Dr. D. K. Mukhoapdhyay

Associate Professor

Research specialization/interests:
Structural geology, metamorphic petrology

Personal data:
Born 17 January 1954, married, citizen of India

Academic qualifications:

Ph.D., 1981, Structural Geology, I.I.T., Kharagpur
M.Sc., 1975, Applied Geology, I.I.T., Kharagpur
B.Sc., 1972, Hons. in Geology, Calcutta University
Higher Secondary, 1969, W.B. Board of Secondary Education

Award/Prizes etc.:
won IIT Silver Medal for standing First class First in M.Sc.

Teaching/Research experience:
1. June 1983 to present: Lecturer/Assistant Professor, Department of Earth Sciences, University of Roorkee
2. Oct to Dec 1996: INSA-DFG Visiting Scientist, Bayrisches Geoinstitut, Bayreuth, Germany
3. March to Aug 1990: INSA-JSPS Visiting Scientist, Hokkaido University, Sapporo, Japan
4. Aug 1980 to May 1983: TA/RA, State University of New York at Stony brook, NY, USA
5. 1975 to 1980: JRF/SRF, Department of Geology and Geophysics, IIT, Kharagpur

Ph.D. theses supervised:
1. Title: Structural evolution of the High Himalaya crystalline thrust sheet in the Chur half-klippe, Lesser Himalaya, Himachal Pradesh.
Candidate: B. K. Bhadra. Year: 1996

2. Title: Inverted metamorphism in the Jutogh thrust sheet around Chur, Himachal Pradesh.
   Candidate: T. K. Ghosh. Year: 1996.
3. Title: Balanced cross sections, deep structure and crustal shortening, NW Himalayas.
   Candidate: P. Mishra. Year: to be submitted in in early 2001

Research projects:

1. Structural history of the Kolar Schist Belt. Funding agency: UGC. Duration: 25.09.1985 to 24.09.1987
2. Metamorphism in relation to deformation episodes in the crystalline rocks of the Lesser Himalaya around Chur, Himachal Pradesh. Funding agency: CSIR. Duration: 07.09.1989 to 28.02.1993.
3. Metamorphism in relation to thrust tectonics in the Himalaya, Funding agency: CSIR. Duration: 01.03.1993 to 29.02.1996
4. Balanced cross section, deep structure, and crustal shortening, NW Himalaya. Funding agency: CSIR. Duration: 01.10.1998 to 31.3.2001.

List of publications in referable journals/edited books:

Mukhopadhyay DK and Mishra P (1999) A balanced cross section across the Himalayan foreland, Punjab Foothills: A reinterpretation of structural styles and evolution. Proc. Indian Acad. Sci. (Earth Planet. Sci.), 108:189-205.

Vir P, Misra JK and Mukhopadhyay DK (1998) Kyanite-phlogopite-clinochlore association in the pelitic rocks of the Vaikrita Group and the Haimanta Formation, Satluj valley, Himachal Himalayas. Jour. Geol. Soc. India., 51, 383-387.

Mukhopadhyay DK, Bhadra BK, Ghosh TK and Srivastava DC (1997) Ductile shearing and large-scale thrusting in the Main Central Thrust Zone, Chur peak area, Lesser Himachal Himalaya. Jour. Geol. Soc. India., 50:5-24.

Mukhopadhyay DK, Bhadra BK, Ghosh TK and Srivastava DC (1997) Development of compressional and extensional structures during progressive ductile shearing, Main Central Thrust Zone, Lesser Himachal Himala. In: S. Sengupta (ed.), Evolution of Geologic Structures in Micro- to Macro-scales, pp. 203-217, Chapman & Hall, London.

Mukhopadhyay DK, Bhadra BK, Ghosh TK and Srivastava DC (1997) Structural and metamorphic evolution of the rocks of the Jutogh Group, Chur half-klippe. Himachal Himalayas: A summary and comparison with the Simla area. Proc. Indian Acad. Sci. (Earth Planet. Sci.), 106:197-207.

Mukhopadhyay DK, Bhadra BK, Ghosh TK and Srivastava DC (1996) Evidence for the thrust emplacement of the "Lesser Himalaya" Chur granite, Himachal Pradesh. Proc. Indian Acad. Sci. (Earth Planet. Sci)., 105:157-171.

Mukhopadhyay DK (1990) Deformational history of the Kolar Schist Belt, south India: Constraints for the tectonic evolution. Proc. Indian Acad. Sci. (Earth Planet. Sci)., 99:201-213.

Mukhopadhyay DK and Haimanot BW (1989) Geometric analysis and significance of mesoscopic shear zones in the Precambrian gneisses around the Kolar Schist Belt, south India. Jour. Struct. Geol., 11:569-581.

Mukhopadhyay DK (1989) Significance of small-scale structures in the Kolar Schist Belt, south India. Jour. Geol. Soc. India, 33:291-308.

Krogstad EJ, Balakrishnan S., Mukhopadhyay DK, Rajamani V and Hanson GN (1989) Plate tectonics 2.5 billion years ago: Evidence at Kolar, south India. Science, 243:1337-1340.

Mukhopadhyay DK (1988) Structural evolution of the Kolar Schist Belt, south India. Jour. Geol. Soc. India, 31:94-96.

Naha K, Mukhopadhyay DK and Mohanty R (1988) Structural evolution of the rocks of the Delhi Group around Khetri, northeastern Rajasthan. Geol. Soc. India Mem., 7:201-245.

Naha K, Mukhopadhyay DK, Mohanty R, Mitra SK and Biswal TK (1984) Significance of contrast in the early stages of the structural history of the Delhi and the pre-Delhi rock groups in the Proterozoic of Rajasthan, western India. Tectonophysics, 105:193-206.

Davidson PM and Mukhopadhyay DK (1984) Ca-Fe-Mg olivines: Phase relations and a solution model. Contrib. Mineral. Petrol., 86:256-263.

Mukhopadhyay DK and Lindsley DH (1983) Phase relations in the join kirschsteinite (CaFeSiO4)-fayalite (Fe2SiO4). Amer. Miner., 68:1089-1094.

Mukhopadhyay DK and Mookherjee A (1978) `Rock-Ball' texture from Saladipura pyrite-pyrrhotite orebody, Khetri Copper belt, India. N. Jb. Miner. Abh., 133:106-112.

Submitted : Mukhopadhya DK (submitted) Extreme heterogeneity in Sr isotope systematics in the Himalayan leucogranites: A possible mechanism of partial melting bases on thermal modeling. Proc. Indian Acad. Sci. (Earth Planet. Sci.)

Abstracts in seminars:

Mukhopadhyay DK and Mishra P (2000) "Out-of-sequence" thrusting in the Himalayan foreland fold-thrust-belt, Kangra recess. Special talk at 3rd conference & Exposition on Petrleum Geophysics,New Delhi, Society of Exploration Geophysicists, Dehra Dun.

Mukhopadhyay DK and Mishra P (1999) A balanced cross section across the Himalayan foreland fold-and-thrust-belt, the foothills of the Punjab and the Himachal Pradesh, India. 14th Himalaya-Karakoram-Tibet Workshop, Kloster Ettal, Germany.

Mukhopadhya DK, Ghosh TK and Miura H (1999) 'Inverted metamorphism' in a ductile shear zone (the Main Central Thrust Zone), Himachal Pradesh, India: large-scale structure, microstructure, geothermobarometry and garnet zoning patterns. 14th Himalaya-Karakoram-Tibet Workshop, Kloster Ettal, Germany.

Mukhopadhyay DK, Bhadra BK, Ghosh TK and Srivastava DC (1994) Thrust imbrication, inverted metamorphism and emplacement of Lesser Himalaya granite around Chur peak, Himachal Himalaya. 9th Himalaya-Karakoram-Tibet Workshop Kathmandu, Jour. Nepal Geol. Soc, 10: 89-90.

Mukhopadhyay DK, Ghosh TK, Bhadra BK and Srivastava DC (1993) Superposed shear fabric on pre-existing foliation surfaces in the Jutogh series around chur peak, Himachal Pradesh: implications for the inverted metamorphic zones. Seminar on "Progressive and Superposed Deformations", Jadavpur University, Calcutta.

Mukhopadhyay DK (1993) Why Sr isotope systematics in the High Himalayan leucogranites are extremely heterogenous? Seminar on "Himalayan Geology & Geophysics (New Data and New Approaches)", Wadia Institute of Himalayan Geology, Dehra Dun.

Ghosh TK, Bhadra BK, Srivastava DC and Mukhopadhyay DK (1993) Garnet microstructures and zoning patterns in the Jutogh Series around Chur peak, Himachal Pradesh: Implications for Himalayan metamorphism. Seminar on "Himalayan Geology & Geophysics (New Data and New Approaches)", Wadia Institute of Himalayan Geology, Dehra Dun.

Bhadra BK, Ghosh TK, Srivastava DC and Mukhopadhyay DK (1993) Thrust imbrication in the Jutogh Series and status of Chur granite, southeast of Simla Hills, Himachal Pradesh. Seminar on "Himalayan Geology & Geophysics (New Data and New Approaches)", Wadia Institute of Himalayan Geology, Dehra Dun.

Mukhopadhyay DK (1991) Tectonic history of the Kolar Schist Belt, south India: Constraints from structural history. In: An International Field Workshop and Seminar on Composition and Evolution of High Grade Gneiss Terrain, Sri Lanka

Mukhopadhyay DK, Rajamani V and Hanson GN (1987) Multiple deformations in the Kolar Schist Belt. Sixth Indian Geol. Congr., Roorkee.

Mukhopadhyay DK, Mohanty R and Naha K (1986) Structural and metamorphic history of the rocks of the Delhi Group around Khetri, northeastern Rajasthan: A Summary. Seminar on "Tectonic evolution of the Aravalli Mountain Range", Udaipur, Rajasthan.

Davidson PM and Mukhopadhyay DK (1983) Ca-Fe-Mg olivines: Phase relations and a solution model. Geol. Soc. Amer., Annual Meeting, Cincinnati (USA).

Mukhopadhyay DK and Lindsley DH (1982) Reconnaissance study on the extent of solid solution in Ca-Fe-Mg olivines. Geol. Soc. Amer., Annual Meeting, New Orleans (USA).

Mukhopadhyay DK and Lindsley DH (1981) Miscibility gap in the CaFeSiO4-Fe2SiO4 system. American Geophysical Union, Spring Meeting, Baltimore (USA).