



**Professor**

**Department of Earth Sciences**

**EDUCATIONAL QUALIFICATION:**

<b>Exam</b>	<b>University</b>	<b>Year</b>	<b>Division</b>	<b>Disitinction</b>
Matriculation	Punjab	1957	1st	1st in School
Intermediate	Punjab	1959	1st	1st in College
B.Sc.	Punjab	1961	1st	1st in Hons. Geol. Group
M.Tech(App. Geol.)	Saugar	1964	1st	1st position
Ph.D.	McMaster	1969		

**Scholarships and Other Distinctions:**

- 1.Held various merit scholarships for 17 years from 1951 to 1968.
- 2.Won Gold Medal for the Ist position in the M.Tech. (Applied Geology) examination of Saugar University in 1964.

**APPOINTMENTS SO FAR HELD:**

<b>Institution</b>	<b>Position</b>	<b>From</b>	<b>To</b>
McMaster University	Teaching Assistant	1964	1968
Roorkee University	Pool Officer	13/3/69	26/3/70
Roorkee University	Lecturer	27/3/70	7/8/76
Roorkee University	Reader	8/8/76	10/9/85

Roorkee University	Scientist "F"	11/9/85
Roorkee University	Professor	25/1/86

## **LIST OF PUBLICATIONS**

### **1. PLACES WHERE WORK HAS BEEN CITED IN LITERATURE**

\*\* The work has been cited in a large number of papers. The following recent textbooks on sedimentary rocks also refer to some of the papers:

1. Pettijohn, F.J., 1975. Sedimentary Rock, 3rd Ed., Harper and Row, New York.
2. Selley, R.C., 1976. An Introduction to Sedimentology, Academic Press, London.
3. Blatt, H., Murray, R.C. and Middleton, G.V., 1980. Origin of Sedimentary Rocks, 2nd Ed., Prentice Hall.
4. Miall, A.D., 1984. Principles of Sedimentary Basin Analysis, Springer-Verlag, Berlin.
5. Reading, H.G.(Ed.),1986. Sedimentary Environments and Facies, 2nd Ed., Blackwell, London.
6. Miall, A.D., 1996. The Geology of Fluvial Deposits. Springer.

### **2. WHETHER THE WORK HAS BEEN RECOGNIZED BY ANY LEARNED BODY**

i) was awarded U.G.C.'s National Associateship in 1976.

ii) Two of the papers (Serial nos. 4.3 and 4.8) accepted for reprinting in the Bench Mark Papers Series in U.S.A

iii) Summary figure of paper with serial no. 4.3 reproduced in first edition and summary figures of papers with serial nos. 4.12 and 4.15 reproduced in the revised edition of the book "Sedimentary Environments and Facies" edited by H.G. Reading, 1986.

iv) Contributed an invited chapter by on the Kosi mega-fan for the book "Alluvial Fans- A Field Approach" edited by Prof. M. Church (Canada) and Prof. A. Rachocki (Poland) and published by Wileys (U.K.) in 1990.

v) Was awarded a grant of Rs. 20 lacs by the Oil Industry Development Board for the Project "Sedimentation Model for Alluvial Megacones of the Indogangetic Plains". In 1985.

vi) Papers with Serial Nos. 5.10-5.12 and 5.14-5.18 presented at International Conferences in U.K., Canada, U.S.A., Australia, France and Spain. Five of the papers (Serial Nos. 5.11 and 5.14-5.16, 5.18) presented by Dr. B. Parkash.

vii) Contributed a 10 typed page entry on 'megafan' for the "Encyclopedia of Earth Surface Processes and Landforms" being edited by Dr. John Gerrard

### **3. PAPERS PUBLISHED**

3.1. A Fortran IV computer program for grain size data from thin sections. Roorkee Univ. Res. Jour., 1969, vol. 11, p. 1-10.

3.2. Downcurrent changes in sedimentary structures in Ordovician turbidite greywackes. Jour. Sediment. Petrol. , 1970, vol. 14, p. 572-590.

3.3. Downcurrent textural changes in Ordovician turbidite greywackes. Sedimentology, 1970, vol. 14, p. 259-293. <Coauthor: G.V. Middleton>

3.4 Sedimentary structures and paleocurrents of the Siwaliks exposed between Jamuna and Ganga rivers. Roorkee Univ. Res. Jour., 1971, vol. 12, p. 13-24.

3.5 Use of principal component analysis in study of dispersal behaviour of ions in groundwater. Bull. Ind. Geol. Assoc., 1972, vol., 5, p. 3-24.

3.6. Sedimentary structures and paleocurrents of the Siwaliks exposed between the Jamuna and Gola rivers. Geol. Mag., 1974, vol. 111, p. 1-14. <Coauthor: I.P. Bajpai and H.P. Saxena>

3.7. Drainage basin morphometric study of a part of Garhwal Himalaya. Him. Geol., 1974, vol. 4, p. 196-216. <Coauthors: I.P. Bajpai and R.S. Mithal>

3.8. A study of depositional processes controlling appositional fabric in sedimentary rocks. Bull. Ind. Geol. Assoc., 1973, vol. 6, p. 23-46.

3.9. Paleocurrent analysis of the Siwaliks of Haryana, Punjab and H.P. Jour. Geol. Soc. Ind., 1975, vol. 16, p. 337-348. <Coauthors: R.K. Goel and P. Sinha>

3.10 Dispersion of paleocurrents in the Jodhpur Sandstones. Proceed.Symp. Sediment. Sedimentation and Sediment. Environ., Delhi, 1975, p. 341-350. <Coauthor: N.K. Srivastava>

- 3.11. Paleogeographic evolution of a part of the Indogangetic trough from Late Tertiary to Recent. *Jour. Geol. Soc. Ind.*, 1977, vol. 18, p. 288-294. <Coauthor: R.K. Goel>
- 3.12. The Siwalik Group (Molasse), sediments shed by the collision of continental plates. *Sediment. Geol.*, 1980, vol. 25, p. 127-159. <Coauthors: R.P. Sharma and A.K. Roy>
- 3.13. Topological changes with time in the plan form of the Kosi river in north Bihar and Nepal. *Proceed. Intern. Workshop on Alluvial River Problems*, Roorkee, 1980, p. 4.43-4.49. <Coauthors: B.B.S.Singhal and N.C. Gupta>
- 3.14. Depositional environments of unfossiliferous sediments of the Jodhpur Group, western India. *Sediment. Geol.*, 1981, vol. 30, p. 15-42. <Coauthor: A.K. Awasthi>
- 3.15. Lithofacies of the Markanda river terminal fan, Kurukshetra District, Haryana. *Intern. Assoc. Sediment. Spec. Publ.*, 1983, vol. 6, p. 337-344. <Coauthors: A.K. Awasthi and K. Gohain>
- 3.16. Engineering properties of the Thar desert sands in Jaisalmer district, Rajasthan. *Engineering Geosciences, R.S. Mithal Commem. Vol.*, 1984, p. 80-88, Sarita Prakashan, N. Delhi. <Coauthors: P.C. Mohan and N. Puri>
- 3.17. Geotechnical investigations for foundation design of multistorey building. *Intern. Conf. on Case Histories in Geotechnical Engineering*, St. Louis (U.S.A.), 1984, p. 1167-1172. <Coauthor: S.C. Handa, S. Saran and G. Ramaswamy>
- 3.18. Soil exploration for administrative block in Tel Bhawan area, Dehradun. *Proceed. Sem. on Recent Develop. in Construction Tech. and Management*, O.N.G.C., Dehradun, 1985, p. iii.29 - iii.32. <Coauthors: S.C. Handa, S. Saran, G. Ramaswamy and A.S.R. Rao>
- 3.19. An experimental study of fabric development in plane-bed phases. *Sediment. Geol.*, 1987, vol. 53, p. 101-122. <Coauthors: G.D. Gupta and R.J. Garde>
- 3.20. Analytical and experimental studies of appositional fabric of sedimentary rocks - a review, In: Moharir, P.S. (Ed.), *Proceed. 6th Indian. Geol. Cong.*, 1987, p. 37-45 (An Invited Paper)
- 3.21. Origin of saline groundwaters of Haryana State, India, In "Regional Characterization of Water Quality, IAHR Pub. 182", Ragone, S. (Ed.), 1989, p. 125-132. (Coauthors: K.M. Kulkarni, S.M. Rao, B.B.S. Singhal, S.V. Navada and N.R. Nair)
- 3.22. Morphology of the Kosi Mega-Fan, in "Morphology of Alluvial Fans - A Field Approach", Church, M. and Rachocki, A. (Eds.), Wileys, U.K. , 1990, p. 151-178. <Coauthor: K. Gohain>

- 3.23. Clay mineralogy of the Gandak megafan and adjoining areas, Middle Gangetic Plains, India. *Sciences Geologiques Bull.*, 1990, vol. 43, p. 203- 212.<Coauthor: Rakesh Mohindra>
- 3.24. Geomorphological and pedological evolution of Haryana State. *Bull. Oil Natural Gas Comm.*, 1991, vol. 28 (2), p. 37-60.<Coauthors: S.K. Singhai and M.L. Manchanda>
- 3.25. Historical Geomorphology and Pedology of the Gandak megafan, the Middle Gangetic Plains, India. *Earth Surf. Processes Landforms*, 1992, vol. 17, p. 643-662. <Coauthors: Rakesh Mohindra and Jitendra Prasad>
- 3.26. Influence of pedogenic processes on clay mineral transformation in soils of the Gandak megafan, middle Gangetic Plain, India. *Clay Res.*, 1992, vol. 11, p. 10-17.<Coauthor: Rakesh Mohindra)
- 3.27. Petrography of the Kosi river sands. *Jour. Indian Assoc. Sediment.*, 1993, vol. 12, p. 27-40.<Coauthor: Harbhajan Singh>
- 3.28. Lithofacies Analysis of the Kosi Megafan Deposits. In: Fielding, C.R. (Ed.), *Current Trends in Fluvial Sedimentology*, *Sediment. Geol.*, 1993, vol. 85, p. 87-113<Coauthors: Harbhajan Singh and K. Gohain>
- 3.29. Visual comparison of different remote sensing techniques used to distinguish different geomorphic units of Haryana state, India. 1993, *Proceed. Nat. Symp. on Remote Sensing Applications for Resource Management with Special Emphasis on N.E. Region*, Guwahati, p. 134-141.<Coauthors: S.K. Singhai, M.L. Manchanda, A.K. Pachauri and S. Khan>
- 3.30. Geomorphology and neotectonic activity of the Gandak megafan and adjoining areas, middle Gangetic Plains. *Jour. Geol. Soc. Ind.*, 1994, vol. 43, p. 149-157.<Coauthor: Rakesh Mohindra>
- 3.31. Role of neotectonics and climate in development of the Holocene geomorphology and soils of the Gangetic Plains between the Ramganga and Rapti rivers. *Sediment. Geol.*, 1994, vol. 94, p. 129-151. <Coauthors: Pankaj Srivastava, J.L. Sehgal and Sudhir Kumar>
- 4.32. Sand distribution in the western part of the Upper Gangetic Plain. *Hydrology Jour. IAH*, 1995, vol. 18 (1 & 2), p. 13-24. <Coauthor: A.K. Singh>
- 3.33. Holocene landform and soil evolution of the western Gangetic plains: Implications of neotectonics and climate, *Zeit. Geomorph. N.F.*, 1996, Suppl. -Bd. 103, p. 283-312. <Coauthors: Sudhir Kumar, M.L. Manchanda, A.K. Singhvi and P. Srivastava>

3.35. Clay minerals in soils as evidence for Holocene climatic change , Central Indo-Gangetic Plains, North-central India, 1998, Quat. Res., 50:

<Coauthors: Pankaj Srivstava and S. K. Pal>

3.36 Evolution of the Lower Gangetic Plain landforms and soils in West Bengal, India. Catena, 1998, 33(2): 75-104.<Coauthors: L.P> Singh and A.K. Singhvi>

#### **4. CONFERENCE PAPERS (ABSTRACTS ONLY)**

4.1. Grain and graptolite orientation in turbidite greywackes, 1968, Soc. Econ. Paleontologists Mineral. Meeting, Dallas, U.S.A.

4.2. Studies on sedimentary structures in Ordovician turbidite greywackes, 1970. Proceed. 57th Sess. Ind. Sci. Cong.

4.3. Studies of shape of pebbles from the Upper Siwaliks exposed north of Mohand, near Dehradun, 1971. Proceed. 58th Sess. Ind. Sci. Cong.

4.4. Cyclic sedimentation in the Middle Siwaliks. Proceed. 58th Sess. Ind. Sci. Cong.

4.5. Trend surface analysis in groundwater studies, 1972. Proceed. Sem. Water Resources of Rajasthan and Gujarat, Jaipur. 4.6. Roundness studies of quartz grains from the Siwaliks, 1972. Proceed. Sem. Geol. Geophys. Studies on Himalaya, Roorkee.

4.7. Morphometric studies of a part of the Garhwal Himalaya, 1972. Proceed. Sem. Geol. Geophys. Studies on Himalaya, Roorkee.

4.8. On the occurrence of the trace fossil *Lesvicyclus* in the sandstones of the Jodhpur Group, 1979. Proceed. 66th Sess. Ind. Sci. Cong.

4.9. Quaternary sediments of the Nalagarh-Pinjore valley, Himachal Pradesh, 1981. 12th Him. Geol. Sem.

4.10. Lithofacies of the Markanda Terminal fan, Kurukshetra Distt., Haryana, 1981. 2nd Intern. Fluvial Conf., Keele (U.K.)

4.11. Channel pattern changes of the Kosi river in Nepal and north Bihar (India), 1982. 11th Intern. Sediment. Cong., Hamilton (Canada). (Coauthor: K. Gohain)

4.12. Development of fabric in plane bed phases, 1985. 3rd Intern. Fluvial Sediment. Conf., Denver (U.S.A.). (Coauthor: G.D. Gupta)

- 4.13. Sedimentology of the Kosi river, North Bihar, India and Nepal, 1986. 6th Ind. Assoc. Sediment., Dehradun. (Coauthor: K. Gohain)
- 4.14. Morphology of the Kosi Mega-Fan, North Bihar, India and Nepal, 1986. 12th Intern. Sediment. Cong., Canberra, Australia. (Coauthor: K. Gohain)
- 4.15. Clay mineralogy of soils on the Gandak Megafan and adjoining areas, Middle Gangetic Plains, 1989. 9th Intern. Clay Conf., Strasbourg, France. (Coauthor: Rakesh Mohindra)
- 4.16. Tectonic control of pedogenesis and sedimentation on the Gandak megafan, Middle Gangetic Plains, India, 1989. 4th Intern. Fluvial Sediment. Conf., Barcelona, Spain. (Coauthor: Rakesh Mohindra)
- 4.17. Origin of saline groundwaters of Haryana State, India, 1989., Intern. Assoc. Hydraulic Scientists, 3rd Assembly, Baltimore, U.S.A.
- 4.18. Facies analysis of Kosi megafan deposits, 1993. 5th Intern. Conf. Fluvial Sediment., Brisbane, Australia.  
<Coauthors: Harbhajan Singh and K. Gohain>
- 4.19 Quaternary geomorphology, pedology and sedimentology of the Gangetic Plains. 1998, Inaugural address for 15th Indian Assoc. Sedimentologists, Guwahati,

## **RESEARCH SUPERVISED**

### **Ph.D. THESES GUIDED**

1. Studies of the sands of a part of the Thar Desert in District of Jaisalmer, Rajasthan. By P.C. Mohan (1977)
2. Sedimentological studies of the Jodhpur Group in the Districts of Jodhpur and Nagaur, Rajasthan, India. By A.K. Awasthi (1979)
3. Sedimentological and hydrological studies of Chorwad? Madhavpur area, Junagarh district, Gujarat, India. By V.N. Nair (1983)
4. Sedimentation on the Kosi alluvial mega?fan, North Bihar, India and Nepal. By K. Gohain (1984)
5. Study of development of fabric in sediments deposited in plane bed phases under unidirectional flows. By G.D. Gupta (1985)

6 Geomorphological and pedological studies of the Gandak Megafan and adjoining Areas in the Middle Gangetic Plains, India. By Rakesh Mohindra (1989)

7. Geomorphology and soils of Haryana State, India By S.K. Singhai (1990)

8. Morphology and Facies Analysis of Sediments of the Kosi Megafan, India and Nepal. By Harbhajan Singh (1991)

9. Holocene Soil-chronoassociation and Neotectonics in the Western Uttar Pradesh. By Sudhir Kumar (1992)

10. A Holocene soil-chronoassociation of the Gangetic Plains between the Ramganga and Rapti rivers. By Pankaj Srivastava (1992)

11. Geomorphological and pedological evolution of parts of Bangladesh Plains By Md. Shohrab Hossain (1995)

12. Geomorphological and Pedological Evolution of the Parts of the Lower Gangetic Plains in West Bengal By L. P. Singh (1995)

13 Evolution of the Indogangetic Foreland Basin during the Pliocene-Pleistocene Period as inferred from Haripur-Kolar Section, H.P., India. J. V. Thomas (1996)

14 Geomorphology, Sedimentology, Pedology of the Intermontane Dehradun Valley, Northwest Himalaya by Ajay Kumar Singh (1998)