

## REFERENCES

- Ahmad A., and Alam, J.M. (1978). The Ganga Basin, its Sub-surface Sequences, their Affinity, Sedimentological and Tectonic Implications. *Him. Geol.* Vol. 8, pp. 583 – 608.
- Ahmad A., Saxena A., and Siddhanta B.K. (1982). Structural Analysis of Eastern Kumaun Himalaya and Related Problems. *Him. Geol.* Vol.10, pp. 280 – 303.
- Alexander, D. (1992). On the Causes of Landslides: Human Activities, Perception, and Natural Processes. *Environmental Geology and Water Sciences*, Vol. 20, No. 3, pp. 165 – 179.
- American Concrete Institute (1983). Specifications for Materials, Proportioning and Application of Shotcrete. ACI Report 506.2 – 77, (Revised) Detroit.
- American Concrete Institute, (1983). Specifications for Materials, Proportioning and Application of Shotcrete. ACI Report 506.2-77, revised. Detroit, Mich.
- Anbalagan R. (1992). Landslide Hazard Evaluation and Zonation Mapping in Mountainous Terrain. *Engineering Geology*, 32. pp. 269 – 277.
- Anbalagan R. and Singh B. (1996). Landslide hazard and risk assessment mapping of mountainous terrains- a case study from Kumaun Himalaya, India. *Engineering Geology* 43, pp. 237 – 246.
- Auden J.B. (1934). The Geology of the Krol Belt. *Rec. Geol. Surv. Ind.*, 69, pp. 123-167.
- Bali, R. (1997). GIS Based Landslide Hazard Evaluation of Chalthi – Dharchula Region, Kumaun Lesser Himalaya. Department of Science and Technology, Ministry of Science Research Project Report No. ES/11/275/97. pp. 124.
- Bali, R. (1998a). Evidences of Hill Slope Instability around Microhydel Projects in Parts of Pithoragarh District, Kumaun Himalaya. In *Proceedings 13<sup>th</sup> Himalaya-Karakoram-Tibet Workshop*, Peshawar, Pakistan. pp. 25 – 27.
- Bali, R. (1998b). Debris Cones in Tawaghat-Sobla Area, Eastern Kumaun Himalaya: Their Morphotectonic Evolution and Impact on Hill Slope Instability (Submitted to D.S.T. for Special Publication on Landslides).
- Barton N., Lien R., and Lunde J. (1977). Engineering Classification of Rock Masses for Design of Tunnel Support. *Rock mechanics*, Vol. 6, pp. 189 – 236.
- Beiniawski, Z.T. (1989); *Engineering Rock Mass Classifications*. Wiley, New York.

- Bhanot V.B., Singh V.P., Kansal A.K. and Thakur V.C. (1977). Early Proterozoic Rb-Sr Whole Rock Age for Central Crystalline Gneiss of Higher Himalaya, Kumaun. *Jour. Geol. Soc. Ind.* 18(2), pp. 90 – 91.
- Bishop, A.W. and Morgenstern, N. (1960). Stability Co-efficients for Earth Slopes. *Geotechniques*, Vol.10(4), pp. 164 – 169.
- Bist, K. S. and Sah, M. P. (1999). The Devastating Landslide of August 1998 In Ukhimath Area, Rudraprayag District, Garhwal Himalaya, *Current Science*, 76. pp. 481 – 484.
- Bist, K.S. and Sah, M.P. (1999); The Devastating Landslide of August 1998 in Ukhimath Area, Rudraprayag District, Garhwal Himalaya. Report W.I.H.G., India.
- Bommer, J.J. and Rodríguez, C.E. (2002). Earthquake-Induced Landslides In Central America. *Engineering Geology* 63, pp. 189–220.
- Carrara A. (1983). Multivariate Models for Landslide Hazard Evaluation. *Math. Geol.*, Vol. 15, no3, pp. 403 – 425.
- Chansarkar, R. A. (1974). Drainage and slope analysis of Kosi basin in Central Kumaun with special reference to the geological controls: Unpublished Ph.D. thesis, M. S. University of Baroda.
- Chi-chi earthquake in central Taiwan. *Engineering Geology* 69, pp. 1 –13.
- Crosta, G.B. (2004). Introduction to the Special Issue on Rainfall-Triggered Landslides and Debris Flows. *Engineering Geology* 73, pp. 191–192.
- Crosta, G.B., Imposimato, S., Roddeman, D.G., Chiesa, S., Moia, F. (2004). Small fast moving flow-like landslides in volcanic deposits: the 2001 Las Colinas Landslide (El Salvador). *Engineering Geology*, 79, pp. 185-214.
- Cruden, D.M. and Varnes D.J. (1996). Landslide Types and Processes. In Special Report 247: Landslides: Investigation and Mitigation (A. Keith Turner and R. L. Schuster, eds.). TRB, National Research Council, Washington, D.C. pp. 36 – 75.
- Cundall, P.A. (1987). Distinct Element Models of Rock and Soil Structures in Analytical and Computational Methods in Engineering Rock Mechanics (E.T.Brown, ed.) George Allen & Unwin, London, pp. 129 – 163.
- Dapples, E.C. (1962), Stages of Diagenesis in the Development of Sandstones<sup>1</sup>. *Geological Society of America Bulletin*: Vol. 73, No. 8 pp. 913 – 934.

- Deere, D.U. and Miller, R.P. (1966). Engineering Classification and Index Properties for Intact Rock. Technical Report No. AFNL-TR-65-116, Air Force Weapons Laboratory, New Mexico.
- Deere, P.V. (1964). Technical description of cores for engineering purposes. *Felsmech Ingenieurgeol* (1). pp. 16 – 22.
- Dimitrizevic, M. (1956), A New Net For Reconstruction of Contour Diagrams. Univ. of Beograd. Min. and Geol. Faculties Trans. (in Yugoslavian with English Summary).
- Duncan C. W. and Norman I. N. (1996). Stabilization of Rock Slopes. In Special Report 247: Landslides: Investigation and Mitigation (A. Keith Turner and R. L. Schuster, eds.). TRB, National Research Council, Washington, D.C. pp. 474 – 504.
- Ellen, S.D.; Wieczorek, G.F.; Brown, W.M. and Herd, D.G. (1988). Introduction In Landslides, Floods and Marine Effects of the Storm (S.D. Ellen and G.F. Wieczorek, eds), U.S. Geological Survey Professional Paper 1434, pp 1 – 5.
- Fredlund, D.G. and Krahn, J. (1977). Comparison of Slope Stability Methods of Analysis. *Canadian Geotechnical Journal*, Vol. 14, No. 3, pp. 429 – 439.
- Fuchs G. and Frank W. (1970). The Geology of West Nepal between Kali Gandaki and Thulo Bheri. *Jahrb. Geol. Bundesanst. (Austria)*, 18, pp. 1 – 103.
- Gansser A. (1964). *Geology of the Himalayas*. Interscience New York, pp. 289.
- Gedney, D.S. and Weber, W.G. (1978). Design and Construction of Soil Slopes. In Special Report 176: Landslides: Analysis and Control (R.L. Schuster and R.J. Krizek, eds.) TRB, National Research Council, Washington, D.C., Chapter – 8, pp 172 – 191.
- GeoStudio (2005). *GeoStudio Tutorials*. Geo-Slope International Ltd. 493 pp.
- Gerber, E. and Scheidegger, A.E. (1969); Stress – Induced Weathering of Rock Masses. *Ecologiae Geologicae Helveticae* (62), 401 – 416 pp.
- Gopendra Kumar (1982). Structural Framework and Tectonic Evolution of Kumaun Himalaya, Uttar Pradesh. *Him. Geol.* Vol.10, pp. 241 – 254.
- Gopendra Kumar (2005). *Geology of Uttar Pradesh and Uttaranchal*. Geol. Soc. India. pp. 383.
- Gopendra Kumar (2005). *Geology of Uttar Pradesh and Uttaranchal*. Geol. Soc. of Ind., pp. 383.

- Gray, D.H. and Sotir, R.B. (1992). Biotechnical Stabilization of Cut and Fill Slopes. *In Stability and Performance of Slopes and Embankments: Proc. of a Specialty Conference, Berkeley, California* (R.B. Seed and R.W. Boulanger, eds.) Geotechnical Special Publication 31, Am. Soc. of Civil Engineers, New York, pp 1395 – 1410.
- Gryta, J.J., and Bartholomew, M.J., (1989). Factors Influencing The Distribution Of Debris Avalanches Associated With The 1969 Hurricane Camille In Nelson County, Virginia: In *Landslide Processes Of The Eastern United States and Puerto Rico*: Schultz, A.P. and Jibson, R.W., editors, Geological Society of America Special Paper 236, p. 15-28.
- Gupta, G.D. and Srivastava, H.N. (1992). On Earthquake Risk Assessment in the Himalayan Region. In G.D.Gupta, Eds. *Himalayan Seismicity*. Memoir (23), Geol. Soc. India, pp 173 – 199.
- Gupta, P. and Anbalagan, R. (1997). Slope Stability of Tehri Dam Reservoir Area, India, Using Landslide Hazard Zonation (LHZ) Mapping. *Quarterly Journal of Engineering Geology*, 30. pp. 27 – 36.
- Harp E. L., and Jibson R.W. (1996). Landslides Triggered by the 1994 Northridge, California Earthquake." *Bull. of Seismological Soc. of America*, Vol. 86 (1B), pp. s319 - s332.
- Haruyama M., and Kitamura R. (1984). An Evaluation Method by the Quantification Theory for the Risk Degree of Landslide Caused by Rainfall in Active Volcanic Area. *Int. Symp. Landslides*, Toronto, Ont., pp. 435 – 440.
- Hayashi C. (1952). On the Prediction of Phenomena from Qualitative Data and Quantification of Qualitative Data from the Mathematico-Statistical Point of View. *Ann. Inst. Statist. Math.*, Vol.3, pp. 69 -98.
- Hearn, G. (1991). CDOT Flex-post Rockfall Fence. Report CDOH – R – UCB – 91 – 6. Colorado Department of Transportation, Denver, 105 pp.
- Heim A. and A. Gansser (1939). Central Himalaya, Geological Observation of the Swiss Expedition in 1936, *Mem. Soc. Helv. Sci. Nat.*, 73, pp. 245.
- Hoek, E. (1983). Strength of Jointed Rock Masses. *Geotechniques*, Vol. 33, No. 3, pp. 187- 223.
- Hoek, E. and Bray, J.W. (1974); *Rock Slope Engineering*. 1<sup>st</sup> Edition, Instt of Mining and Metallurgy, London pp 525.
- Houlsby, A.C. (1990). *Construction and Design of Cement Grouting: A Guide to Grouting in Rock Foundations*. John Wiley and Sons, 466 pp.

- Hvorslev, M.J. (1951); Time Lag and Soil Permeability in Groundwater Observations. Bull. 36. U.S.Army Engineer Waterways Experiment Station, Vicksburg, Mississippi, pp. 50.
- IMSD (1995). Integrated Mission for Sustainable Development, Technical Guidelines. pp 74, National Remote Sensing Agency, Department of Space, Government of India, Hyderabad.
- IS: 10082 – 1981. Method of Test for Determination of Tensile Strength by Indirect Tests on Rock Specimens. Bureau of Indian Standards. 12 pp.
- IS: 1124 : 1974. Method of Test For Determination of Water Absorption, Apparent Gravity and Porosity of Natural Building Stones. Bureau of Indian Standards. 9 pp.
- IS: 13030 (1991). Method of Test for Laboratory Determination of Water Content, Density and Related Properties of Rock Material. pp. 6.
- IS: 13047 : 1991. Method for Determination of Strength of Rock Materials in Triaxial Compression. Bureau of Indian Standards. 4 pp.
- IS: 14496 [Part 2] : 1998. Preparation of Landslide Hazard Zonation Maps in Mountainous Terrains – Guidelines. Bureau of Indian Standards. 19 pp.
- IS: 1893 [Part 1] : (2002). Indian Standard Code of Practice on Criteria For Earthquake Resistant Design of Structures. Bureau of Indian Standards. 41 pp.
- IS: 2720 [Part 13] (1986). Indian Standard, Methods of Test For Soils, Direct Shear Test (Second Revision). Bureau of Indian Standards. 12 pp.
- IS: 2720 [Part 13] (1986). Indian Standard, Methods of Test For Soils, Direct Shear Test (Second Revision). Bureau of Indian Standards. 12 pp.
- IS: 2720 [Part 17] (1986). Indian Standard, Methods of Test For Soils, Laboratory Determination of Permeability (First Revision). Bureau of Indian Standards. 14 pp.
- IS: 2720 [Part VII] (1974). Indian Standard, Methods of Test For Soils, Determination of Water Content-Dry Density Relation Using Light Compaction (First Revision). Bureau of Indian Standards. 14 pp.
- IS: 7356 [Part-I] (1974); Indian Standard Code of Practice for Installation, Maintenance and Observation of Instruments for Pore Pressure Measurements in Earth Dams: Porous Tube Piezometers. Bureau of Indian Standards. 16 pp.

- IS: 9143 : 1979. Method for Determination of Unconfined Compressive Strength of Rock Materials. Bureau of Indian Standards. 6 pp.
- ISRM Suggested Methods (1978). Quantitative Description of Discontinuities in Rock Masses. *Int. J. Rock Mech. Min. Sci. & Geomech. Abstr.* 15, pp. 319–368.
- Iverson, R.M. (2000). Landslide Triggering by Rain Infiltration. *Water Resources Research* V. 367, No. 7 pp 1897 – 1910.
- Jackson, K. C. (1970). Textbook of Lithology; McGraw-Hill Book Company, Publ.; 552pp.
- Jade S., and Sarkar S. (1993). Statistical Models for Slope Instability Classification, *Intl. Jour. of Engineering Geology*, Vol. 36, pp. 91 – 98.
- Jain A.K. and Manickavasagam R.M. (1993). Inverted Metamorphism in the Intracontinental Ductile Shear Zone During Himalayan Collision Tectonics. *Geology*, Vol. 21, pp. 407 – 410.
- James Warner (2004). Practical Handbook of Grouting: Soil, Rock and Structures. John Wiley and Sons. 720 pp.
- Janbu, N. (1954). Applications of Composite Slip Surfaces for Stability Analysis. In *Proc. of the European Conf. on the Stability of Earth Slopes*, Stockholm, Vol. 3, pp. 39 – 43.
- Jibson R.W., Harp E.L., and Michael J.A. (1998). A Method for Producing Digital Probabilistic Seismic Landslide Hazard Maps: An Example from the Los Angeles, California, Area. U.S. Department of interior, open file report 98-113, pp. 1 – 17.
- Jibson R.W., Harp E.L., and Michael J.A. (1999). A Method for Producing Digital Probabilistic Seismic Landslide Hazard Maps. *Int. Jour. Engineering Geology*, Vol 58, pp. 271 – 289.
- Jibson R.W., Prentice C.S., Borissoff B.A., Rogozhin E.A., and Langer C.J. (1994). Some Observations of Landslides Triggered by 29th April 1991 Racha Earthquake, Republic of Georgia. *Bulletin of the Seismological Society of America*, Vol. 84(4), pp. 963 – 973.
- Jnawali B. M. and Jha S. N. (1997). Geological Traverse of Mahakali R. from Manail to Kawamalla with Heavy Concentrate and Geochemical Stream Sediment Sample Locations, Parts of Baitadi and Darchula Districts. HMG/Dept. of Mines and Geology. Ref. no. 053/46.
- Karnieli A., Meisels A., Fiesher L., and Arkin Y. (1996). Automatic Extraction and Evaluation of Geological Linear Features from Digital Remote Sensing Data

using Hough Transform. Photogrammetric Engineering and Remote Sensing. Vol. 62(5), pp. 525-531.

Kawakami H., Saito Y. (1984). Landslide Risk Mapping by Quantification Method. Int. Symp. Landslides, Toronto, Ont., pp 535-540.

Keaton, J.R. and DeGraff J.V. (1996). Surface Observation and Geologic Mapping. In Special Report 247: Landslides: Investigation and Mitigation (A. Keith Turner and R. L. Schuster, eds.). TRB, National Research Council, Washington, D.C. pp. 178 – 230.

Keefer, D.K. (1984). Landslides Caused by Earthquakes. Geol. Soc. America Bull., V.95, pp 406 – 421.

Khayingshing Luirei, Pant P.D. and Kothiyari G.C. (2006). Geomorphic Evidences of Neotectonic Movements in Dharchula Area, Northeast Kumaun: A Perspective of the Recent Tectonic Activity. Jour. Geol. Soc. India, Vol. 67, pp. 92 – 100.

Krahn J. (2004). Stress and Deformation Modelling with SIGMA/W, An Engineering Methodology. Geo-Slope Int. Ltd. 398 pp.

Krahn, J. (2004). Seepage Modelling with SEEP/W, An Engineering Methodology. Geo-Slope Int. Ltd. 398 pp.

Krahn, J. (2004). Stability Modelling with SLOPE/W, An Engineering Methodology. Geo-Slope Int. Ltd. 396 pp.

Kumar, A., Agarwal, P.N. and Chandrasekaran, A.R. (1981). A study of Indo-Nepal Earthquake of May 21, 1979. Symposium on Earthquake Disaster Mitigation, Univ. of Roorkee, 1, pp. 43 – 51.

Kumar, A.; Agarwal, P.N. and Chandrasekaran, A.R. (1981). A Study of Indo-Nepal Earthquake of May 21, 1979. Symp. Earthquake Disaster Mitigation. Univ. of Roorkee, 1: pp 43 – 51.

Kumar, Y. and Patel, R.C. (2004), Deformation Mechanisms in the Chiplakot Crystalline Belt (CCB) Along Kali-Gori Valleys (Kumaun), NW-Himalaya. Jour. Geol. Ind. Vol. 64, pp. 76 – 91.

Kynine, D.P. and Judd, W.R. (1957). Principles of Engineering Geology and Geotechnics. McGraw-Hill Book Company, Inc. Publ. pp. 730.

Larsen, M.C. and Sanchez, A.J. (1992). Landslides Triggered by Hurricane hugo in Eastern Puerto Rico, September 1989. Caribbean Jour. of Sc., Vol. 28, No. 3 – 4, pp 113 – 125.

- Luzi L. Pergalani F. and Terlien, M.T.J. (2000). Slope Vulnerability to Earthquakes at Subregional Scale, using Probabilistic Techniques and Geographic Information Systems. *Int. Jour. Engineering Geology*, Vol. 58, pp. 313-336.
- McGuffey, V.C. (1991). Clues of Landslide Identification and Investigation. In *Geologic Complexities in the Highway Environment* (R.H. Ficies, ed.), Proc. 42<sup>nd</sup> Annual Highway Geology Symposium, Albany, New York, New York State Department of Transportation, Albany, pp. 187 – 192.
- Mehdi S.H., Gopendra Kumar and Gyan Prakash (1972). Tectonic Evolution of Eastern Kumaun Himalaya: A New Approach. *Him. Geol.*, Vol. 2, pp. 481 – 501.
- Mehnert K.R., (1968): Nomenclature of Migmatites, Migmatites and the Origin of Granitic Rocks: Amsterdam, Elsevier, pp. 354-357.
- Mehnert, K. R. (1968): Migmatites and the Origin of Granitic Rocks. Amsterdam. pp. 391.
- Merh S.S. (1977). Structural Studies in the Parts of Kumaun Himalaya, *Him. Geol.*, 7, pp. 481 – 501.
- Michalic, S.; Zugaj, R. and Jurak, V. (2003). The Influence of Heavy Rainfall on the Landslide Initiation. Univ. of Zagreb. Publication 12 pp.
- Mikkelsen, P.E. (1996); Field Instrumentation. In Turner A.K. and Schuster R.L. (Eds.) *Landslide Investigation and Mitigation* sp. Report 247, Transportation Research Board, National Research Council, National Academy Press, pp 278 – 314.
- Misra R.C. and Sharma R.P. (1972). Structure of the Almora Crystallines, Lesser Himalaya, *Him. Geol.*, 2, pp. 481 – 501.
- Mitchell, J.K. and Villet, W.C.B. (1987). NCHRP Report 290: *Reinforcement of Earth Slopes and Embankments*. TRB, National Research Council, Washington, D.C., 323 pp.
- Morgenstern, N.R., and Price, V.E. (1965). The Analysis of The Stability of General Slip Surfaces, *Geotechniques*, Vol. 15, pp. 79 – 93.
- Nair L. M. (1995). Studies on the Fluvial History of Saryu River Basin Central Kumaun Himalaya. Unpublished Ph.D. Thesis, M.S.University of Baroda. pp. 320.
- Nichols, T. C. Jr (1980). Rebound, its Nature and Effect on Engineering Works. *Quart. Jour. Engg. Geol.* (13), 133 – 152 pp.
- Nicholson, D.T. (2004). Hazard Assessment for Progressive, Weathering-related Breakdown of Excavated Rock Slopes. *Quart. Jour. Engg. Geol. and Hydrogeol.* (37), 327 – 346 pp.



- O' Rourke, T.D. and Jones, C.J. (1990). Overview of Earth Retention Systems: 1970 – 1990. In *Design and Performance of Earth Retaining Structures: Proc. of a Specialty Conference, Ithaca, N.Y.* (P.C. Lambe and L.A. Hanson eds.) Geotechnical Special Publication 25, American Soc. of Civil Engineers, N.Y., pp 22 – 51.
- Pal, D. (1973). Geology of the Area Around Nainital, District Nainital, U.P. Unpublished Ph.D. Thesis, M.S.University of Baroda. pp. 254.
- Pal, D. (1986). Glaciations vis-a-vis Landform Evolution of Northwestern Himalaya. Geomorphic studies. Central Himalaya - Environment: People and Problems Himalayan Research Group, Nainital. S.C. Joshi Ed. pp. 21 – 45.
- Pal, D. (1988). Quaternary glacial records and Neotectonics. In the Western Himalaya Geomorphology and Environment Ed. Savindra Singh & R. C. Tiwari. pp. 288 – 299.
- Pal, D., Sharma, B.P. & Lal, A.K., 1998. Degradation Of Land Resources In MBT and MCT Zones as a Result of NNE-SSE Trending Linear Aravalli Basement In Garhwal Himalaya. Him. Env. & Sust. Dev., Ed. P.B. Saxena. Recent Trends in Biosphere and Environment Series, 1, Surya International Publications, Dehradun. pp. 279 – 300.
- Palmstrom, A. (1975). Characterizing the Degree of Jointing and Rock Mass Quality. Internal report. Berdal, Oslo.
- Paul S. K., Bartarya S. K., Rautela P., Mahajan A. K. (2000). Catastrophic Mass Movement of 1998 Monsoons at Malpa in Kali Valley, Kumaun Himalaya (India). *Geomorphology* 35, pp. 169 – 180.
- Pilgrim G.E. and West W.D. (1928). The Structure and Correlation of the Simla Rocks. *Mem. Geol. Surv. Ind.* 53, pp. 1 – 140.
- Polemio, M.; Bozzano, F.G. and Floris, M. (1998). Rainfall as Triggering Factor of Slope Movements in Southern Italy: Montalbano Ionico Case Record. *Proc. VIII Congress of IAEG, Vancouver*, pp 1889 – 1896.
- Powar K.B. (1972). Petrology and Structure of the Central Crystalline Zone, North-Eastern Kumaun. *Him. Geol.* Vol.2, pp. 34 – 46.
- Prestininzi, A. and Romeo, R. (2000). Earthquake-Induced Ground Failures In Italy. *Engineering Geology* 58, pp. 387 – 397.
- Priest S.D. (1993). *Discontinuity Analysis of Rock Engineering*. Chapman and Hall, pp. 467.

- Priest S.D. and Hudson J.A. (1976). Discontinuity Spacing in Rock. *Int J. Rock Mech. Min Sci & Geomech Abstr.* 13, pp. 134-153.
- Priest S.D. and Hudson, J.A. (1981). Estimation of Discontinuity Spacing and Trace Length Using Scanline Surveys. *Int. Jour. Rock Mech. and Mining SCS and Geomechanics* 18, pp. 183 – 197.
- Ravi Shanker, Gopendra Kumar and Singh Gopal (1996). Sequence Stratigraphy and Major Events of Himalaya. In: *Proc. Symp. Recent Advances in Geological Studies of NW Himalaya and Foredeep*, Lucknow, 21-23 February, 1995. *Geol. Surv. India Spec. Publ. no. 21 (1)*, pp. 1 – 12.
- Rib, H.T. and T. Liang, (1978). Recognition and Identification of Landslides. In *Special Report 176: Landslides: Analysis and Control*. TRB, National Research Council, Washington D.C. Chapter.3, pp 34 – 80.
- Romana, M. (1993). A Geomechanics Classification of Slopes: Slope Mass Rating. In Hudson, J.A. (Ed.) *Comprehensive Rock Engineering, Principles, Practice and Projects (3)* Pergamon, Oxford, 575 – 599.
- Sandersen, F., Bakkehoi, S.; Hestnes, E. and Lied, K. (1995). The Influence of Meteorological Factors on the Initiation of Debris Flow, Rock Fall, Rockslides and Rockmass Stability. *Proc. 7<sup>th</sup> Int. Symp. on Landslides*. Trondheim Norway, 1:97-114.
- Saxena S.P. (1974). Geology of the Marchula-Bhikiasen area, District Almora, Uttar Pradesh, with special reference to the South Almora Thrust. *Him. Geol.* 4, pp. 630 – 647.
- Scottish Executive (2006); *Peat Landslide Hazard and Risk Assessments*. Govt. of U.K., 72 pp.
- Seeber, L., Armbruster, J.G., and Quittmeyer, R., (1981). Seismicity and Continental Subduction in the Himalayan Arc. In Gupta H.K. and Delany, F.M., eds. *Zagros, Hind Kush, Himalya Geodynamic Evolution: American Geophysical Union Geodynamic Series*, v.3, pp. 215 – 242.
- Seeber, L.; Armbruster, J.G. and Quittmeyer, R.C. (1981). In *Zagros, HinduKush Himalaya Geodynamic Evolution*, Gupta H.K. and Delany F.M. (Eds.) *Geodyn. Ser. Agu*, Washington D.C., Vol. 3, pp 215 – 242.
- Shou, K. J. and Wang C.F. (2003). Analysis of the Chiufengershan landslide triggered by the 1999 Chi-Chi earthquake in Taiwan. *Engineering Geology* 68, pp. 237 – 250.

- Sidle, R.C. (2006); Using Weather and Climate Information for Landslide Prevention and Mitigation. Present Int. Workshop on Climate and Land Degradation, Arusha, Tanzania.
- Simon, A.; Larsen, M.C. and Hupp, C.R. (1990). The Role of Soil Processes in Determining Mechanism of Slope Failure and Hillside Development in a Humid Tropical Forest. *Geomorphology*, Vol. 3, pp 263 – 286.
- Sinha R.S. (1982). Himalayan Main Central Thrust and its Implications for Himalayan Inverted Metamorphism. *Tectonophysics*, 84, pp. 197 – 224.
- Soeters, R. and van Westen, J. V. (1996). Slope Instability Recognition, Analysis, and Zonation. In Special Report 247: Landslides: Investigation and Mitigation (A. Keith Turner and R. L. Schuster, eds.). TRB, National Research Council, Washington, D.C. pp. 129 – 177.
- Spencer, E. (1967). A Method of Analysis of Embankments Assuming Parallel Inter-slice Forces. *Geotechnique*, Vol. 17(1), pp. 11 – 26.
- Srivastava P. and Mitra. G. (1996). Thrust Geometries and Deep Structure of the Outer and Lesser Himalaya, Kumaon and Garhwal (India): Implications for the Evolution of the Himalayan Fold-and-Thrust Belt. *Tectonics*, Vol. 13, pp. 89 – 109.
- Srivastava, H.N. and Dattatrayan, R.S. (1986). Study of Return Periods of Earthquakes in Some Selected Indian and Adjoining Regions. *Mausam*. No.37, pp 333 – 340.
- Terzaghi, K. (1950); Mechanism of Landslides. *Geol. Soc. America, Engg. Geol. (Berkey) Volume*, pp 83 – 123.
- Thakur V.C. and Choudhury (2005). Central Crystalline and Main Central Thrust, Eastern Kumaun Himalaya; Satish Serial Pub. House, ed:- Saklani P.S., pp. 321 – 335.
- Turner, F.J. & Verhoogen, J. (1960). *Igneous and Metamorphic Petrology*, Mc Graw Hill, New York Publ. 2 ed. pp. 694.
- U.S.B.R. (1965). *Earth Manual*. United States Department of the Interior, Bureau of Reclamation. Oxford and IBH Pub. Co. (First Edition), 783 pp.
- Underwood, L.B. (1978); Exploration and Geologic Predictions for Underground Works. In *Proc. Subsurface Exploration for Underground Excavation and Heavy Construction*. Amer. Soc. of Civil Engg. pp. 65 – 83.
- Valdiya K.S. (1980a). *Geology of Kumaun Lesser Himalaya*. Wadia Institute of Himalayan Geology, Dehradun, India.

- Valdiya K.S. (1980b). The Two Intracrustal Boundary Thrusts of the Himalaya. *Tectonophysics*, 66, pp. 323 – 348.
- Valdiya K.S. (1981). Tectonics of the Central Sector of the Himalayas, in '*Himalayan Geodynamic Evolution*', American Geophysical Union, Geodynamic Series, 3, pp. 87 – 110.
- Valdiya K.S. (1988). Tectonics and Evolution of the Central Sector of the Himalaya. *Phil. Trans. R. Soc. Lond. A* 326, pp. 151 – 175.
- Valdiya K.S. (2005). Structure of the Kumaun Lesser Himalaya. Himalaya (Geological Aspects) Vol. 2; Satish Serial Pub. House, ed:- Saklani P.S., pp. 337 – 365.
- Valdiya K.S. and Gupta V.J. (1972). A Contribution to the Geology of Northeastern Kumaun, with Special Reference to the Hercynian Gap in Tethys Himalaya. *Him. Geol. Vol.2*, pp. 1 – 33.
- Valdiya, K.S. (1986). Neotectonic Activities in the Himalayan Belt. *Int. Symp. Neotectonics in South Asia, Dehradun, India.* pp 241 – 267.
- Valdiya, K.S. (1993). Uplift and Geomorphic Rejuvenation of the Himalaya in the Quaternary Period. *Current Science*, Vol. 64, pp. nos. 11 & 12, 10 & 25, pp. 873 – 885.
- Valdiya K.S. (1962). An Outline of the Stratigraphy and Structure of the Southern Part of Pithoragarh District, Uttar Pradesh. *Geol. Soc. Ind. (3)*, pp. 27 – 48.
- Varnes, D.J. (1978). Slope Movement Types and Processes. In Special Report 176: Landslides: Analysis and Control (R.L. Schuster and R.J. Krizek, eds.), TRB, National Research Council, Washington, D.C., pp 12 – 33.
- Varnes, D.J. (1984). Landslide Hazard Zonation: A Review of Principles and Practice. UNESCO, Paris. pp. 63.
- Vashi, N.M. and Merh S.S. (1965). Structural Elements of the Rocks in the Vicinity of South Almora Thrust near Upradi (Almora District, U.P.). *Jour. M.S. University, Baroda*, 14, pp. 27 – 32.
- Wasowski, J. and Del Gaudio, V. (2000). Evaluating seismically induced mass movement hazard in Caramanico Terme (Italy). *Engineering Geology* 58, pp. 291 – 311.
- Wasowski, J. and Singhroy V. (2002). Special Issue From The Symposium On Remote Sensing And Monitoring Of Landslides. *Engineering Geology* 68 (2003), pp. 1 – 2.

- Wen-Neng Wang, Masahiro Chigira, and Takahiko Furuya (2003). Geological and geomorphological precursors of the Chiu-fen-erh-shan landslide triggered by the Chi-chi earthquake in central Taiwan. *Engineering Geology* 69, pp. 1 –13.
- Wieczorek, G.F. (1996). Landslide Triggering Mechanisms. In Special Report 247: Landslides: Investigation and Mitigation (A. Keith Turner and R. L. Schuster, eds.). TRB, National Research Council, Washington, D.C. pp. 76 – 90.
- Wilson, R.C. and Keefer, D.K. (1983), Dynamic Analysis of a Slope Failure from the 1979 Coyote Lake, California, Earthquake. *Bulletin of the Seismological Society of America*, Vol. 73, pp. 863 – 877.
- Wilson, S.D. and Mikkelsen, P.E. (1978); Field Instrumentation. In Special Report 176: Landslides: Analysis and Controls (R.L. Schuster and R.J. Krizek, eds.) TRB, National Research Council, Washington, D.C. Chap. 5, pp 112 – 138.
- Yedekar D.B. and Powar K.B. (2005). The North Almora Thrust Zone, Kumaun Himalaya. *Himalaya (Geological Aspects)* Vol. 2; Satish Serial Pub. House, ed:- Saklani P.S., pp. 337 – 365.
- Yin K.L., and Yan T.Z. (1988). Statistical Prediction Models for Slope Instability of Metamorphosed rocks. *Intl. Symp. Landslides, lausanne*, pp. 1269 – 1272.
- Youd, T.L. and Perkins, D.M. (1978). Mapping Liquefaction – Induced Ground Failure Potential: American Soc. of Civil Engineers, *Jour. Geotech. Engg. Dn.*, V.104, No. GT4. pp 433 – 446.
- Zaruba, Q., and Mencl. V. (1969). *Landslides and Their Control*. 1<sup>st</sup> ed. Elsevier, Amsterdam, Netherlands, pp. 205.
- Zernitz, E.R., 1932. Drainage Patterns and their Significance. *Journal of Geology* 40, 498- 521.
- Zezere, J.L.; Rodrigues, M.L. and Ferreira, A.B. (2003). Recent Landslide Activity in Relation to Rainfall in the Lisbon Region, Portugal. *Geophysical Research Abstracts; European Geophysical Soc.* (5), 05506.