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Research Experience:

List of Externally Sponsored Research Projects

- Co-Principal Investigator. “Design of stone column-improved soft ground considering clogging effect based on long-term field study (SCF)” sponsored by Science and Engineering Research Board (SERB), Department of Science and Technology, New Delhi (INR 32,27,400) (2021-2024).
- Principal Investigator (India) of a project entitled “Landslide hazard assessment in NE India along the Gangtok-Tsomgo / Changu Lake and Gangtok / Chungthang-Lachen corridors” – A Indo-Norway Project Sponsored by MoES involving NGU, NGI, WIHG & IITKGP (INR2,11,00,000) (2017-2022).
- Principal Investigator (India) of a project entitled “HYDRODRIL,” sponsored by European Commission, Ref. No. ID FP7-PEOPLE-2011-IRES-295225. The project is a collaborative research between BOKU, Austria, CUG, China, Univ. of Nottingham (UNID), UK, UNAM, Mexico and IIT Kharagpur (India). The project is coordinated by Prof Wei Wu of BOKU, Austria (Eu 37,400 /Eu 264,600) (2012-2016).
- Principal Investigator. “Experimental & Numerical Studies on Deep Excavation under Static & Seismic Conditions” by Department of Science and Technology, New Delhi, Ref No. SR/S3/MERC-0029/2011. The distribution of earth pressure and corresponding response of the retaining wall system under different combinations of cohesionless soil with plastic fines (clay) & non plastic fines (silt) under different construction stages is being studied with the help of laboratory model tests and numerical modeling. The settlement profile of the ground surface and conditions of structures near the edge of excavation is also studied (INR73,00,000) (2012-2016).
- Co-Principal Investigator. “Strengthening the Research and Postgraduate Teaching in the Areas of Structural, Geotechnical, Environmental and Transportation Engineering (FET)” by Department of Science and Technology, New Delhi, Ref No. SR/FST/ETII-037/2008 dtd 17.03.2009 (INR2,45,00,000) (2009-2014).
- Principal Investigator. “Modeling and Monitoring of Landslide Hazard in Sikkim Himalayas (HSH)” by Department of Science and Technology, New Delhi, Ref No. ES/11/092(50)/2003 dt. 19.03.2004. It is a part of DST’s Natural Disaster Management Program. It includes field instrumentation and long term monitoring of Lanta Khola landslide on North-Sikkim Highway in Sikkim (2004-2008) (INR 23,00,000).
- Principal Investigator of a project entitled “Theoretical & Experimental Investigation of Strain Localization in Cohesive Soils under Plane Strain Condition (LCS),” sponsored by Department of Science & Technology, Govt. of India (New Delhi), Ref. No. SR/S3/MCE/03/2001-SERC-Engg. Dt. 12-11-2002. (Rs. 13 Lakhs). The project includes development of an advanced bi-axial test facility to study strain localization in soils. Digital image processing is utilized to monitor shear band development with the progress of the tests (2002-2005).
- Principal Investigator of a project entitled “Preparation of Status Report on Landslide Problem in Sikkim (RLP),” sponsored by Department of Science & Technology, Govt. of India (New Delhi). Ref. No. ES/11/092(50)/2003 dt 22-01-2003. (Rs. 30 Thousands). The project includes visiting major landslides in Sikkim and reporting different measures undertaken to mitigate landslide and the present status of these slides (2003).

Consultancy Projects/ Professional Experience (2000 to date):

- **Study of Differential Settlement of Hooghly Met Coke Plant Facility at Haldia (SPFH)**
Client: TATA Steel Co. Ltd, Jamshedpur
Principal Consultant. (INR 7,08,000) (2018-2019).
- **Review of the Design & Performances of 74m High MSE Wall and slopes at Pakyong Airport, Sikkim (RDST)**
Client: Airport Authority of India (GM, Pakyong Airport)
Principal Consultant. (INR 75,60,000) (2016-2018).
- **Impact Assessment on Heritage Structures due to Proposed Construction Route of E-W Metro at Kolkata (HSPW)**
Client: Kolkata Metro Rail Corporation Ltd., Kolkata
Co-consultant. Determination of settlement and motions at the heritage buildings due to the construction of E-W tunnels and station. (INR 75,57,000) (2016-2018).
- **Cyclic Triaxial Tests for Kolkata Metro Rail Corporation Ltd (SOTK)**
Client: Transtonnelstroy-Afcons JV, Mumbai
Principal Consultant. Performed cyclic triaxial tests on the soils from E-W Metro near BBD Bag, Kolkata (INR 114500) (2016).
- **Soil Stabilization with Geocrete (SOSG)**
Client: KABA Infratech Pvt. Ltd., New Delhi
Co-consultant. Laboratory tests on soils with different percentages of Geocrete. (INR 150000) (2014-2015).
- **Strengthening of Weak Formation and Rehabilitation Work in Malda Division of Eastern Railway (WFAW)**
Client: Eastern Railway, Malda Division
Principal Consultant. Performed drilling, field & laboratory testing and redesigning of the railway embankments. (INR 8,65,000) (2012-2014).
- **Liquefaction Study of the Site for Steel Complex at Gokulpur (SSCG)**
Client: Rashmi Metaliks, Ltd, Kolkata
Principal Consultant. Performed seismic hazard and ground liquefaction study of the project site for the new steel plant. (INR 86,034) (2012).
- **Stability & Strength Test for Q-0, Dunguri Lime Stone Quarry (SFDL)**
Client: ACC Ltd, Bargarh Cement Works, Bargarh, Orissa
Co-PI, Performed Strength tests, Stability analysis of the slope. (PI: Prof. K. Pathak, Mining Dept) (INR 165,000) (2011-2013).
- **Inspection & Testing of 100-m Transmission Tower at AIR, Kohima (TMTA)**
Client: All India Radio & Doordarshan, Kolkata
Principal Consultant. Performed field inspection and field testing of the newly erected foundation of the tower. Checked bearing capacity, settlement and stability of the foundation. (INR 3,00,000) (2011-2012).
- **Evaluation & modification of tank foundations at JSL (EMTF)**
Client: BOC India Ltd, Kolkata
Principal Consultant. Design & analysis of retaining wall and tank foundations (INR 3,80,000) (2011-2012).
- **Assessment of undrained extensional behavior of Padma Bridge Soils -1 (BPBS)**
Client: DCL-FCL, Dhaka, Bangladesh
Co-consultant. Testing of soils from Padma Bridge (3.47 Lakhs) (2010).
- **Assessment of undrained extensional behavior of Padma Bridge Soils -2 (PDBR)**
Client: M/s M. Ahmed & Associates, Ltd., Dhaka, Bangladesh
Co-consultant. Testing of soils from Padma Bridge (1.49 Lakhs) (2010).
- **Characterization of Sinter Metallics and Muck Dump Material (SJMD)**
Client: Tata Steel Ltd, Jamshedpur
Principal Consultant. Site visit. Determination of characterization of sinter and muck dump by laboratory tests. (3.86 Lakhs) (2009).
- **Assessment of Liquefaction Potential at OSCOM Site, Matikhal (OSCO).**

Client: Indian Rare Earths Ltd, Orissa

Co-consultant (7 Lakhs) (2009-2010).

- **Assessment of Tunnel Distress at HMPCL (AOTD)**

Client: Hoogly Met Coke & Power Co., Ltd, Tata Steel, Kolkata

Co-consultant. Performed site inspections. Reviewed data. Reviewed analyses of the failure (9.55 Lakhs) (2009).

- **Construction of Arterial Road & Backup Area Behind Berth No. 2 of Haldia Dock Complex.**

Client: Kolkata Port Trust, Haldia Dock Complex.

Co-consultant. (2009).

- **Soil Test for Construction of BLLRO Office Building at Nayanjuli, Kharagpur.**

Client: Govt. of West Bengal.

Principal Consultant. Performed Laboratory Tests to Determine Suitability of Foundation Soil & its Bearing Capacity (2009).

- **Review of Bund Stability of the existing Red Mud and Ash Ponds at Vedanta Aluminium Plant, Rayagoda, Orissa.**

Client: Pollution Control Board, Bhubaneswar, Orissa.

Principal Consultant. Visited the plant. Reviewed field data and measurements. Produced status report with recommendations (2008).

- **Testing and Evaluation of 100 m Transmission Tower at AIR Kohima.**

Client: Webel Mediatronics Ltd.

Principal consultant. Visited the site and supervised field testing. Prepared status report and recommendations. Reviewed post construction drawings. (Rs. 4.07 lakhs) (2007-2008).

- **Study of Water Supply Distribution/Storage & Source Availability for Darjeeling Municipality (SWSD)**

Client: District Magistrate, Darjeeling

Consultant. Performed survey of pipelines. Reviewed existing water supply and storage schemes. Proposed projected demands. Visited proposed storage site at Tiger Hills (Rs. 4.82 Lakhs) (2007).

- **Construction of Arterial Road and Backup Area behind Berth No 2 of Haldia Dock Complex (ARBA)**

Client: Kolkata Port Trust, Haldia Dock Complex

Co-consultant. (Rs 4.49 Lakhs) (2007-2008).

- **Soil Test of Microwave Compound at Mohanpur, Midnapore (DOPP)**

Client: BSNL, Tamluk

Principal Consultant. Performed drilling and soil tests (In-situ density, moisture content, unconsolidated undrained triaxial tests for the soil (2006).

- **Soil investigation and geotechnical design for foundation of the proposed bridge across the old Kansabati near Daspur (GDFB)**

Client: Panchayat Samity, Daspur-I, Midnapore

As co-consultant, supervised drilling, sampling and laboratory testing of samples. Reviewed design of the bridge foundation (2006).

- **Soil Tests for the M/s ICICI Bank (PCBR)**

Client: M/S ICICI Winfra, Kolkata

Performed drilling, sampling and soil tests (2006).

- **Soil Investigation for the Proposed Kasturba Gandhi Balika Vidyapeeth (NTBV)**

Client: Headmistress, Nayagram Thana Balika Vidyapeeth, Midnapore

Performed drilling, sampling, soil tests, bearing capacity determination and foundation design for the proposed school building (2005).

- **Investigation of possible causes for observed surface undulations in 4/6 laning of NH-6 (IPCS)**

Client: National Highway Authority of India

Reviewed existing test data (2005).

- **Investigation of RE Wall Distress at Km 18 of NH6 and Design of Remedial measures (REWD)**

Client: National Highways Authority of India

Reviewed remedial measures as co-consultant (2006).

- **Checking of Design of Turamdih Tailings Dam**

Client: Uranium Corporation of India Ltd, Jharkhand.

Performed stability check of the Turamdih Tailings Dam Stages I & II for the normal and seismic loading conditions (2004-2005).

- **Checking of Bund Stability of Existing Red Mud Ponds**

Client: Indian Aluminium Company, Ltd, Ranchi.

Performed stability check of the existing Tailings Dam for the normal, flood and seismic loading conditions (2004-2005).

- **Design of Pagladiya Embankment Dam in India**

Client: CWC & Brahmaputra Board, Mr. D.V. Theraja (Chief Engineer, E&NE, CWC)

Reviewed existing design of Pagladiya Dam in Assam and performed seismic safety evaluation of the dam based on field & laboratory test data. The dam section was revised and a cutoff wall was added to mitigate foundation liquefaction (2002).

- **Design of Railway Embankments in India**

Client: South Eastern Railway, Jajpur Road Division, Mr. S.C. Gupta (Const. Div.)

Performed design and analyses of 45m high railway embankments between Keonjhar and Jajpur Road, Consultancy Project no. IIT/SRIC/CE/2000-2001/71, (2000-2001).

Refereed Journal Publications

1. "MSA-based seismic fragility analysis of RC structures considering soil nonlinearity effects and time histories compatible to uniform hazard spectra," Bandyopadhyay, Srijit, Parulekar, Yogita M., Sengupta, Aniruddha, Structures, Vol. 54, 330-347 (2023).
2. "Study of the Dynamic Performance of a Gabion Wall," Jyothi Vishali Mummadisinh and Aniruddha Sengupta, Structures, Vol. 50, Pages 576-589 (2023).
3. "Generation of seismic hazard maps of Assam State," Bandyopadhyay, Srijit, Parulekar, Yogita M., Sengupta, Aniruddha, Soil Dynamics, Earthquake Engineering and Computational Geotechnical Engineering Lecture Notes in Civil Engg. Vol. 300, 227-239 (2023).
4. "Generation of seismic hazard maps for Assam region and incorporation of the site effects," Bandyopadhyay, Srijit, Parulekar, Yogita M., Sengupta, Aniruddha, Acta Geophysica, Vol. 70, Issue 5, Pages 1957- 1977 (2022).
5. "Dynamic behaviour of a piled raft resting on saturated Kasai River sand," Banerjee, Raj, Chattaraj, Rana, Sengupta, Aniruddha, Parulekar Y.M., Geomechanics and Geoengineering, Volume 17, Issue 4, Pages 1023 – 1055 (2022).
6. "Geomorphic evaluation of landslides along the Teesta River valley, Sikkim Himalaya, India," Gupta, Vikram, Chauhan, Neha, Penna, Ivanna, Hermanns, Reginald, Dehls, John, Sengupta, Aniruddha, Bhasin, Rajinder, Geological Journal, Volume 57, Issue 2, Pages 611 – 621 (2022).
7. "Settlement behaviour of a pile raft subjected to vertical loadings in multilayered soil," Banerjee, Raj, Bandyopadhyay, Srijit, Sengupta, Aniruddha, Reddy G.R., Geomechanics and Geoengineering, Volume 17, Issue 1, Pages 282 – 296 (2022).
8. "An in-house code for studying the response of soil deposits in Mumbai city using 2-D equivalent linear and 1-D nonlinear approach," Banerjee, Raj, Bandyopadhyay, Srijit, Singh, Tarvinder, Sengupta, Aniruddha, Reddy G.R., Coleman, Justine, Bolisetti, Chandrakanth, Geomechanics and Geoengineering, Volume 17, Issue 1, Pages 220 – 245 (2022).
9. "Probabilistic seismic hazard analysis (PSHA) to estimate the input ground motions for co-seismic landslide hazard assessment: A case study on Himalayan highways, Sikkim (India)," Kumar, S., Sengupta, A., Hermanns, R., Dehls, J., Bhasin, R., Penna, I., Gupta, V. Physics and Chemistry of the Earth, Parts A/B/C, Vol. 127, Article103157 (2022).
10. "Numerical prediction of undrained cyclic triaxial experiments on saturated Kasai River sand using two constitutive models of liquefaction," Banerjee, Raj, Chattaraj, Rana, Parulekar, Y. M. and Sengupta, A. Bulletin of Engineering Geology and the Environment, Volume 80, Issue 11, Pages 8565 – 8582, (2021).
11. "Structure soil structure interaction of conventional and base-isolated building subjected to real earthquake," Bandyopadhyay, Srijit, Parulekar Y.M., Sengupta, Aniruddha, Chattopadhyay J., Structures, Volume 32, Pages 474 – 493 (2021).

12. "Behavior of braced wall embedded in saturated liquefiable sand under seismic loading," Konai, Sanku, Sengupta, Aniruddha, Deb, Kousik, *Earthquake Engineering and Engineering Vibration*, Volume 20, Issue 2, Pages 361 – 375 (2021).
13. "Estimation of ground vibration and settlement during underground tunneling in Kolkata, India," Sengupta, Aniruddha, Banerjee, Raj, Bandyopadhyay, Srijit, *Arabian Journal of Geosciences*, Volume 14, Issue 1, 10.1007/s12517-020-06246-1 (2021).
14. "Numerical modeling of debris flow during a rainfall induced landslide at Malin in India," Sajwan, Avinash and Sengupta, Aniruddha *Geotechnical Special Publication, Geo-Extreme 2021: Infrastructure Resilience, Big Data, and Risk*, Savannah, GSP 330, DOI: 10.1061/9780784483701.013, Pg. 129 – 138 (2021).
15. "Back analysis of shear strength parameters of a large rock slide in Sikkim Himalaya," Rajinder Bhasin, Mahdi Shabanimashcool, R.L. Hermanns, O.A. Morken, J.F. Dehls, Vikram Gupta, Aniruddha Sengupta, *Journal of Rock Mechanics and Tunnelling Technology (JRMTT)*, Volume 26 (2), Pages 81-92 (2020).
16. "Behavior of a combined piled raft foundation in a multi-layered soil subjected to vertical loading," Srijit Bandyopadhyay, Aniruddha Sengupta and Y. M. Parulekar, *Geomechanics and Engineering*, Techno Press, Vol. 21, No. 4, pp.379-390 (2.67) (2020).
17. "Development of correlation between SPT-N value and shear wave velocity and estimation of non-linear seismic site effects for soft deposits in Kolkata city," Srijit Bandyopadhyaya, Aniruddha Sengupta and G.R. Reddy, *Geomechanics and Geoengineering*, Taylor & Francis, Volume 16, Issue 1, Pages 1 – 19, (1.04) (2020).
18. "Seismic behavior of cantilever wall embedded in dry and saturated sand," Sanku Konai, Aniruddha Sengupta, Kousik Deb, *Front. Struct. Civ. Eng.*, Volume 14, Issue 3, Pages 690 – 7051, (1.46) (2020).
19. "Effect of a less permeable stronger soil layer on the stability of non-homogeneous unsaturated slopes," Dey, Nabarun, Sengupta, Aniruddha, *Frontiers of Structural and Civil Engineering*, Volume 14, Issue 6, Pages 1462 – 1475 (2020).
20. "Study of a surface raft foundation in dry cohesionless soil subjected to dynamic loading," Raj Banerjee, Aniruddha Sengupta and G. R. Reddy, *Current Science*, Vol. 117, No. 11, pp. 1800-1812 (0.967) (2019).
21. "Behavior of braced excavation in sand under a seismic condition: Experimental and numerical studies," S. Konai, A. Sengupta, K. Deb, *Earthquake Engg. & Engg. Vibration*, Vol. 17, Issue 2, pp. 311-324 (2018) (cited by 1).
22. "Effect of rainfall on the triggering of the devastating slope failure at Malin, India," Nabarun Dey, A. Sengupta, *Natural Hazards*, DOI: 10.1007/s11069-018-3483-9, (Sept 2018).
23. "Shake Table Tests and Numerical Modeling of Liquefaction of Sand," R. Banerjee, S. Konai, A. Sengupta and K. Deb, *Geotechnical and Geological Engg. J.*, Volume 35, Issue 4, Pages 1327 - 1340, (Feb 2017).
24. "A Comparative Assessment of the Seismic Response of an Earthen Dam using Analytical Simulation and Empirical Methods," S. Bandyopadhyay, R. Banerjee, A. Sengupta, Y.M. Parulekar and G.R. Reddy, *Current Science*, Volume 113, Issue 5, Pages 902 - 910 (0.967) (2017).
25. "Dynamic Properties of Fly Ash," R. Chattaraj and A. Sengupta, *J. Materials in Civil Engineering*, ASCE, Volume 29, Issue 11, Article number 04016190 (Jan 2017) (1.43) (cited by 3).
26. "Estimation of Design Parameters for Braced Excavation in Clays," S. S. Chowdhury, K. Deb, A. Sengupta, *Geotechnical and Geological Engg. J.*, DOI: 10.1007/s10706-016-0123-6 (Nov 2016).
27. "Liquefaction Potential and Strain Dependent Dynamic Properties of Kasai River Sand," R. Chattaraj, A. Sengupta, *Soil Dynamics and Earthquake Engineering*, Vol. 90, pp. 467-475 (2.04) (2016) (cited by 5).
28. "Effect of Fines on the Behavior of Braced Excavation in Sand: Experimental and Numerical Study," *Intl. J. of Geomechanics*, ASCE, Vol. 16, No. 1, pp. 04015018-1 - 13 (2016) (S.S. Chowdhury, K. Deb and A. Sengupta) (1.2) (cited by 2).
29. "Performance of Sand and Shredded Tire Mixture as a Natural Base Isolator for Earthquake Protection," *J. of Earthquake Engineering and Engineering Vibration*, Vol. 14, No.4, pp. 683-693 (2015) (S. Bandyopadhyay, A. Sengupta, G. R. Reddy) (0.475) (cited by 4).
30. "Behavior of Underground Retaining Structures under Seismic Condition," *Earthquakes and Structures*, Vol. 8, No. 5, 1147-1170 (2015) (S.S. Chowdhury, K. Deb and A. Sengupta) (1.38) (cited by 6).
31. "Study of a Railway Embankment Reinforced with Jute Tassels," *Sadhana*, Vol. 40, Part 1, pp. 277-293 (2015) (A. Sengupta and S. Dalal) (0.587).
32. "Rain Triggered Slope Failure of the Railway Embankment at Malda, India," *Acta Geotechnica*, Vol. 9, pp.

- 789-798 (2014) (Monal Raj and A. Sengupta) (2.493) (cited by 11).
33. "Natural Base Isolation System for Earthquake Protection," *Current Science*, Vol. 107, Issue 6, pp. 1037-1043 (2014) (S. Bandyopadhyay, A. Sengupta, G. R. Reddy) (0.93).
 34. "Study of a Model Slope Reinforced with Jute," *Geomechanics and Geoengineering*, pp. 289-305, (2014) (A. Sengupta and S. Kumar).
 35. "Estimation of Design Parameters for Braced Excavation: Numerical Study," *Intl. J. of Geomechanics (ASCE)*, Vol. 13, Issue 3, pp. 234-247, (2013) (S.S. Chowdhury, K. Deb and A. Sengupta) (1.2) (cited by 17).
 36. "Numerical Study of a Failure of a Wall," *Intl. J. of Geotechnical & Geological Engg.*, Vol. 30, pp. 1025-1034, (2012) (A. Sengupta) (cited by 2).
 37. "Behavior of Nailed Steep slopes in Laboratory shake Table Tests," accepted for publications in *Intl. J. of Civil Engg. & Arch.* (2012) (A. Sengupta & Debabrata Giri).
 38. "Dynamic Analysis of Nailed Soil Slopes," *Ground Improvement J.*, Vol. 164, Issue GI4, pp. 225-234, (Nov. 2011) (A. Sengupta & Debabrata Giri) (cited by 5).
 39. "Site-Specific Microzonation Study in Kolkata Metropolitan City, India by 2-D Modeling of *SH* and *P-SV* Waves," *Intl J. of Pure & Applied Geophysics*, Vol. 168, pp. 479-493 (F. Vaccari, M. Y. Walling, W. K. Mohanty, A Sengupta and G. F. Panza) (2011)(1.614) (cited by 17).
 40. "Estimation of Permanent Deformations of Tehri Dam Due to 7.0 and 8.5 Magnitude Earthquakes," *Sadhana*, Vol. 35, Part 3, pp. 373-392 (2010) (A. Sengupta) (0.587) (cited by 3)
 41. "Strain Localization in Geomaterials in Nature, Laboratory Tests and Numerical Analyses," *Current Science*, Vol. 98, No. 9, pp. 1195-1201, (2010) (A. Sengupta) (0.93) (cited by 2).
 42. "Landslide Investigation and Mitigation in the Eastern Himalayan Region," *Indian Road Congress (IRC) J.*, Vol 71-2, Paper No. 560, pp. 133-142, July-Sept. (2010) (A. Sengupta, S. Gupta & K. Anbarasu).
 43. "Dynamic Behavior of Small Scale Model of Nailed Steep Slopes," *Intl J. of Geomechanics & Geoengineering*, Vol. 5, Issue 2, pp. 99-102, 2010 (D. Giri & A. Sengupta).
 44. "Integrated Very Low Frequency EM, Electrical Resistivity, and Geological Studies on Lanta Khola Landslides, North Sikkim, India," *Intl J. of Landslides*, Vol 7, pp 43-53, (2010) (S.P. Sharma, K Anbarasu, S. Gupta, A. Sengupta) (2.814) (cited by 8).
 45. "Rainfall Thresholds for the Initiation of Landslide at Lanta Khola in North Sikkim, India," *Intl J. of Natural Hazards*, Vol 52, pp 31-42, (2010) (A. Sengupta, S. Gupta and K. Anbarasu) (1.719) (cited by 49).
 46. "Dynamic Behavior of Small-Scale Model Slopes in Shaking Table Tests," *Intl. J. Geotechnical Engineering*, Vol 4, No 1, pp 1-11, Jan, (2010) (D. Giri and A. Sengupta) (cited by 5).
 47. "Estimation of permanent deformations of Tehri dam due to 7.0 and 8.5 magnitude earthquakes," Sengupta, A. and Saikia, A., *Geotechnical Engineering*, Volume 40, Issue 4, Pages 209 – 216, 2009.
 48. "Dynamic Behavior of Small Scale Nailed Soil Slopes," *Intl J. of Geotechnical and Geological Engineering*, Vol 27, No 6, pp 687-698 (2009) (D Giri & A. Sengupta) (cited by 14).
 49. "Mechanism of Activation of the Lanta Khola Landslide in Sikkim Himalayas," *Intl J. of Landslides*, DOI 10.1007/s 10346-009-0193-0, Vol. 7, pp. 135-147, (2010) (K Anbarasu, A. Sengupta, S. Gupta) (2.814) (cited by 22).
 50. "Anisotropy in Kaolinite subjected to Large Strains during Biaxial Tests," *Intl J. of Clays and Clay Minerals*, Vol 57, No 2, pp 251-263, (2009) (A. Sengupta) (1.431) (cited by 1).
 51. "Site-specific Studies on the Lanta Khola Landslide in Sikkim Himalayas," *Intl J. Geotechnical Engineering*, J Ross Publishing Inc., Vol 3, pp 361-376, (2009) (K. Anbarasu, S. Gupta & A. Sengupta) (cited by 2).
 52. "Effect of Orientation of Microfabrics on Engineering Behaviors of Clay," *Indian Geotechnical Journal*, Vol 39, No 2, pp 233-318, (2009) (A. Sengupta & L.R. Mantri).
 53. "A Kinematic Limit Approach for the Stability Analysis of Nailed Soil Slopes," *Asian J. Civil Engineering*, Vol. 10, No. 2, 163-176 (2009) (D. Giri and A. Sengupta) (cited by 3).
 54. "Locating the Critical Failure Surface in a Slope Stability Analysis by Genetic Algorithm," *Intl J. Applied Soft Computing*, Elsevier Science Publications, U.K., Vol. 9, January, 387-392 (2009) (A. Sengupta & A. Upadhyay) (2.679) (cited by 47).
 55. "Predictions of Earthquake Induced Permanent Deformations of Dams by Simplified and Advanced Methods of Analyses," *Intl J. of Dam Engineering*, Vol XVIII, Issue 4, 289-309 (2008) (A. Sengupta).
 56. "Anisotropy of Magnetic Susceptibility Analyses of Deformed Kaolinite: Implications for Evaluating Landslides," *Intl J. of Earth Sciences*, Vol. 98, pp. 1721-1725 (2009) (M. Mamtani and A. Sengupta) (2.084) (cited by 12).

57. "Estimation of Permanent Deformations of Tehri Dam Due to 7.0 and 8.5 Magnitude Earthquakes," *Advances in Earth Structures*, ASCE Geotechnical Special Publications No. 151, pp. 203-210, (2006) (A. Sengupta).
58. "An Evolutionary Algorithm for Locating the Critical Failure Surface in a Soil Slope," *The Electronic Journal of Geotechnical Engineering (EJGE)*, Vol. 10, 0592, pp. 1-15, Bundle F, (2005).
59. "Investigation into Shear Band Formation in Clay," *Indian Geotechnical Journal*, Vol. 34, No. 2, pp. 141-163, April (2004) (S. Sengupta & A. Sengupta, co-authors).
60. "Performance of a Thermodynamic Constitutive Model for Granular Materials," *Indian Geotechnical Journal*, Vol. 33, No. 4, pp. 319-346, October (2003).
61. "Lateral Earth Pressures in Clayey Backfills," *Indian Geotechnical Journal*, Vol. 32, No. 2, pp. 65-85, April (2002) (A. Sengupta & G. Venkateshwarlu, co-authors).
62. "Review of a Thermodynamic Theory for Granular Materials," *Computers and Geotechnics*, Vol. 11, pp. 1-36 (1991) (A. Sengupta & Suren Saxena, co-authors) (1.224).
63. "Reservoir Induced Seismicity: A new Model," *Intl. J. Num. Method Geom.*, Vol. 12, pp. 263-281 (1988) (S.K. Saxena, A.M. Ger & A. Sengupta, co-authors) (1.055) (cited by 5).

Refereed Conference Publications

1. "Dynamic plane strain testing as an alternative method to characterize cyclic direct simple shear experiment on sands," R. Banerjee, Y.M. Parulekar, A. Sengupta, J. Chattopadhyay, 10th European Conference on Numerical Methods in Geotechnical Engineering (NUMGE 23), Imperial College, London (2023).
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