

REFERENCES

References

- Agrawal, S. K. (1961). Kutch Mesozoic – On the occurrence of foraminifers in the Jurassic of Kutch (Gujarat, W.India), *Jour. Sci. Res. B.H.K.* Vol. XI (2).
- Aki, K. (1979). Characterization of barriers on an earthquake fault, *J. Geophys. Res.*, v. 84, 6140–6148 p.
- Alexander, J. and Leeder, M. R. (1987). Active tectonic control on alluvial architecture. *Soc. Econom. Paleo. and Min.*, 243-252 p.
- Allen, C. R. (1975). Geological criteria for evaluating seismicity. *Geol. Soc. Am. Bull.* v. 86, 1041-1057 p.
- Allen, C. R., Zhouli, L., Hong, Q., Huawei, Z. and Weishi, H. (1965). Segmentation and recent rupture history of the Xianshuihe fault, southwestern China. In, Fault segmentation and controls of rupture initiation and termination. D. P. Schwartz and R. H. Sibson, eds., *U.S. Geol. Surv. Open file report*, 89-315, 10-30 p.
- Allen, J. R. L. (1982). Sedimentary structures-Their character and physical basis. In *Dev. In Sedimentol.* v. 30B(2), 1-663 p.
- Ambraseys, N.N. (1988). Engineering seismology, *Earthquake Eng. Structural Dynamics.* v. 17, 1-105 p.
- Antonellini, A., Aydin, A. and Pollard, D. D. (1994). Microstructures of deformation bands in porous sandstones at Arches National park. *Jour. Struc. Geol.* v. 16, 941-959 p.
- Auden, J. B. (1949). Dykes in western India. *GSI records.* v. 81, Pt.1.
- Augustithis, S. S. and Otteman, J. (1966). On diffusion rings and spheroidal weathering. *Chemical Geology.* v. 2, 201-209. p.
- Aydin, A. (1978). Development of faults as zones of deformation bands and as slip surfaces in sandstones. *Pure and Applied Geophysics.* v. 116, 931–942 p.
- Aydin, A. and Johnson, A. M. (1978). Development of faults as zones of deformation bands and as slip surfaces in sandstones. *Pure and Applied Geophysics.* v. 116, 931-942 p.
- Aydin, A. and Johnson, A. M. (1983). Analysis of faulting in porous sandstone. *Jour. Struc. Geol.* v. 5, 19-31 p.
- Baskaran, M. (1989). Geochronology of the Miolitic rocks of Kutch. *Jour. Geol. Soc. Ind.* v 33, 588-593 p.
- Beaty, C. B., (1990): Anatomy of a White Mountain debris-flow-the making of an alluvial fan. - In: Rachocki, A.H. & M. Church (eds.) (1990): *Alluvial Fans-A Field*

Approach: 69-90 p. Wiley New York.

- Belbussov, V. V. (1962). Basic problems in geotectonics., *McGraw Hill Book Co. Inc.* New York & London.
- Berg, A. W. (1990). Formation of Mima mounds: A seismic hypothesis. *Geology*. v. 18, 281-284 p.
- Bernberg, G. R. and Schott, W. (1963). Jurassic and Cretaceous at the western berder of the Gondwana shield in India and stratigraphy and oil possibilities. *Proc. Sym. Dev. Pet. Res. Asia and far East*. Min. Res. Dev. Ser. No. 18. v. 2, 230-236 p.
- Bilham, R., Blume, F., Bendick, R., and Gaur, V. K. (1998). Geodetic constraints on the translation and deformation of India: Implication for future great Himalayan earthquakes. *Current Science*. v. 74(3), 213-229 p.
- Biswas S. K. and S.V. Deshpande (1970): Geological and tectonic maps of Kutch. - In: *Bull. Oil Nat. Gas Comm.* v.7, 115-116 p.
- Biswas S. K., (1974) Landscape of Kutch-a morphotectonic analysis. - *Ind. Jour. Earth Sci.* v. 1, 177-190 p.
- Biswas S. K., (1980) Structure of Kutch-Kathiawar Region, W. India.- *Proc. 3rd Ind. Geol. Congr.* Pune. 255-272 p.
- Biswas S. K., (1982) Rift basins in Western India and their hydrocarbon prospects with special reference to Kutch basin. - *Amer. Ass. Petr. Geol. Bull.* v. 66, 1467-1513 p.
- Biswas S. K., (1987): Regional tectonic framework, structure and evolution of the Western marginal basins of India. – *Tectonophysics*. v. 135, 307-327 p.
- Biswas, S. K and Deshpande, S. V. (1973) Mode of eruption of Deccan Trap lavas with special reference to Kutch. *Jour. Geol. Soc. Ind.* v. 14, 134-141 p.
- Biswas, S. K. (1965) A new classification of the Tertiary rocks of Kutch, western India. *Bull. Geol. Min. Met. Soc. Ind.* No. 35. 1-6 p.
- Biswas, S. K. (1971): Note on the geology of Kutch. *Quart Jour. Geol. Min. Metal Soc. India*. v. 43, 223-235 p.
- Biswas, S. K. (1988). Structure of western continental margin of India and related igneous activity. *Mem. Geol. Soc. Ind.* No. 10, 371-390 p.
- Biswas, S. K. and Deshpande, S. V. (1968). Basement of Mesozoic sediments of Kutch, Western India. *Bull. Geol. Min. Met. Soc. Ind.* N. 40. 1-7 p.
- Biswas, S. K. and Raju, D. S. N. (1973). The rock stratigraphic classification of the Tertiary sediments of Kutch. *Bull. Oil Nat. Gas Comm.* v. 10, N 1, 37-45 p.

- Blair, T. C and Mcpherson, J. G. (1994a): Alluvial fans and their natural distinction from rivers based on morphology, hydraulic processes, sedimentary processes and facies assemblages. - *Jour. Sediment. Res.* v. A64, 450-489 p.
- Blair, T. C and Mcpherson, J. G. (1994b): Alluvial fan process and forms. - In: Abrahams, A.D. & A.J. Parsons (eds.) (1994): *Geomorphology of Desert Environments Chapman and Hall*. 354-402 p. London.
- Blair, T. C. & J.G. McPherson (1992): The Trollheim alluvial fan and facies model revisited. - *Geol. Soc. Am. Bull.* v. 104, 762-769 p.
- Blair, T. C. (1987): Sedimentary processes, vertical stratification sequences and geomorphology of the Roaring River alluvial fan, Rocky Mountain National Park, Colorado. *Jour. Sediment. Petrol.* v. 57, 845-862 p.
- Blanford, W. T. (1869). On the geology of the portion of Kutch. *Mem. Geol. Surv. Ind.* v. 1, Pt. 12, 17-38 p.
- Blenkinsop, T. G. (1989). Thickness-displacement relationships for deformation zones. Discussion. *Jour. Struc. Geol.* v. 11. 1051-1054 p.
- Brierley, G.J., K. Liu & K.A.W. Crook (1993): Sedimentology of coarse-grained alluvial fans in the Markham Valley, Papua New Guinea. *Sediment. Geol.* v. 86: 297-324.
- Brodzikowski, K and Van Loon, A. J. (1983). Sedimentology and deformational history of unconsolidated Quaternary sediments of the sudetic foreland. *Geol. Judetico.* v. 18(1), 123-187 p.
- Brown, W. G. (1988). Deformation styles of Laramide uplifts in the Wyoming foreland, in Schmidt, C. J. and Perry, W. J. eds. Interaction of Rocky mountain foreland and the cordilleran thrust belt: *Geol Soc. Am. Mem.* v. 171, 1-25. p.
- Bull, W. (1978). Geomorphic tectonic activity classes of the south front of the San Gabriel Mountains., (*A unpublished final Report U. S. Geol. Survey Contr. No. 14-08-0001-4-394*), 1 – 59 p.
- Bull, W. B. and McFadden, L. D. (1977) Tectonic Geomorphology North and South of the Garlock fault, California, In: *Geomorphology in Arid Regions*, Eds. Doehring, D. O. *Proc. 8th Ann. Geomorph. Symposium*, State University of New York, Binghamton, 115–138 p.
- Bull, W.B. (1984). Tectonic Geomorphology. *Jour. Geol. Educ.* v. 32, 310-324 p.
- Burnes, A., (1839). Travels to Bokhara. *John Murray London.* v. 1, 328 p.
- Burnett A.W. and Schumm S.A. (1983) Active tectonics and river response in Louisiana

- and Mississippi. *Science*. v. 222, 49-50 p.
- Caputo, R. (1995). Evolution of orthogonal sets of coeval extension joints. *Terra Review*. v. 7, 479-490 p.
- Carl, J. D., and Amstutz, G. C. (1958). Three dimensional Liesegang rings by diffusion in a colloidal matrix, and their significance for the interpretation of geological phenomena. *Geol. Soc. Am. Bull.* v. 69, 1467-1468. p.
- Cartwright, J. A., Trudgill, B. D. and Mansfield, C. S. (1995). Fault growth by segment linkage: An explanation for scatter in maximum displacement and trace length data from the canyonlands grabens of SE Utah. *Jour. Struc. Geol.* v. 17, 1319-1326 p.
- Childs, C., Nicol, A., Walsh, J. J. and Watterson, J. (1996). Growth of vertically segmented normal faults. *Jour. Struc. Geol.* v. 18(12), 1389-1397 p.
- Childs, C., Watterson, J. and Walsh, J. J. (1995). Fault overlap zones within developing normal fault systems. *Jour. Geol. Soc. Lond.* v. 56, 535-549 p.
- Chorley, R. J., Schumm, S. A., and Sugden, D.E. (1985). *Geomorphology*. Methuen and Co. Ltd. Publication, London. 589 p
- Chung, W.-Y. and Gao, H. (1995) Source mechanism of the Anjar, India, earthquake of July 21, 1956 and its seismotectonic implications for the Kutch rift basin, *Tectonophysics*, v 242, 281-292 p.
- Costa, J.E. (1984): Physical geomorphology of debris-flows.- In: COSTA, J.E. and P.J. FLEISHER (eds.) (1984): Development and Application of Geomorphology *Springer-Verlag*. 268-317 p. Berlin.
- Crone, A. J and Haller, K. M. (1991). Segmentation and the coseismic behaviour of Basin and range normal faults: examples from east-central Idaho and southwestern Montana, USA. *Jour. Struc. Geol.* v. 13, 151-164 p.
- DasGupta, S., Bhattacharya, A and Jana, T. K. (1998) Quantitative assessment of seismic hazard in easter-northeastern India through Poisson probability density function analysis. *Jour. Geol.Soc.Ind.* v.52, 181-194 p.
- Davis, G. H. (1998). Fault-fin landscape. *Geol. Mag.* v. 135(2), 283-286 p.
- Davison, (1936). Great Earthquakes, *Thomas Murby & Co.* London. 119-120 p.
- De, A. (1981). Late Mesozoic Lower Tertiary magma type of Kutch and Saurashtra. *Mem. Geol. Soc. Ind.* No.3, 327-329.
- Embelton, C., ed. (1987). Neotectonics and morphotectonics, *Zeitschrift fur Geomorphologie Suppl.* v. 63, 1-211 p.
- Fossen, H. and Hesthammer, J. (1998). Deformation bands and their significance in porous

- sandstone reservoirs. *First break*. v. 16(1), 21-25 p.
- Frere, H. B. E. (1970). Notes on the Runn of Cutch and neighbouring region. *Jour. Roy Geogr. Soc.* v. 40, 181-207 p.
- Fursich, F. T., Oschmann, W., Jaitly, A. K and Singh, I. B. (1991). Faunal response to transgressive-regressive cycles: example from Jurassic of western India. *Palaeogeography, Palaeoclimatology, Palaeoecology*. v. 85, 149-159. p.
- Ghosh, A. K and Ghosh, S. (1959). Dipterocarpoxyton Malavii Sp. Nov. *Science & Culture*. v. 23. 328-332 p.
- Ghosh, R. N. (1981) Quaternary events and environments in little Rann of Kutch. *4th regional conf. of Geology. Min. & Energy resources of SE Asia*, Manilla.
- Gindy, A. R., Alshakiry, A. J., Sa'ad, N. A. (1985). Spheroidal weathering in marls and chalks of Gebel Gurnach near Luxor, southern Egypt. *Jour. Sediment. Petrol.* v. 55, 762-768. p.
- Glennie, K.W. and Evans, G. (1976). A reconnaissance of the Great Rann of Kutch, India. *Sedimentology*. v. 23, 625-647 p.
- Gopala Rao, D. (1988). A shallow seismic reflection study of the Gulf of Kutch, NW India Observations and its structural evolution. *Marine Geology*. v. 82, 277-283 p.
- Gowd, T.N., Srirama Rao, S.V. and Chary, K.B. (1996). Stress field and seismicity in the Indian Shield: Effects of the collision between Indian and Eurasia. *Pageoph*. v 146, 1-27 p.
- Grant, C. W. (1937). Memoir to illustrate a geological map of Kutch, *Geol. Trans. Ser.* 14, v. 5, 289-329 p.
- Gregory, D. I. and Schumm, S. A. (1987). The effect of Active tectonics on alluvial river morphology. In : *River Channels : Environments and Processes* (Eds. Richard, K.), Basil Blackwell, Oxford. 41-68 p.
- Guha, S. K. (1961). A note on the Ostracodes from Lower Miocene of Chasra, Kutch. *Bull. Geol. Min. & Met. Soc. Ind.* N. 25.
- Gupta, S. K. (1975). Silting of the Rann of Kutch during Holocene. *Ind. Jour. Earth Sci.* v. 2, 163-175 p.
- Gutenberg, B. and Richter, C. F. (1956). Earthquake magnitude, intensity, energy and acceleration. *Bull. Seism. Soc. Am.* v 46, 105-145 p.
- Gutnberg, B. and Richter, C. F. (1965). Earthquake magnitude, intensity, energy and acceleration. *Bull. Seism. Soc. Am.* v 46, 105-145 p.

- Hacks J.T. (1973) Stream-profile analysis and stream-gradient index. *U. S. Geol. Surv. Jour. Res.* v 1(4), 421-429 p.
- Hancock, P. L. (1985). Brittle microtectonics. *Jour. Struc. Geol.* v. 7, 437-457 p.
- Hardas, M. G. (1969) Geology of the area to the south and southwest of Bhuj, Dist. Kutch (Gujarat) with special reference to its Stratigraphy, Sedimentation and Structure, M. S. University of Baroda.
- Haung, W., (1993). Morphologic patterns of stream channels on the active Yishi Fault, southern Shandong Province, Eastern China: implications for repeated great earthquakes in the Holocene, *Tectonophysics.* v 219, 283-304 p.
- Heald, M. T., Hollingsworth, T. J. and Smith, R. M. (1979) Alternation of sandstone as revealed by spheroidal weathering. *Jour. Sediment. Petrol.* v. 49, 0901-0910. p.
- Heddi, M. and Eastaff, D. (1995). Application of Remote sensing to Tectonics: case studies in the Guadix-Baza basin (southern Spain). *Proc. 21st Ann. Conf. Remote sensing soc.* 841-848 p.
- Hempton, M. R. and Dewey, J. F. (1983). Earthquake induced deformational structures in young lacustrine sediments, East Anatolian fault, southeast Turkey. *Tectonophysics.* v. 98, T7-T14 p.
- Hesterberg, T. C. and Merritts, D. J. (1995). Tectonic deformation estimation using stream gradients: Non parametric function estimation from difference data, Proceeding of the section on physical and engineering sciences, *Amer. Stat. Assoc.* 85-91 p.
- Hills, F.S. (1956). A Contribution to the morphotectonics of Australia, *J. Geol. Soci. Aust.* v 3, 1-15 p.
- Hovius, N. (1996). Regular spacing of drainage outlets from linear mountain belts. *Basin Research.* v 8, 29-44 p.
- Ishihara, K. (1985). Stability of natural soil deposits during earthquakes. *Proc. Int. Conf. Soil Mech. Found. Eng. 11th*, San Francisco. v. 1, 321-376 p.
- Jai Krishna (1992). Seismic zoning map of India. *Current Science.* v 62, 17-23 p.
- Johnston, A. C. (1996b) Seismic moment assessment of earthquakes in stable continental regions-II. Historical seismicity. *Geophys. J. Int.* v. 125, 636-678 p.
- Johnston, A.C. and Kanter, L.R. (1990). Earthquakes in stable continental crust. *Scientific American.* 68-75 p.
- Jutz, S. L. and Chorowicz, J. (1993). Geological mapping and detection of oblique extensional structures in the Kenyan rift valley with a SPOT/LANDSAT-TM data merge. *International Journal Remote Sensing.* v 14, 1677-1688 p.

- Kachchh District Gazetteer. (1971), *Govt. Press and Stationary Dept*, 56-61 p.
- Kar, A. (1988). Evidence for neotectonism from the Indian desert. In, S. Singh and R. C. Tiwari, eds. *Geomorphology and Environment*, Allahbad Geogr. Soc. 300-310 p.
- Kar, A. (1993a) Present day geomorphic processes as key to the reconstruction of Quaternary landform history in the Thar Desert. *Jour. Geol. Soc. Ind.* v 41, 513-517 p.
- Kar, A. (1993b): Neotectonic influence on morphological variations along the coastline of Kachchh, India. *Geomorphology* Rishi Publ. Varanasi, *Geomorphology*. v 8, 199-219 p.
- Kar, A. (1993c). Neotectonic influence on morphological variations along the coastline of Kachchh, India. *Geomorphology*, v. 8, 199-219 p.
- Keller, I and Pinter, N. (1996). Megageomorphology. In, *Active Tectonics: Earthquakes, Uplift and Landscape*. Prentice Hall.
- Khatti, K. N. (1994). Seismic Hazard in Indian region, *Current Science*. v 62, 109-116 p.
- King, G. C. P. and Nabelek, J. (1985). Role of fault bends in the initiation and termination of earthquake rupture. *Science*. v 228, 984-987 p.
- Kitchin, F. L. (1903). Jurassic fauna of Kutch, Genes Trigon Pal. Indica, Ser. IX, V. III.
- Krishnan, M. S. (1968). Geology of India and Burma, *Higginbothams*, Madras.
- Krzyszowski, D and Stachura, R (1998), Neotectonically controlled fluvial features, Walbrych Upland, Middle Sudeten Mts, southwestern Poland. *Geomorphology*. v 22, 73-91 p.
- Krzyszowski, D., Migon, P., Snoka, W. (1995). Neotectonic Quaternary history of the Sudetic Marginal fault, Southwestern Poland. *Folia Quat.* v 66, 73-98 p.
- Langbein, W. B. and Leopold, L. B. (1962). The concept of entropy in landscape evolution *U. S. Geol. Surv. Prof. Pap.* 500A: 20 pp.
- Larsen, V. & R.J. Steel (1978): The sedimentary history of a debris-flow dominated Devonian alluvial fan-study of textural inversion. *Sedimentology*. v 25, 37-58 p.
- Liesegang, R. E. (1913) *Geologische Diffusionen*. Steinkopf, Dresden. 180. p.
- Lomintz, C. (1994). Fundamentals of earthquake prediction, *John Wiley & Sons*, 175 p.
- Lowe, D.R. (1975). Water escape structures in coarse-grained sediments. *Sedimentology*. v 22, 157-204 p.
- Maclean, A (1985). Quaternary segmentation of the Wasalth fault zone as studied by morphometric discriminant analysis, M.Sc. Thesis, Miami University on Ohio, 200 p.

- MacMurdo, J. (1824). Paper relating to the earthquake which occurred in India in 1819. *Phil. Mag.* v. 63, 105-177 p.
- Madan, M. (1965). Variation in Nummulites Ficheli, Michelotlic. *Geol. Soc. Ind.* v. 2(4), 93–96 p.
- Malik, J. N., S.S. Merh & V. Sridhar (1998): Paleo-delta complex of Vedic Sarasvati and other ancient rivers of northwestern India. *Mem. Geol. Soc. of India*.
- Malik, J. N., Sohoni, P. S., Karanth, R. V. and Merh, S. S. (1999). Modern and Historic seismicity of Kachchh Peninsula, Western India. *Jour. Geol. Soc. of India* (1999)
- Malik, J. N., Sohoni, P. S., Merh, S. S. and Karanth, R. V. (1999). Active Tectonic control on Alluvial fan Architecture along the Kachchh Mainland Hill Range, Western India. *Zeithschrift für Geomorphologie. (In press)*.
- Mangrulkar, G. Y. (1948). Bombay-Sind connection (Kutch route) *Railway report*.
- Mayer, I. (1985). Tectonic geomorphology of escarpment and mountain fronts. In R.E.Wallane Eds. Active Tectonics. Natl. Res. Conf, Washington DC, 125 – 135 p.
- McCalpin, J. P. (1996). *Palaeosismology*. J. P. McCalpin (Edt.), Published by Academic press. v 62, 588 p.
- McConnell, D. A. (1994). Fixed hinge, basement involved fault propagation folds, Wyoming. *Geol. Soc. Am. Bull.* v. 106, 1583-1593. p.
- Mckeown, F. A., Jones – Ceul, Meridee, Askew, B. L. and McGrath, M. A. (1988). Analysis of stream profile data and inferred tectonic activity, eastern Qzark mountains region. *U. S. Geol. Survey Bull.* 1807: 39 p.
- Merh, S. S. (1995). *Geology of Gujarat*. *Geol. Soc. India*. 222 p.
- Merh, S. S. and Hardas M. G. (1968). A note on the probable origin of some patches of Miliolite like limestones of the area South of Bhuj, Kutch (Gujarat). *Abst. Proc. 55th Ind. Sci. Congress*.
- Merritts, D. and Vincent, K. R. (1989). Geomorphic response of coastal streams to low, intermediate and high rates of uplifts, Mendocino triplejunction region, northern California. *Geol. Soc. Am. Bull.* v 101, 1373-1388 p.
- Miall, A.D. (1985) Architectural-element analysis : A new method of facies analysis applied to fluvial deposits. *Earth Sci. Rev.* v 22, 261-308 p.
- Mills, P.C. (1983). Genesis and diagnostic value of soft-sediment deformation structures - A review. *Sediment. Geol.* v 35(2), 83-104 p.
- Mitra, S. (1993). Geometry and Kinematic evolution of Inversion structures. *Bull. Am.*

- Assoc. Pet. Geol.* v. 74(7), 1159-1191. p.
- Mohindra, R. and Bagati, T.N. (1996). Seismically induced soft-sediment deformation structures (seismites) around Sumdo in the lower Spiti valley (Tethys Himalaya). *Sediment. Geol.* v 101, 69-83 p.
- Molanr, P. and Chen, W.-P. (1982). Seismicity and Mountain Building. In *Mountain Building Processes*, ed. K. Hsu, San Diego, California, *Academic Press*, 41-57 p.
- Morley, C. K., Nelson, R. A., Patton, T. L. and Munn, S. G., (1990). Transfer zones in the east Africa rift system and their relevance to hydrocarbon exploration in rifts. *Bull. America Ass. Petrol. Geol.* v 74, 1234-1253 p.
- Nash, C. R., Rankin, L. R., Leeming, P. M. and Harris, L. B. (1996). Delineation of lithostructural domains in northern Orissa (India) from Landsat Thematic Mapper imagery. *Tectonophysics.* v 260, 245-257 p.
- Obermeir, S.F. (1996). Use of liquefaction-induced features for paleoseismic analysis - An overview of how seismic liquefaction features can be distinguished from other features and how their regional distribution and properties of source sediment can be used to infer the location and strength of Holocene paleo-earthquakes. *Engg. Geol.* v 44, 1-76 p.
- Obermeir, S.F., Martin, J.R., Frankel, A.D., Youd, T.L., Munson, P.J., Munson, C.A., and Pond, E.C. (1993). Liquefaction evidences for one or more strong Holocene earthquakes in the Wabash Valley of southern Indiana and Illinois, with a preliminary estimate of magnitude. *U. S. Geol. Surv. Prof. Paper.* 1536, 27p.
- Oldham, R. D. (1893). A manual of Geology of India, 2nd Ed.
- Oldham, R. D. (1898). A note on the Allah-Band in the northwest of the Ran of Kutch. *Mem. Geol. Sur. India.* v. 28, 27-30 p.
- Oldham, R. D. (1926). The Kutch earthquake of 16th June 1891 with a revision of the great earthquake of 12th June 1897. *Mem. Geol. Sur. India.* v. 46, 71- 47 p.
- Oldham, T. (1869). Annual report for 1868. *Rec. Geol. Sur. Ind.* V. 11.
- Oldham, T. (1883). A Catalogue of Indian Earthquakes from the earliest times to the end of A.D. 1869. *Mem. Geol. Surv. India*, v. 19(2), 163-213 p.
- Ouchi S. (1985). Response of alluvial rivers to slow active tectonic movements. *Geol. Soc. Am. Bull.* v 96, 504-515 p.
- Peacock, . C. P and Sanderson, D. J. (1992) Effects of layering and anisotropy on fault geometry. *Jour. Geol. Soc. Lond.* v. 149, 793-802 p.

- Peacock, D. C. P. and Sanderson, D. J. (1991). Plane segment linkage and relay ramps in normal fault systems. *Jour. Struc. Geol.* v 13, 721–723 p.
- Peacock, D. C. P. and Sanderson, D. J. (1994a). Geometry and development of relay ramps in normal fault system. *Bull. America Ass. Petrol. Geol.* v 78, 147–165 p.
- Peacock, D. C. P. and Zhang (1994). Field examples and numerical modelling of onesteps and bends along normal faults in C.S. *Tectonophysics.* v 234, 147–167 p.
- Platt, L. B. (1962). The Runn of Cutch. *Jour. Sediment. Petrol.* v. 32(1), 92–98 p.
- Poddar, M. C. (1963). Stratigraphy and oil possibility in Kutch, W. India, Proc. 1st Sym. Dev. Pet. Res. Of Asia and far east, N. 10, 146–148 p.
- Prasad, K. N. (1964). Miocene vertebrates from Cutch District, Gujarat, India. *Geol. Soc. Ind. Bull.* v. 1(2), 9–11 p.
- Price, N. J. (1966). Fault and joint development in brittle and semi-brittle rock. *Pergamon press*, Oxford. 176 p.
- Prucha, J. J., Graham, J. A. and Nikelson, R. P. (1965). Basement controlled deformation in Wyoming province of Rocky Mountain foreland. *Bull. Am. Assoc. Pet. Geol.* v. 49, 966–992. p.
- Quittmeyer, R. C. and Jacob, K.H. (1979) Historical and modern seismicity of Pakistan, Afghanistan, North-western India, and south-eastern Iran. *Bull. Seism. Soc. Ame.* v. 69, 773–823 p.
- Rajendran, C. P., Kusala, R., and John, B. (1998). Surface deformation related to the 1819 Kachchh earthquake: Evidence for recurrent activity. *Current Science.* v 75(6), 623–626 p.
- Rajnath, (1932). A contribution to the stratigraphy of Cutch. *Qua. Jour. Geol. Mini and Metall Soc. Ind.* v 4(4).
- Rajnath, (1934a). detailed stratigraphy of the Jumara area Cutch. Abst. *Proc, 21st Ind. Sc. Congress.* 346 p.
- Rajnath, (1934b). Revision of the Jurassic Brachiopod fauna of Cutch. Abst. *Proc. 21st Ind. Sci. Congress.* 351 p.
- Rajnath, (1942). The Jurassic rocks of Cutch – their bearing on some problems of Indian Geology. Presidential Adress, *Geol. Soc. 29th Ind. Sci. Congress.*
- Rascoe, B. Jr. (1975). Tectonic origin of preconsolidation deformation in upper Pensylvanian rocks near Bartlesville, Oklahoma. *Bull. Am. Assoc. Pet. Geol.* v. 59(9), 1626–1638 p.

- RaviKumar, M. and Bhatia, S. C. (1999). A new seismic hazard map for the Indian plate region under the global seismic hazard assessment programme. *Current Science*. v 77(3), 447-453 p.
- Reineck, H. E., and Singh, I. B. (1980). Depositional sedimentary environments. *Springer-Verlag*, Berlin.
- Rhea S. (1993). Geomorphic observations of rivers in the Oregon Coast Range from a regional reconnaissance perspective. *Geomorphology*. v 6, 135-150 p.
- Rodgers, J. (1987) Chains of basement uplifts within cratons marginal to orogenic belts. *American Journal of Science*. v. 287, 661-692. p.
- Roy, B. (1973). Pattern and causes of inundation of the Rann of Kutch. Unpublished Ph. D. thesis.
- Roy, B. and Merh, S.S. (1977). The Great Rann of Kutch : An intriguing Quaternary terrain. *Rec. Res. Geol.* v. 9, 100-108 p.
- Sant, D. A. and Karanth, R. V. (1993). Geomorphic evolution of Lower Narmada Valley, Western India. *Geomorphology*. v 8, 221-245 p.
- Scheidegger, A. E. (1978). The enigma of jointing. *Rivista della Italiana de Geofisica e Scienze Affine*. v. 5, 1-4 p.
- Scheidegger, A. E. and Schubert, C. (1989). Neotectonic provinces and joint orientations of northern South America. *Jour. South. Am. Earth Sci.* v 2(4), 331-341 p.
- Schumm S.A. (1963) Sinuosity of alluvial rivers on the Great Plain. *Geol. Soc. Am. Bull.* v 74, 1089-1100 p.
- Schumm, S.A. (1986). Alluvial river response to active tectonics. In : Active tectonics studies in geophysics : Washington, D.C. *Natn. Acad. Press*. 80-94 p.
- Sclische, R. W., Young, S. S., Ackermann, R. V. and Gupta, A. (1996). Geometry and scaling relations of a population of very small rift related normal faults. *Geology*. v. 24(8), 683-686 p.
- Scott, B. and Price, S. (1988). Earthquake-induced structures in young sediments. *Tectonophysics*. v 147, 165-170 p.
- Seeber, L and Gortintz, V., (1987). River profiles along the Himalayan arc as indicators of active tectonics. *Tectonophysics*. v 92, 335-367 p.
- Seed, H. B. (1979) Soil liquefaction and cyclic mobility for level ground during earthquakes. *J. Geotech. Eng.* v. 105, 201-255. P.

- Segall, P. and Pollard, D. D. (1980). Mechanics of discontinuous faults, *Geophysics, Res.* v 85, 4337–4350 p.
- Seilacher, A. (1969). Fault graded beds interpreted as seismites. *Sedimentology.* v. 13, 155-159 p.
- Sen, M. and Satyanarayan, K. V. S. (1953) Studies on soil of Rann of Kutch. *Quat. Jour. Geol. Min. Met. Soc. Ind.* v. XXV(2). 51-60 p.
- Sengupta, S. N. (1959). Some aspects of geodynamics of the Indian sub continent. *Proc. of the Ind. Nat. Sci. Academy.* v. 41. Pt. A(4) 339-357 p.
- Seth, A., Sarkar, S., and Bose, P.K. (1990). Synsedimentary seismic activity in an immature passive margin basin (Lower Member of the Katrol Formation, Upper Jurassic, Kutch, India. *Sediment. Geol.* v 68, 279-291 p.
- Shahabpour, J. (1998). Liesegang blocks from sandstone beds of the Hojedk formation, Kerman, Iran. *Geomorphology.* v. 22, 93-106. p.
- Sharma, V. (1990). Geomorphic evolution of Kutch coastline with special reference to erosional and depositional processes. *Unpublished Ph.D Thesis*, University of Delhi, Delhi.
- Shepard, R. G. (1979). River channel and sediments responses to bedrock lithology and stream capture, sandy creek drainage, central Texas, In: Adjustments to the Fluvial systems Eds. Rhodes, D. D. and Williams G. P. *Proc. 10th Ann. Geomorph. Symp. State University of New York*, Binghamton, 255 – 276 p.
- Shrivastava, P.K. (1971): Recent sediments of the Rann of Kutch. *Jour. Geol. Soc. Ind.* v 12, 392-395 p.
- Sibson, R. H. (1989). Earthquake faulting as a structural process. *Jour. Struct. Geol.* v. 11, 1–14 p.
- Sims, J.D. (1973). Earthquake-induced structures in sediments of the Van Norman Lake, San Fernando, California. *Science.* v 182, 161-163 p.
- Sims, J.D. (1975). Determining earthquake recurrence intervals from deformational structures in young lacustrine sediments. *Tectonophysics.* v 29, 141-152 p.
- Snow, R. S. (1989). Frontal seismicity of stream channels. *Pure Appl. Geophys.* v 131, 99–109 p.
- Sohoni, P. S., and Malik, J.N. (1998). Remnants of Large magnitude earthquakes: Evidences from the Great Rann sediments, Kachchh, Western India. *Current Science.* v 74(11), 985-989 p.

- Sohoni, P. S.; Malik, J.N., Merh, S. S. and Karanth, R. V. (1999). Active tectonics astride Katrol Hill Zone, Kachchh, W. India. *Jour. Geol. Soc. Ind.* v 53, 579-586 p.
- Spath, L. F. (1924). On the Blake collection of Ammonites from Kachchh, India: *Pal. Indica*, New. Ser. V. IX. Mem. No. 1.
- Srivastava, P. K., Koli, M. D. and Hardas, M. G. (1964). Geological report of Tertiary rocks of western and southern Kutch. Field season, 1963-64, *ONGC report* (unpublished).
- Stewart, J. and Hancock, P. L. (1990). What is fault scarp. *Episodes*. v 13, 256-263 p.
- Suppe, J. (1983) Geometry and Kinematics of fault-bend folding. *American Journal of Science*. v. 283, 684-721 p.
- Suppe, J. (1985). Principles of structural geology. *Prentice Hall Inc.* New Jersey.
- Suppe, J. and Medwedeff, D. A. (1984). Fault propagation folding. *GSA abstracts with programs*. v. 16, 670 p.
- Suppe, J. and Medwedeff, D. A. (1990). Geometry and Kinematics of fault propagation folding. *Ecolgae Geologicae Helveticae*. v. 83, 409-454 p.
- Sylvester, A. G. (1998). Strike slip faults. *Geol. Soc.Ame. Bull.* v 100, 1666-1703 p.
- Talling P. J., Stewart, M. D., Stark, C. P., Gupta, S. and Vincent S. J. (1997). Regular spacing of drainage outlets from linear fault blocks, *Basin Research*. v 9, 275-302 p.
- Tandon, A. N. (1992). Seismology in India – An overview up to 1970. *Current Science*. v 62: 9-16 p.
- Thakkar, M. (1999). Unpublished Ph.D Thesis, M. S. University of Baroda.
- Vittori, E., Labini, S. S., and Serva, L. (1991). Palaeoseismology: Review of the state-of-art. *Tectonophysics*. v 193, 9-32 p.
- Vredenburg, E. (1910). A summary of the Geology of Kutch, *2nd edition*.
- Waagen, W. (1871). Abstaract of reults of examination of the Ammonite fauna of Cutch, with remarks on the distribution among the beds and probable age. *Rec. Geol. Surv. Ind.* v. 4(4).
- Wallace, R. E. (1981). Active faults, Palaeoseismology and earthquake hazard in the western United States. In. Earthquake prediction: An international review (D. W. Simpson and P. G. Richards, eds.), *Maurice Irwing Ser.* v. 4, 209-216 p.
- Weaver, J. D. (1976). Seismically induced load structures in the Basal Coal Measures, South Wales. *Geol. Mag.* v. 113(6), 535-543 p.
- Wells, S.G., Bullard, T.F., Menges, C.M., Karas, P.A., Kelson, K.I., Ritter, J.B and Wesling, J.R. (1988). Regional variation in Tectonic Geomorphology Along a

- segmented convergent Plate Boundary, Pacific Coast of Costa Rica. *Geomorphology*. v.1, 239-265 p.
- Wilcox, R. E., Harding, T. P. and Seely, D. R. (1973). Basic wrench tectonics. *Bull. Am. Assoc. Pet. Geol.* v. 57(1), 74-96. p.
- Williams, J. D. and Vann, I. (1987). The geometry of listric normal faults and deformation in their hangingwalls. *Jour. Struc. Geol.* v. 9, 789-795 p.
- Wynne, A. B. (1869). Preliminary votes on the Geology of Kutch. *Rec. Geol. Surv. Ind.* v. 2(3), 51-58 p.
- Wynne, A. B. and Fedden, F. W. (1872). Geology of Kutch Mem. *Geol. Sur. Ind.* v. 9(1).
- Wynne, A.B., (1872). The Geology of Cutch. *Mem. Geol. Surv. India*, v. 9, 289 p.
- Yeats, R. S., Sieh, K., and Allen, C. R. (1997). Geology of Earthquakes. *Oxford Univ. Press*, 568 p.
- Youd, T. L. (1973). Liquefaction, flow and associated ground failure. *U. S. Geol. Surv. Circular*, 688 p.
- Zhang, P., Slemmons, D. B. and Mao, F. (1991). Geometric pattern, rupture termination and fault segmentation of the Dixie valley-Pleasant valley active normal fault system, Nevada, USA. *Jour. Struc. Geol.* v. 13, 165-176 p.
- Ziegler, P. A. (1995). Dynamics of intraplate compressional deformations: A comparison with Alpine foreland. *Nova Acta Leopoldina*. NF/71, Nr. 291, 265-300 p.
- Ziony, J. I and Yerks, R. F. (1985). Evaluating earthquake hazard in the Los Angeles region. *USGS Prof. Paper*. 1360: 43-91 p.
-
- Gamond, J.-F. (1983). Displacement features associated with fault zones: A comparison between observed examples and experimental models. *Jour. Struc. Geol.* vv. 5, 33-45 p.