer, Germany, 2008.

5. Application of Soft Computing Techniques to Expansive Soil Characterization, Pijush Samui, Sarat Das, and T.G. Sitharam, Springer-Verlag Series, Netherlands, 2009.

6. Site characterization model using machine learning, Pijush Samui ,Sarat Das, and D.P.
 Kothari Nova Publishers, USA, 2010.

7. Utilization of Support Vector Machine (SVM) for prediction of ultimate capacity of driven piles in cohesionless soils, Pijush Samui and S.K. Sekar, Nova Publishers, USA, 2010.

Prediction of pile bearing capacity using Multivariate Adaptive Regression Spline,
 Pijush Samui, Nova Publishers, USA, 2010.

9. Disaster mitigation and management: the relevance of artificial intelligence, Pijush Samui, Rebuilding Sustainable Communities with Vulnerable Populations after the Cameras Have Gone: A worldwide study, 2011.

10. Slope Stability analysis using Metaheuristic Algorithm, Pijush Samui, Metaheuristics in Water, Geotechnical and Transport Engineering, Elsevier, year, 2012.

11. Determination of pull out capacity of small ground anchor using data mining techniques, Pijush Samui, Data Mining and Analysis in Engineering field, year 2013.

12. Application of Artificial Neural Network and Genetic Programming in Civil Engineering, Pijush Samui, Dhruvan Choubisa, Akash Sharda, Biologically-Inspired Techniques for Knowledge Discovery and Data Mining, year 2014.

13. GPR and RVM Based Predictions of Surface and Hole Quality in Drilling of Aisi D2 Cold Work Tool Steel, Pijush Samui and Yildirim Dalkilic, Artificial Intelligent Algorithms and Techniques for Handling Uncertainties: Theory and Practice, year 2014.

14. Modeling of Wind Speed Profile Using Soft Computing Techniques, Pijush Samui and Yildirim Dalkilic,Soft Computing Applications for Renewable Energy and Energy Efficiency, year 2014.

15. MINIMAX Probability Machine A New Tool for Modeling Seismic Liquefaction Data, Pijush Samui, J Jagan, Hariharan Rajadurai and Yildirim Dalkilic Handbook of Research on Swarm Intelligence in Engineering, year 2015. 16. Utilization of Classification Techniques for the Determination of Liquefaction Susceptibility of Soils, Pijush Samui, Jagan, J., Prabhakar, G. Advanced Research on Hybrid Intelligent Techniques and Applications, year 2015.

17. Application of Meta-Models (MPMR and ELM) for determining OMC, MDD and Soaked CBR value of Soil, Pijush Samui, Vishal Shah, and Heneyl Shah, Advanced Research on Hybrid Intelligent Techniques and Applications, year 2015.

 Determination of Work Zone Capacity Using ELM, MPMR and GPR, Sangeeta Roy,
 J. Jagan and Pijush Samui , Using Decision Support Systems for Transportation Planning Efficiency, year 2016.

19. Reliability Analysis of Slope Using MPMR, GRNN and GPR, Dhivya Subburaman, Jagan J., Yıldırım Dalkiliç and Pijush Samui , Handbook of Research on Computational Simulation and Modeling in Engineering, year 2016.

20. Determination of Rate of Medical Waste Generation Using RVM, MARS and MPMR, Jagan J., Pijush Samui and Barnali Dixon, Handbook of Research on Waste Management Techniques for Sustainability, year 2016.

21. Pijush Samui, Sanjiban Sekhar Roy, Pradeep Kurup, and Yıldırım Dalkiliç(2016), "Modeling of Seismic Liquefaction Data Using Extreme Learning Machine", Earthquakes: Monitoring Technology, Disaster Management and Impact Assessment, Nova, pp. 61-70.

22. J. Jagan, G. Meghana and Pijush Samui (2016), "Determination of Stability Number of Layered Slope Using ANFIS, GPR, RVM and ELM", Soft Computing: Developments, Methods and Applications, Nova, pp. 39-68.

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23. J. Jagan, Yıldırım Dalkiliç, and Pijush Samui(2016), Utilization of SVM, LSSVM and GP for Predicting the Medical Waste Generation, Smart Cities as a Solution for Reducing Urban Waste and Pollution, IGI Global, pp. 224-251.

24. Jagan Jayabalan, Sanjiban Sekhar Roy, Pijush Samui, Pradeep Kurup(2017), Intelligent Models Applied to Elastic Modulus of Jointed Rock Mass, Handbook of Research on Trends and Digital Advances in Engineering Geology, pp. 1-30.

25. Sanjiban Sekhar Roy, Pulkit Kulshrestha, Pijush Samui(2017), Classifying Images of Drought-Affected Area Using Deep Belief Network, kNN, and Random Forest Learning Techniques, Deep Learning Innovations and Their Convergence With Big Data, pp. 102-

119.

Bose, A., Roy, S.S., Balas, V.E., Samui, P.(2019), Deep learning for brain computer interfaces, Smart Innovation, Systems and Technologies ,Volume 136, pp.333-344.

27. Roy, S.S., Biba, M., Kumar, R., Kumar, R., Samui, P.(2017), A new SVM method for recognizing polarity of sentiments in twitter, Handbook of Research on Soft Computing and Nature-Inspired Algorithms, pp. 281-291.

28. Jayabalan, J., Yildirim, D., Kim, D., Samui, P.(2016), Design optimization of a wind turbine using artificial intelligence, Mathematical Concepts and Applications in Mechanical Engineering and Mechatronics, pp.38-66.

29. Lotfi, Khadije, Hossein Bonakdari, Isa Ebtehaj, Mohammad Rezaie-Balf, Pijush Samui, Ahmed A. Sattar, and Bahram Gharabaghi. "River flow forecasting using stochastic and neuro-fuzzy-embedded technique: a comprehensive preprocessing-based assessment." In Water Engineering Modeling and Mathematic Tools, pp. 519-549. Elsevier, 2021.

30. Bonakdari, Hossein, Isa Ebtehaj, Amir Hossein Azimi, Pijush Samui, Ahmed A. Sattar, Ali Jamali, Seyed Hamed Ashraf Talesh, Amir Mosavi, and Bahram Gharabaghi. "Pareto design of multiobjective evolutionary neuro-fuzzy system for predicting scour depth around bridge piers." In Water Engineering Modeling and Mathematic Tools, pp. 491-517. Elsevier, 2021.

31. Pijush Samui and Saini, I.(2013) Utilization of multivariate adaptive regression splines (MARS) for prediction of pull out capacity of small ground anchor, International Journal of Advances in Soft Computing and its Applications, Vol.5, Issue 1, pp.1-9.

32. Tien Bui, D., Hoang, N.-D., Martínez-Álvarez, F., Ngo, P.-T.T., Hoa, P.V., Pham, T.D., Samui, P., Costache, R. A novel deep learning neural network approach for predicting flash flood susceptibility: A case study at a high frequency tropical storm area, Science of the Total Environment, Volume 701, 20 January 2020, Article number 134413.

Journal Publications

- Jayant Kumar and Pijush Samui,(2006), "Determination for Layered Soil Slopes using the Upper Bound Limit Analysis", Geotechnical and Geological Engineering, Vol. 24, No. 6, pp. 1803-1819.
- Pijush Samui and Bimlesh Kumar, (2006), "Artificial Neural Network Prediction of Stability Numbers for Two-layered Slopes with Associated Flow Rule", The Electronic Journal of Geotechnical Engineering, Vol. 11 A.
- Pijush Samui and T.G. Sitharam,(2007), "Application of relevance vector machine in seismic attenuation prediction", Journal of Earthquake and Tsunami, Vol. 1, No. 4, pp. 299-309.
- Pijush Samui,(2007),"Seismic liquefaction potential assessed by relevance vector machine", Journal earthquake engineering and engineering vibration, Vol. 6, No. 4, pp. 331-336.

- T.G. Sitharam and Pijush Samui,(2007), "Geostatistical modelling of spatial and depth variability of SPT data for Bangalore", Geomechanics and Geoengineering, Vol. 2, No. 4, pp. 307-316.
- Bimlesh Kumar and Pijush Samui,(2007), "Application of ANN for predicting pore water pressure response in a shake table test", International Journal of Geotechnical Engineering, Vol. 2, No. 2, pp. 153-160.
- T.G. Sitharam, Pijush Samui and Anbazhagan Panjamani, (2008), "Spatial Variability of Rock Depth in Bangalore Using Geostatistical, Neural Network and Support Vector Machine Models", Geotechnical and Geological Engineering, Vol. 26, No. 5, pp. 503-517.
- Pijush Samui, (2008), "Support vector machine applied to settlement of shallow foundations on cohesionless soils", Computers and Geotechnics, Vol. 35, No. 3, pp. 419-427.
- Pijush Samui, and T.G. Sitharam,(2008), "Relevance vector machine applied to settlement of shallow foundation on cohesionless soils", Georisk, Vol. 2, No. 1, pp. 41- 47.
- Pijush Samui, (2008), "Prediction of friction capacity of driven piles in clay using support vector machine", Canadian geotechnical journal, Vol. 45, No. 2, pp. 288-295.
- Pijush Samui, Pradeep Kurup, and Sitharam, T.G., (2008), "OCR prediction using support vector machine based on piezocone data", Journal of Geotechnical and Geoenvironmental engineering, Vol. 134, No. 6, pp. 894-898.
- 12. Pijush Samui,(2008), "Slope stability analysis: a support vector machine approach", Environmental geology, Vol. 26, No. 2, pp. 255-267.
- Pijush Samui and T.G. Sitharam,(2008), "Least square support vector machine applied to settlement of shallow foundations on cohesionless soils", International journal of numerical and analytical methods in geomechanics, Vol. 32, No. 17, pp. 2033 2043.
- Pijush Samui and T.G. Sitharam,(2008), "A comparative study of ordinary kriging and support vector machine models for the spatial variability of rock depth in Bangalore", Geotechnical Engineering Special Publication No 179,

Characterization, monitoring and modeling of geosystems, ASCE Geo Institute, pp.934-935.

- Jayant Kumar and Pijush Samui,(2008) "Frequency effect on liquefaction using shake table tests", Journal of South Asian Geotechnical Society, Vol. 39, No. 3, pp. 169-173.
- Pijush Samui,(2008), "Predicted ultimate capacity of laterally loaded piles in clay using support vector machine", Geomechanics and Geoengineering, Vol. 3, No. 2, pp. 113 – 120.
- Pijush Samui and T.G. Sitharam,(2009), "Site characterization model using least square support vector machine and relevance vector machine based on corrected SPT data(Nc)", International journal of Numerical and analytical method in Geomechanics, Vol. 34, No. 7, pp. 755-770.
- Sarat Das, Pijush Samui, Akshaya K Sabat, and T.G. Sitharam,(2010), "Prediction of Swelling Pressure of Soil using Artificial intelligence techniques", Environmental Earth Science, Vol. 61, No.2, pp. 393-403.
- Pijush Samui and T.G. Sitharam,(2009), "Application of least square support vector machine in seismic attenuation prediction", Indian society earthquake technology, Vol. 46, No.3-4, pp. 147–155.
- Pijush Samui and T.G. Sitharam,(2009), "Pullout capacity of small ground anchors: a relevance vector machine approach", Geomechanics and Engineering: An international Journal, Vol. 1, No. 3, pp. 259-262.
- Pijush Samui and T.G. Sitharam,(2010), "Site characterization using Artificial Neural Network and kriging", International Journal of Geomechanics, Vol.10, No.5, pp. 171-180.
- 22. T.G. Sitharam and Pijush Samui,(2010), "Spatial variability of SPT data using ordinary and disjunctive kriging", Georisk, Vol.4, No. 1, pp.22-31.
- Pijush Samui and T.G. Sitharam,(2010),"Correlation between SPT, CPT and MASW", International Journal of Geotechnical Engineering, Vol. 4, No. 2,pp. 279-288.

- Bimlesh Kumar and Pijush Samui,(2010), "Determination of Stability Numbers for Soil Slopes Following Non-associated Non-coaxial Flow Rule", International Journal of Geotechnical Engineering, Vol. 4, No.1, pp. 89-97.
- Pijush Samui,(2011),"Prediction of pile bearing capacity using support vector machine", International Journal of Geotechnical Engineering, Vol. 5, No. 1, pp. 95-102.
- Pijush Samui and T.G. Sitharam,(2010) "Applicability of statistical learning algorithms for spatial variability of rock depth", Mathematical Geology, Vol. 42, No. 4, pp. 433-446.
- Pijush Samui,(2011), "Utilization of relevance vector machine for rock slope stability analysis", International Journal of Geotechnical Engineering, Vol. 5, No. 3, pp. 351-355.
- Pijush Samui,(2010), "Application of support vector machine for rock slope stability analysis", Journal of Rock Mechanics and Tunneling Technology, Vol. 16, No. 2, pp.113-122.
- Pijush Samui,(2010), "Support Vector Machine for Evaluating Seismic Liquefaction Potential Using Standard Penetration Test", Disaster Advances, Vol. 3, No. 3, pp.20-25.
- 30. Pijush Samui,(2010), "seismic liquefaction potential assessed by least square support vector machine (lssvm)", International Journal of Engineering Under Uncertainty: Hazards, Assessment and Mitigation, Vol. 2, No. 3-4, pp. 151-155.
- Pijush Samui,(2010), "Application of Soft Computing in Disaster Mitigation and Management", Disaster Advances, Vol. 3, No. 3, pp.3.
- 32. Pijush Samui and T.G. Sitharam,(2010), "Relevance Vector Machine for Evaluating Seismic Liquefaction Potential Using Shear Wave Velocity" In GeoShanghai 2010: Soil Dynamics and Earthquake Engineering, Geotechnical Special Publication No. 201, ASCE, Edited by M. Huang, X. Yu and Y. Huang (ISBN 978-0-7844-1102-5), Reston, VA, USA, pp. 212-217.
- Pijush Samui and T.G. Sitharam(2010), "Design of a piezovibrocone and calibration chamber", Geomechanics and Engineering: An international Journal, Vol.2, No.3, pp. 177-190.

- 34. Pijush Samui and T.G. Sitharam,(2010), "Spatial variability of rock depth using artificial intelligence techniques", Earth Science India, Vol. 3 (IV), pp. 195-205.
- 35. Pijush Samui and T.G. Sitharam,(2011), "machine learning modeling for predicting soil liquefaction susceptibility", Natural Hazards and Earth System Sciences, Vol.11, No.1, pp. 1-9.
- 36. Pijush Samui(2012), "application of statistical learning algorithms to ultimate bearing capacity of shallow foundation on cohesionless soil", International journal of numerical and analytical method in geomechanics, Vol. 36, No.1, pp. 100-110.
- 37. Pijush Samui and T.G. Sitharam,(2011),"Determination of liquefaction susceptibility of soil based on field test and artificial intelligence", International Journal of Earth Science and Engineering, Vol. 4, No. 2, pp. 216-222.
- Sarat Das, Pijush Samui, Akshaya K. Sabat,(2011), "application of artificial intelligence to maximum dry density and unconfined compressive strength of cement stabilized soil", Geotechnical and Geological Engineering, Vol. 29, No. 3, pp. 329-342.
- Pijush Samui, Dookie Kim, and T.G. Sitharam,(2010), "support vector machine for evaluating seismic liquefaction potential using shear wave velocity", Journal of Applied Geophysics, Vol. 73,No.1, pp.8-15.
- Pijush Samui,(2011), "application of least square support vector machine (lssvm) for determination of evaporation losses in reservoirs", Engineering, Vol.3, No.4, pp. 431-434.
- Pijush Samui and D.P. Kothari,(2011), "utilization of least square support vector machine (lssvm) for slope stability analysis", Scientia Iranica, Vol. 18, No. 1A, pp. 70-78.
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- 43. Venkatesh S, Pijush Samui, Dookie Kim, and S. K. Sekar, (2011), "Application of statistical learning algorithm for determination of failure mechanism of interior beam-column joint", International journal of earth science and engineering, Vol. 4, No.6, pp. 1111-1117.

- 44. Pijush Samui,(2011), "Least square support vector machine applied to elastic modulus of jointed rock mass", Journal of Rock Mechanics and Tunneling Technology, Vol.17, No.1, pp. 5-12.
- 45. Pijush Samui, Subhamoy Bhattacharya and T.G. Sitharam,(2011), "support vector classifiers for prediction of pile foundation performance in liquified ground during earthquakes", International Journal of Geotechnical Earthquake Engineering,Vol.3, No.2, pp. 42-59.
- 46. Sarat Das, Pijush Samui, Akshaya K Sabat,(2011), "prediction of field hydraulic conductivity of clay liners using artificial neural network and support vector machine", International Journal of Geomechanics, Vol.12, No.5, pp. 606-611.
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- 48. 48.Pijush Samui,(2011), "least square support vector machine and relevance vector machine for evaluating seismic liquefaction potential using spt", Natural Hazard, Vol. 59, No. 2, pp. 811-822.
- Pijush Samui, J. Karthikeyan,(2011), "Determination of liquefaction susceptibility of soil based on CPT: a least square support vector machine approach", International Journal of Geotechnics and Environment, Vo.3, No. 1, pp. 75-84.
- Pijush Samui, Sarat Das, Dookie Kim and Gil Lim Yoon,(2011), "determination of compression index for marine clay: a relevance vector machine approach", Marine Georesources & Geotechnology, Vol.30, No.4, pp. 263-273.
- 51. Sarat Kumar Das, Pijush Samui, Dookie Kim, N. Sivakugan and Rajanikanta Biswal,(2011), "lateral displacement of liquefaction induced ground using least square support vector machine", International journal of geotechnical earthquake engineering, Vol.2, No. 2, pp. 29-39.
- 52. Kulkrni Kallyan S, Pijush Samui, Dookie Kim, and S.K.Sekar,(2011), "Model of Least Square Support Vector Machine (LSSVM) for Prediction of Fracture Parameters of Concrete", International Journal of Concrete Structures and Materials, Vol.5, No.1, pp. 21-25.

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- 55. Pijush Samui,(2011), "Determination of ultimate capacity of driven piles in cohesionless soil: a multivariate adaptive regression spline (mars) approach", International Journal of Numerical and Analytical Method in Geomechanics, Vol.36 No.11, pp. 1434-1439.
- 56. Pijush Samui and Barnali Dixon,(2012), "application of support vector machine and relevance vector machine to determine evaporative losses in reservoirs", Hydrological Processes, Vol. 26, No. 9, pp. 1361-1369.
- Pijush Samui and Sarat das,(2011), "Relevance Vector Machine for Prediction of Soil Properties", Journal of Civil Engineering Research and Practice, Vol. 8, No.1, pp. 23-33.
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- 59. Nilanjan Mitra and Pijush Samui,(2011), "Prediction of inelastic mechanisms leading to seismic failure of Interior Reinforced concrete beam-column Connections", Practice Periodical on Structural Design and Construction, Vol.17, No.3, pp. 110-118.
- 60. Pijush Samui and Pradeep Kurup,(2011) "use of relevance vector machine (rvm) for prediction of overconsolidation ratio (OCR)", International Journal of Geomechanics, Vol.13, No.1, pp. 26-32.
- Pijush Samui, Prasanna H. Gowda, Thomas Oommen, Terry A. Howell, and Thomas H. Marek,(2012) "Statistical Learning Algorithms for Identifying Contrasting Tillage Practices with Landsat Thematic Mapper Data", International Journal of Remote Sensing, Vol. 33, No.18, pp. 5732-5745.

- 62. Pijush Samui and Sarat Das,(2011), " site characterization model using support vector machine and ordinary kriging", International Journal of Intelligent Systems, Vol.20, No.3, pp. 261-278.
- 63. Pijush Samui, Dookie Kim, and Sarat Das,(2011), "Uplift capacity of suction caisson in clay using multivariate adapative regression spline", Ocean Engineering, Vol. 38, No. 17-18, pp. 2123-2127.
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 "Prediction of Rainfall Using Support Vector Machine and Relevance Vector Machine", Earth Science India, Vol. 4(IV), pp. 188 200.
- 65. Pijush samui,(2011) "multivariate adaptive regression spline applied to friction capacity of driven piles in clay", Geomechnics and engineering: an international journal, Vol. 3, No. 4, pp. 285-290.
- 66. Sarat Kumar Das, Pijush Samui, S. Z, Khan and N. Sivakugan,(2011) "machine learning techniques applied to prediction of residual strength of clay", Central European Journal of Geosciences, Vol.3, No.4, pp. 449-461.
- 67. Pijush Samui,(2012), " a study of slope stability prediction using least square support vector machine, Journal of Applied Mechanics and Engineering",Vol.17,No.1, pp.279-287.
- Pijush Samui,(2011), "Utilization of Least Square Support Vector Machine (LSSVM) for Prediction of Liquefaction Susceptibility of Soil", International Journal of Sensing, Computing and Control, Vol. 1, No. 2, pp.111-116.
- Pijush Samui and Pradeep Kurup,(2012), "multivariate adaptive regression spline (mars) and least squares support vector machine (lssvm) for OCR prediction", Soft Computing, Vol.16, No.8, pp.1347-351.
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- 71. Pijush Samui,(2012), "Three dimensional site charaterization model of bangalore using support vector machine", ISRN Soil Science, pp.1-10.

- 72. Pijush Samui,(2011), "Utilization of Statistical Learning Algorithms for Prediction of Elastic Modulus of Jointed Rock Mass", Recent Trends in Civil Engineering & Technology Vol.1, No.3, pp.1-7.
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- 75. Pijush Samui,(2012), "Support vector classifier analysis of slope, Geomatics, Natural Hazards and Risk, Vol. 4, No.1, pp.1-12.
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- 198. Kardani, Navid, Abidhan Bardhan, Dookie Kim, Pijush Samui, and Annan Zhou. "Modelling the energy performance of residential buildings using advanced computational frameworks based on RVM, GMDH, ANFIS-BBO and ANFIS-IPSO." Journal of Building Engineering 35 (2021): 102105.
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- 200. Kumar, Deepak, Pijush Samui, Dookie Kim, and Anshuman Singh. "A Novel Methodology to Classify Soil Liquefaction Using Deep Learning." Geotechnical and Geological Engineering 39, no. 2 (2021): 1049-1058.
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adaptive regression splines." Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards 15, no. 1 (2021): 27-40.

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- 203. Roy, Sanjiban Sekhar, and Pijush Samui. "Predicting longitudinal dispersion coefficient in natural streams using minimax probability machine regression and multivariate adaptive regression spline." International Journal of Advanced Intelligence Paradigms 19, no. 2 (2021): 119-127.
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- 205. Mehta, Azad Kumar, Deepak Kumar, and Pijush Samui. "Modelling of Seismic Liquefaction Using Classification Techniques." International Journal of Geotechnical Earthquake Engineering (IJGEE) 12, no. 1 (2021): 12-21.
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Conference Proceedings

1. T.G. Sitharam and Pijush Samui, "Artificial neural network and support vector machine models for evaluating spatial variability of SPT data", NUMOG X, Greece, 25–27 April 2007, 653-658.

2. T.G. Sitharam and Pijush Samui, "Three-Dimensional Site Characterization Model Using Artificial Neural Network", 13th ARC, India, 10-14 December 2007, 1125-1129.

3. T.G. Sitharam and Pijush Samui, "Spatial variability of SPT data using ordinary and disjunctive kriging", ISGSR, China, 18-19 October 2007, 1-12.

4. Pijush Samui, Gautam Adak and Subhamoy Bhattacharya, "Liquefaction studies for the city of Kolkata", International Workshop on Earthquake Geotechnical Engineering, India, 2006, 442-452.

5. Pijush Samui and Subhamoy Bhattacharya, "Site response studies of Kolkata", International Workshop on Earthquake Geotechnical Engineering, India, 453-458.

6. Pijush Samui, "ANFIS prediction of stability numbers for two-layered slopes with associated flow rule", Civil Engineering in the New Millennium: Opportunities and Challenges, India, 2007, 1673-1678.

7. Pijush Samui, and Bimlesh Kumar, "Sensitive analysis of soil parameters on stability numbers", Civil Engineering in the New Millennium: Opportunities and Challenges, India, 2007, 1767-1772.

8. T.G. Sitharam, Pijush Samui and Jatinder Singh, "Development of piezovibrocone and calibration chamber: advances in CPT and in-situ testing", IGC, India, 2005, pp. 179-182.

9. T.G. Sitharam, Pijush Samui and Shyam Sundar, P, "Three dimensional site characterization for Bangalore city using Neural Network approach", GEOPRACTICE, India, 2005, pp 147-152.

10. T.G. Sitharam and Pijush Samui, "Comparison of cpt, spt and masw in situ tests", IGC, India, 2006, pp. 913-917.

11. T.G. Sitharam and Pijush Samui, "Three dimensional site characterization models using ANN and ANFIS", FIYGEC, India, 2007, 66-71.

12. Sarat Kumar Das and Pijush Samui, "Applicability of statistical learning algorithms in seismic attenuation prediction", 12^{th} IACMAG, India, October 1 – 6 2008, 1627-1633.

13. T.G. Sitharam and Pijush Samui, "Three dimensional site characterization models using support vectore machine and ordinary kriging", 3rd International Conference on Site Characterization, China, 2008, 1-6.

14. Sarat Kumar Das and Pijush Samui, "Prediction of liquefaction potential based on CPT data: A relevance vector machine approach", 12^{th} IACMAG, India, October 1 – 6 2008, 2856-2861

15. Pijush Samui, Gautam Bhattacharya and Deepankar Choudhury, "Prediction of ultimate capacity of laterally loaded piles in clay: a relevance vector machine approach", Soft Computing in Civil Engineering, @ WSC12 Online, October 16-26 2007, 1-10.

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16. Sk. Faruque Ali and Pijush Samui, "Confinement Efficiency of R C Columns with Rectangular Ties: A SVM Approach", 3rd IICAI, India, 2007, pp. 926-940.

17. Pijush Samui and Sarat Das, "Relevance vector machine classifier analysis of slope",3rd IICAI, India, 2007, 917-925.

 Pijush Samui, Gautam Bhattacharya, Sarat Kumar Das "Applicability Support Vector Machine and Relevance Vector Machine Classifier Analysis of slope", 12th IACMAG, India, October 1 – 6 2008, 4667-4674.

19. T.G. Sitharam and Pijush Samui, "Support Vector Machine for Evaluating Seismic Liquefaction Potential Using Shear Wave Velocity", A Workshop on Microzonation, India, 2007, 163-175.

20. T.G. Sitharam and Pijush Samui, "Intelligent models applied to CPT seismic liquefaction data", CAM2TBST, India, 2008, 1-5.

21. Pijush Samui and JS Lin, "SVM: A new tool for geotechnical Engineering", 4th International Workshop on New Frontiers of Computational Geomechanics, USA, 2008, 115-125.

22. Pijush Samui, Application of artificial inteligency in disaster mitigation and management, Disaster Risk Vulnerablity Conference 2011, 101-106.

23. Kallyan Kulkarni, Pijush Samui, S.K. Sekar "Prediction Of Elastic Modulus Of Concrete: By A Soft Computational Approach", proc. National conference for Advances in Materials & structures (AMAS), Pondicherry, India, 2011,pp335-338

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conference on Civil, Structural and Environmental Engineering (ICSEE), Tiruchengode, Tamil Nadu, India;2011;pp 52-55.

25. Venkatesh S, Pijush Samui, S.K.Sekar. statistical learning algorithm for deremination of failure mechanism of interior beam-column joint, international conference on structural and environmental engg, KSR college of engineering, tiruchengode. (International conference). page 18-23,2011.

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27. Länsivaara, T. & Pijush Samui, A. 2010. Three dimensional site characterization model of Suurpelto (Finland) using support vector machine. In: Benz, T. et al. (eds.). Numerical Methods in Geotechnical Engineering. Proceedings of the Seventh European Conference on Numerical Methods in Geotechnical Engineering Numge 2010, Trondheim, Norway, 2-4 June, 2010 pp. 355-359.

28. Shrikant Srirambhat, Yuvaraj.P, S.K.Sekar and Pijush Samui (2010), "Investigations On Sawdust As Partial Replacement Of Fine Aggregate", in 1st international conference on Science Engineering and Technology (VIT- University, vellore, India).

29. Yuvaraj P, A Ramachandra Murthy, S.K.Sekar and Pijush Samui (2012), "Application of Artificial Neural Network To Predict Fracture Characteristics Of High Strength And Ultra High Strength Concrete Beams", in 2nd international conference on Advances in mechanical, manufacturing ad building sciences (VIT-University, vellore, India) Jan 9th- 11th 2012 pp1129-1136. 30. Samui, P.(2019), Application of Artificial Intelligence in Geo-Engineering, 3rd International Conference on Information Technology in Geo-Engineering, ICITG 2019; Guimarães; Portugal; 29 September 2019 through 2 October 2019; Code 232749.

Teaching Experience

- 1. Structures on Expansive soil
- 2. Geotechnical Engineering I (Soil Mechanics)
- 3. Applied Mechanics
- 4. Fluid Mechanics (Laboratory)
- 5. Soil Mechanics (Laboratory)
- 6. Foundation Engineering
- 7. Soil Dynamics and Machine Foundation
- 8. Soil structure interaction
- 9. Advanced Foundation Engineering
- 10. Engineering Mechanics

Membership of Technical Societies

- 1. Indian Geotechnical Society (LM-3028)
- 2. Institution of Engineers (M-141941-7)
- 3. Indian Science Congress(L15829)
- 4. World federation of Soft Computing
- 5. Geotechnical Engineering for Disaster Mitigation and Rehabilitation (JWG-DMR)

Awards and Honors

- i. Received CIMO Fellowship from Finland Government.
- ii. Selected Fellow Member in International Congress of Disaster Management.
- iii. Appointed as a Guest Editor in "Disaster Advance" Journal.
- iv. Selected Fellow Member in Earth Science India.
- v. Working as Director In-Charge for Centre for Disaster Mitigation and Management

(VIT University)

vi. Selected Editorial Board Member in the Following Journal:

- Sustainable Infrastructure Systems and Green Engineering Journal(Bentham Science Publishers)
- Journal of Civil Engineering and Construction Technology(Academic Journals, Kenya)
- Disaster Advances, India
- Journal of Science and Technology Education Research(Academic Journals, Kenya)
- International Journal of Ambient Computing and Intelligence (IJACI)
- Global Journal of Technology and Optimization
- Ocean system engineering
- vi. Reviewer of the following journals
 - Journal of Testing and Evaluation, ASTM, USA
 - International journal of numerical and analytical methods in Geomechanics, John Wiley & Sons Inc, USA
 - Georisk, Taylor & Francis, UK
 - Recent Patents on Computer Science, Bentham Science Publishers
 - TamKang Journal of Science and Engineering, Taiwan
 - Center for Advanced Engineering Environments, Elsevier
 - Geomechanics and Engineering, Techno Press, Korea
 - Canadian Geotechnical Journal, NRC Research press, Canada

- Journal of Civil Engineering, Korean Society of Civil Engineers, Korea
- Journal of Engineering and Technology Research, Academic Journals, Kenya
- Journal of Engineering Mechanics, ASCE, USA
- Journal of Geotechnical and Geoenviromental Engineering

vii. Cited in MARQUIS WHO'S WHO IN THE WORLD, USA, 29rd Edition, 2012.

viii. Listed TOP 100 ENGINEERS by International Biographical Centre, Cambridge, England

ix. Selected associate editor in International Journal of geotechnical earthquake engineering, Engineering, Arabian journal of Geosciences and innovative infrastructure solutions.

x. Selected for the IIT Roorkee Shamsher Prakash Research Award of Rs. 50,000/- and a Citation for the Year 2011 for My Achievements in Geotechnical/ Earthquake Engineering

xi. Selected for IGS – Sardar Resham Singh Memorial Award – 2013

xii. Selected for APJ Abdul Kalam Award by Marina Lab-2015

xiii. My work has press released by Indian Institute of Science-2015

xiv.

Sponsored Research Projects

- Modeling of spatial variation of soil properties for probabilistic site characterization of Kalpakkam(2011-2013); Funding Agency: IGCAR; Total cost: INR 6,07,200.
- 2. Evaluation of Liquefaction resistance of Indian soils using statistical learning algorithms(2011-2014); Funding Agency, BARC; Total cost: INR 10,75,250.
- Radical decrease in risk of natural catastrophic disasters(2018-2020)Funding Agency: BRICS; Total cost: INR 39,88,766

Consultancy Projects

- A case study on the compression index of marine clay in the east coast of South Korea; Consultant: Structural System Laboratory, Kunsan National University; Total cost:INR 19,000.
- Prediction of uplift capacity of suction caisson in clay; Structural System Laboratory, Kunsan National University; Total cost:INR 26,000.
- Utilization of support vector machine for prediction of fracture parameters of concrete, Kunsan National University; Total cost: INR 23,599.
- 4. Least square support vector machine and multivariate adaptive regression spline for modeling lateral load capacity of piles, Kunsan National University; Total cost: INR 26,000.
- 5. Modeling of reservoir induced earthquakes: a multivariate adapative regression spline, Kunsan National University; Total cost: INR 26,000.
- Determination of Compression Index for Marine Clay: A Relevance Vector Machine Approach, Kunsan National University; Total cost: INR 21,000.
- 7. Determination of reservoir induced earthquake using support vector machine and gaussian process regression, Kunsan National University; Total cost: INR 23852.
- 8. SPT-based liquefaction potential assessment by relevance vector machine approach, Kunsan National University; Total cost: INR 23,852.
- Spatial variability of rock depth, Kunsan National University; Total cost: INR 17,775.
- pullout capacity of ground anchor, Kunsan National University; Total cost: INR 22,414.

- Prediction of compressive strength of self compacting concrete, Kunsan National University; Total cost: INR 11,276.
- Determination of angle of shearing resistance of soil, Kunsan National University; Total cost: INR 30,142.
- Determination of water absorption and compressive strength and gradation of paver block; Total cost: INR 15000.
- Determination of OMC, MDD, Cu,Cc,consistancy and gradation; Total cost: INR 77000.
- 15. Mix design of concrete; Total cost: INR 402715.
- 16. Testing of cement; Total cost: INR 7557
- 17. Testing of concrete cube; Total cost: INR 10350
- 18. Testing of soil; total cost: INR 18975
- 19. Determine of tensile strength of steel; Total cost: 14330.

Supervision of Students

Sr.No.	Student,s Name	Degree	Title	Co-Guide	Year and Status
1	J. Karthikeyan	PhD	ModelingofLiquefactionSusceptibilitySoilUsingStatisticalLearningAlgoritm	Nil	Completed in 2013
2	Manoj Kumar	PhD	Machine Learning Techniques Applied to Rock Properties and Slope Stability	Nil	Completed in 2014
3	Visawanathan R	PhD	Modeling of Spatial Variability of Rock Depth and Water	Nil	Completed in 2016

			Depth of Vellore		
			and Chennai		
4.	Jagan J	M.S.	Data Mining	Nil	Completed in
			Techniques Applied		2015
			To Effective Stress		
			Parameter of		
			Unsaturated Soil		
5	Akhil	M.Tech	Shear Strength	Prof. Rama	Completed in
	Ahammed		Modeling of Deep	Mohan Rao	2013
	Mashood K P		Beam Using Soft		
			Computing		
			Techniques		
6	Nithin K	M.Tech	Prediction of	Prof. Rama	Completed in
			Compressive	Mohan Rao	2013
			Strength of Self		
			Compacting		
	V 'D		Concrete	DOV	
/	Y uvaraj P	M.Tech	Advanced Statistical	Dr. S.K.	Completed in
			Models to Predict	Sekar and	2012
			Fracture	Dr. A.	
			Characteristics for	Ramachandra	
			High Strength and	Murthy	
			Concrete Records		
0		M Tash	Utilization of	Dr C V	Completed in
0	Kulkalili K.S.	M. Tech	Artificial	DI.S.K. Sokor	
			Antificial Intelligence(AI) for	Sekai	2011
			Dradiction of Election		
			Modulus of Normal		
			and High Strength		
			Concrete		
9	Venkatesh	M Tech	Application of	Dr S K	Completed in
	Sanka	ivi. i cen	Statistical Learning	Sekar	2011
	Sumu		Algorithm for	Solitar	2011
			Determination of		
			Failure Mechanism		
			of Interior Beam-		
			Column		
10	Satham	M.Tech	Experimental	P.	Completed in
	Hussain		studies on concrete	Rammohan	2014
			containing cement	Rao	
			kiln dust and fly ash		
11	Suhaina	M.Tech	Prediction of	S.K. Sekar	Completed in
	Sanofer A.K.		compressive		2015
			strength of high		
			performance		

			concrete with fly ash and metakaolin		
			using statistical		
			algorithim		
			techniques		
12	Randhir	M.Tech	Dynamic soil	Dr. L.B. Roy	Completed in
	Kumar Gupta		structure interaction		2016
			for 10 storeyed		
			framed structure		
			using genetic and		
			extreme learning		
10		DID	machine	<u> </u>	<u> </u>
13	Rahul Kumar	PhD	Reliability analysis	Sunita	Completed in
		DID	of geostructure	Kumarı	2019
14	Sujjet Ummar	PhD	Determination of	Sunita	Ongoing
			seismic liquefaction	Kumarı	
			potential of soil		
			using deterministic,		
			probabilistic and		
1.7			reliability methods		
15	Ruben	M.Tech	Reliability analysis		Completed in
	Kumari		of shallow	Dr. Avijit	Completed in
			MADS and ELM	Durman	2010
16	Anioli Kujur		Evoluation of		
10	Anjan Kuju		liquefaction		
		M Tech	susceptibility of	Dr. Sunita	Completed in
		WI. I COII	high seismic region	Kumari	2016
			of Rihar		
17	Angshuman		Modeling of seismic		
17	singh		liquefaction		
	8	M.Tech	potential of soil	Nil	Completed in
			using Deep learning		2017
			and LSSVM		
18	Brijhanbhan		Soil structure	DuefLD	
	Rao	M.Tech	interaction using	Prof. L.B.	Completed in
			LSSVM and GPR	коу	2018
19	Uttam Yadav	М.	Reliability analysis	Dr. Sunita	Completed in
		Tech	of slope	Kumari	2017
20	Aale Rasul		slope stability		
		М.	analysis using soft		Completed in
		Tech	computing		2018
			techniques		

Conferences/Workshops/ Training Organized

- Technical Committee Member of the Symposium on Modelling and Simulation in Computer Sciences and Engineering (MSCSE 2015), Rhodes, Greece, during 23-29 September 2015.
- Technical Committee Member of 4th Symposium on Modelling and Simulation in Computer Sciences and Engineering ,Thessaloniki, Greece, during 25-30 September 2017.
- Co-coordinator, Workshop on "Satellite Image Processing Techniques", VIT University, Vellore, 1st & 2nd August, 2014.
- Co-coordinator, Workshop on "Advances in Forecasting Techniques for Water Resources", VIT University, Vellore, 19th September, 2014.
- Co-coordinator, Workshop on "Repair and Retrofitting of Distressed Reinforced Concrete Structures ", VIT University, Vellore, 26th September, 2014.
- Co-coordinator, Training on "Introductory, Intermediate & Innovative Geomatics ", VIT University, Vellore, 5th to 25th June, 2013.
- Co-coordinator, Workshop on " Damage Assessment of RCC Structures by Non Destructive Techniques ", VIT University, Vellore, 11th September, 2015.
- Co-coordinator, Training on "Disaster Safety for Educational Institutions ", VIT University, Vellore, 16th April, 2015.
- Co-coordinator, Training on "Satellite Image Processing for Civil Engineering Applications ", VIT University, Vellore, 27th & 28th March, 2015.
- Co-coordinator, Workshop on " Development of High Resolution Digital Elevation Model Using CARTOSAT – 1 Stereo Data ", VIT University, Vellore, 26^h & 27th February, 2015.

References

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Former Director Research, MVSR Engg. College, Hyderabad
Former Director General
J B GROUP OF EDUCATIONAL INSTITUTIONS ,Hyderabad
Former DG,RGI,Nagpur.
Emeritus Director general,VITS Indore
Former VC,VIT Vellore
Former Director i/c IIT Delhi
Former Principal VRCE, Nagpur

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