

Dr. Kripamoy Sarkar

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RESEARCH THEME

Ph.D.: Landslide risk analysis in and around Luhri area, Lower Himalaya, Himachal Pradesh, India

KEY ACADEMIC PROJECTS

M.Tech: Geotechnical investigation of Amiyan Landslide, Uttaranchal under the supervision of **Prof. T.N. Singh**

M.Sc: Mathematical two electrode Geo-electrical profiling over thick dyke like body and Geohydrological investigation of South Sagar Island region South 24 Parganas, West Bengal under the supervision of **Prof. R. K. Majumdar.**

KEY ACADEMIC ACHIEVEMENTS

➤ TEACHING EXPERIENCE

- **Assistant Professor**, Department of Applied Geology, Indian School of Mines, Dhanbad, **17/06/2013– till date.**
- **Assistant Professor**, Department of Earth Science, Assam University, Silchar, **22/09/2010 – 17/06/2013.**
- **Lecturer (Geology)**, Department of Civil Engineering, Sardar Patel College of Engineering, Andheri (W), Mumbai, **11/09/2009–21/09/2010.**

➤ INDUSTRIAL EXPERIENCE

- Worked as a Geologist from 2005-2006 in **Hindustan Construction company Limited (HCC), Mumbai.**

➤ SUPERVISION:

- Postgraduate Thesis: 09 (completed)
- Ph.D Thesis: 02(ongoing)

➤ AWARDS AND HONOURS

- Expert Member for campus selection at IIT Bombay, Coal India Limited, 2010.
- External Examiner for M.Tech. Programmes, Dept. of Earth Sciences, IIT Bombay, 2010.
- Best Paper Award, 2011, Indian Society for Rock Mechanics and Tunneling technology for the year 2009.
- Award of SERC Fast Track Project for Young Scientist, DST, 2009.
- Award of Senior Research Fellowship, CSIR, 2008.
- Nominated for Young's Scientist Award, ISCA, 2008.
- All India Rank 21st in GATE (Graduate Aptitude Test in Engineering), 2003.
- Qualified in NET (National Eligibility Test), June, UGC-CSIR, 2003.
- Distinction in Bachelor of Science, Jadavpur University, 2000.

➤ MEMBER OF EDITORIAL AND REVIEWER

- Editorial Member, International Journal of Earth Science Research.
- Editorial Member, International Journal of Earth Sciences and Engineering.
- Reviewer, International Journal of Arabian Geosciences.
- Reviewer, International Journal of Neural Computing and Applications.
- Reviewer, International Journal of Environmental Engineering Science.
- Reviewer, International Journal of Environmental Earth Science.
- Reviewer, International Journal of Geomaterial.
- Reviewer, International Journal of Scientia Iranica.
- Reviewer, Bulletin of Engineering Geology and the Environment

POSITION OF RESPONSIBILITY

- **Faculty In charge:** Integrated M.Sc.Tech (Applied Geology), ISM, Dhanbad (2013).
- Evaluation committee **member**, Summer Training/Internship, ISM, Dhanbad (2013).
- **Exam coordinator** (2012-13), Department of Earth Science, Assam University.
- **Directorate of Technical Education** (2010), Involved in First year engineering admissions, Mumbai University.
- **Secretary** (2008), CAFET-INNOVA Technical Society, Maharashtra State Chapter.
- **Coordinator** (2004), ERSA council, Department of Earth Sciences, IIT Bombay.

COMPUTER SKILL

- Softwares: FLAC-3D, PLAXIS-2D, GeoStudio (2004), Stereonett, AutoCAD 2007, GIS (TNT MIPS and MAP INFO).

PUBLICATIONS

➤ Papers in refereed Journals

- **Sarkar, K., Vishal, V. and Singh, T.N., 2012, An Empirical Correlation of Index Geomechanical Parameters with the Compressional Wave Velocity, *Geotechnical and Geological Engineering*, Vol-30(2), pp.469-479.**
- **Sarkar, K., Singh, T.N. and Verma, A.K., 2012, A numerical simulation of landslide-prone slope in Himalayan region - a case study, *International Journal of Arabian Geosciences*, Vol-5(1), pp.73-81.**
- **Sarkar, K and Singh, T.N., 2011, Instability analysis of slope along NH-22 around Sainj area, H.P., *Indian Landslides*, Vol-49(1), pp.9-12.**
- **Sarkar, K., Tiwary, A. and Singh, T.N., 2010, Estimation of strength parameters of rock using artificial neural networks, Bulletin of Engineering Geology and the Environment, Vol-69, pp.599-606.**
- **Singh, T.N., Verma, A.K., and Sarkar, K., 2010, Static and Dynamic analysis of a landslide, *International Journal of Geomatics, Natural Hazards and Risk*, ISSN: 1947-5713, Vol-1(4), pp.323-338.**
- **Singh, N., Singh, T.N., Tiwary, A., and Sarkar, K., 2010, Textural identification of basaltic rock mass using image processing and neural network, *International Journal of Computational Geosciences*, Vol. 14(2) pp 301-310.**

- **Sarkar, K.** and Singh, T.N., 2009, **Prediction of strength parameters by dynamic wave**, *International Journal of Earth Sciences and Engineering*, Vol-2(1), pp.12-19.
- Singh, T.N., Jain, A. and **Sarkar, K.**, 2009, **Petrophysical parameters affecting the microbit drillability of rock**, *International Journal of Mining and Mineral Engineering*, Vol-1(3), pp.261-277.
- Verma, A.K., Singh, T.N., Verma, M.K. and **Sarkar, K.**, 2009, **Predictions of shear displacement in fully grouted rock bolt**, *International Journal of Rock Mechanics and Tunneling Technology*, Vol-15(2), pp.117-130.
- **Sarkar, K.**, Sazid, M., Khandelwal, M. and Singh, T.N. 2009, **Stability analysis of soil slope in Luhri area, Himachal Pradesh**, *Mining Engineers Journal*, Vol-10(6), pp.21-27.
- Singh, T.N. and **Sarkar, K.**, 2009, **Landslides and flooding around Mumbai**, *Journal of Indian Landslides*, Vol -2(1), pp. 1-8.
- Singh, T.N., Dubey, S., Gupta, N. and **Sarkar, K.**, 2009, **Effect of pH on various physico-mechanical properties of basalt rock**, *Mining Engineers Journal*, Vol-10(10), pp.17-23.
- **Sarkar, K.** and Singh, T.N., 2008, **Slope Stability Study of Himalayan Rock-A Numerical Approach**, *International Journal of Earth Sciences and Engineering*, Vol-1, pp.7-16.
- Sinha, S.C., **Sarkar, K.** and Singh, T.N., 2008, **Geotechnical investigation of road hill slope near Bhatan tunnel along Mumbai-Pune expressway, Maharashtra**, *Mining Engineers Journal*, Vol - 10(3), pp.24-27.
- **Sarkar, K.**, Gulati, A. and Singh, T.N., 2008, **Landslide Susceptibility Analysis Using Artificial Neural networks and GIS in Luhri area, Himachal Pradesh**, *Journal of Indian Landslides*, Vol -1(1), pp. 11-20.
- **Sarkar, K.** and Singh, T.N., 2007, **Evaluation of Instability Analysis of Slope – A Numerical Approach**, *Mining Engineers Journal*, Vol-8, pp.11-31.
- Singh, T.N., Bhardwaj, V., Dhonta, L. and **Sarkar, K.**, 2007, **Numerical analysis of instability of slope near Rudraprayag area, Uttarakhand**, *Indian Journal of Engineering Geology*, Vol-34(1-4), pp.33-42.
- Singh, T.N., Barde, K.S., Purwar, N., Gupta, S. and **Sarkar, K.**, 2007, **Effects of heightening on overburden spoil dump stability**, *Mining Engineers Journal*, Vol -9(2), pp.16-23.
- Singh, T.N., **Sarkar, K.** and Bali, R., 2005, **A Geotechnical Investigation of Rocks of Amiyani Landslide area, Kumaun Himalayas, Uttarakhand**, *Mining Engineers Journal*, Vol-1, pp. 21-26.

➤ Papers in Conference/Symposium/Workshop

- **Sarkar, K.** and Singh, T.N., 2010, **Road Cut stability analysis along NH-22 in Luhri area, Himachal Pradesh**, *Rock Mechanics in civil and environmental engineering (Zhao, Labiouse, Dudt and mathier, Eds) Taylor and Francis pub.*, pp. 659-662.
- Singh, T.N., Verma, A.K., and **Sarkar, K.**, 2009, **Static and Dynamic analysis of a landslide- A Case Study**, *Proceeding of National seminar on Geodynamics, sedimentation and biotic response in the context of India-Asia collision*, Aizwal, Mizoram, pp.49-65.
- **Sarkar, K.** and Singh, T.N., 2008, **Slope failure analysis in road cut slope by numerical method**, *5th International Symposium, ISRM, Tehran*, pp.635-642.
- **Sarkar, K.** and Singh, T.N., 2008, **Environmental impact assessment of hill cut road, Himachal Pradesh**, *Proceeding of EMMA, Pilgrim Press Pvt. Ltd., Varanasi*, pp.655-663.
- Singh, T.N., and **Sarkar, K.**, 2008, **Assessment of instability analysis of slope by numerical method**, *Proceeding of Landslide Management-Present scenario and future directions, CBRI, Roorkee*, pp.218-231.

- Hydrose, M.K and **Sarkar, K.**, 2007, **Design of Waste Dump Slope in an Iron ore Mine – A case Study**, *International seminar on Mineral Processing Technology, Bombay*, pp. 682-684.
- Singh, T.N. and **Sarkar, K.**, 2007, **Engineering Geological Characteristic of Unconsolidated Sandstone from Himalaya, India**; *National conference on Emerging Technology and Developments in Civil Engineering, Amravati*, pp.75-81.
- **Sarkar, K.**, Hydrose, M.K and Singh, T.N 2007, **Assessment of Dump Slope stability in an Iron ore Mine, Goa, India**, *Geominetech Symposium, ENTMS, Bhubaneswar*, pp. 31-33.
- Singh, T.N., Barde, K.S., Purwar, N., Gupta, S. and **Sarkar, K.**, 2007, **Assessing Stability of Waste Dump – A Case Study**, *Tenth International Symposium on Environmental Issues and Waste Management in Energy and Mineral Production, Thailand*, pp.769-779.
- Singh, T.N and **Sarkar, K.**, 2006, **Indian Mineral Industry on the path of Sustainable Development**, *National workshop on Occupational safety, Health and Environmental Issues in Industries, Goa*, pp. 73-86.
- Singh, T.N and **Sarkar, K.**, 2005, **Geotechnical Investigation of Amiyam landslide hazard zone in Himalayan Region, Uttaranchal, India**, *First International Conference on Geotechnical Engineering for Disaster Mitigation and Rehabilitation, Singapore*, DOI No:10.1142/9789812701602_0036, pp. 355-360.
- Singh, T.N. and **Sarkar, K.**, 2005, **Influence of chemical properties on strength of sandstone in Himalayan Region, Uttaranchal**; *National conference on Geotechnics and Environment for Sustainable Development, Nagpur*, pp. 6-12.
- Majumdar, R.K., Mukherjee, A.L., **Sarkar, K.** and Das, S., 2002, **Groundwater studies on south Sagar Island region, south 24 parganas, West Bengal** ; *National Conference on Analysis and Practice in Water Resources Engineering for Disaster Mitigation, Kolkata*, pp. 175 - 183.

➤ **Chapter contributed in edited books:**

- **Sarkar, K.**, Verma, A. K and Singh, T. N., 2011, **Jointed rockmass behavior along road cut slope in Luhri area, Himachal Pradesh, India**, *Slope Stability- Natural and Man made slope, chap.- 10 (edited by T N Singh and Y C Sharma)*, *Yavu education of India, New Delhi, ISBN NO. 978-93-8071-84-0*, pp. 155-165.
- Verma, A.K., **Sarkar, K.** and Singh, T. N., 2011, **Numerical modeling for Landslides**, *Slope Stability- Natural and Man made slope, chap.- 24(edited by T N Singh and Y C Sharma)*, *Yavu education of India, New Delhi, ISBN NO. 978-93-8071-84-0*, pp. 387-405.
- Singh, T.N., **Sarkar, K.**, and Gulati, A., 2010, **Slope Stability Analysis for Management of Landslides**, *MD Publications Pvt. Ltd., New Delhi (Edited by K.K Singh and A.K Singh)*, *ISBN-13: 9788175332027*, pp.83-121.
- Singh, T.N., **Sarkar, K.**, and Gulati, A., 2009, **Application of Soft Computing for Landslide and its Parametric Analysis**, *NOVA Science Publishers, Inc., USA (Edited by P.K.Joshi et al.)*, pp.349-382.

MEMBERSHIP

- Life Member, Mining Engineers' Association of India, Hyderabad.
- Life member, Indian Geotechnical Society (Mumbai Chapter).
- Member of 'The Indian Science Congress Association'.
- Member, Society of Exploration Geophysicists.
- Life Member, Earth sciences Association, IIT Bombay.