

Prof Harsh Gupta

(A brief professional curriculum vitae)

EDUCATION

Born on June 28, 1942 in India, Prof Gupta had his education at the Indian School of Mines (B. Sc.(Hons), M. Sc. and A. I. S. M.) and the University of Roorkee (Ph. D), India. He availed two years UNESCO fellowships for advance studies in Seismology at the International Institute of Seismology and Earthquake Engineering, Tokyo.

SPECIALIZATION

Geophysics (seismology), and its application to address problems of continents and oceans.

POSITIONS HELD

Currently, Prof Gupta is Raja Ramanna Fellow at the National Geophysical Research Institute (N.G.R.I.), Hyderabad, India. Among the important positions held earlier include Secretary to Government of India, Department of Ocean Development (2001- 2005); Director, N.G.R.I. (1992- 2001); Advisor, Department of Science and Technology, Government of India (1990- 1992); Vice Chancellor, Cochin University of Science and Technology (1987- 1990); Director, Centre of Earth Science Studies, Trivandrum (1982- 1987); and Project Director; Kerala Mineral Development and Exploration Project (1982- 1987); Research Scientist, University of Texas at Dallas (UTD), USA, (1972-1977); Adjunct Professor, UTD, USA (1978-2001).

RESEARCH

Globally known for providing first geophysical evidence of enormously thick crust below Himalaya and Tibet Plateau; identifying common characteristics of artificial water reservoir triggered earthquakes and discriminating them from normal earthquakes; making successful medium term earthquake forecast in the north east India region; Chairing the Steering Committee of Global Seismic Hazard Program (GSHAP) of the UN where some 500 scientist worked during 1992 through 1999 to produce Global Seismic Hazard Map, etc.

Prof Gupta has published over 150 scientific papers in reputed journals. He is an author of four books; all published by Elsevier Scientific Publishing Company, and edited 20 volumes. His first book, “Dams and Earthquakes” published in 1976 has been translated in to Russian and Chinese.

Following the disastrous tsunami of 26th December 2004, Dr. Gupta spearheaded designing and commissioning the Tsunami Warning System for India.

NATIONAL AND INTERNATIONAL ASSOCIATIONS

Prof Gupta is currently the President of the Geological Society of India. Earlier, he has been the President of Indian Geophysical Union; Indian Geological Congress; and Association of Exploration Geophysicists. He was the General President of the 94th Indian Science Congress (ISC). ISC covers all disciplines of natural sciences. “Planet Earth” was chosen as the focal theme of the Congress which was inaugurated by the Prime Minister of India, and addressed by the President of India, Nobel Laureates, and distinguished scientists from Indian and abroad, and attended by some 5,000 participants.

Dr. Gupta is currently a member of the Committee on Science Planning and Review (CSPR) of ICSU and ICSU Planning Group on Natural and Human-induced Hazards and Disasters; Vice President of IUGG; Chair, Expert Group on Natural and Human Induced Environmental Hazards and Disasters in Asia and Pacific; Member, Committee on Public Affairs (COPA), AGU; and Life Time Bureau Member of the ILP. Earlier he has been a Councilor of IUGS; Chair, Steering Committee, Global Seismic Hazard Program (a UN initiative); Chair, IASPEI/UNESCO/ICL Working Group on Seismology and Related Sciences in Africa; Bureau/Executive Committee member of IASPEI and ILP.

Prof Gupta is the Founder President of Asian Seismological Commission.

Prof Gupta has convened/co-convened over 20 Symposia/Seminars globally, and given several invited lead talks.

ANTARCTICA

Prof Gupta was the Leader of the Third Indian Scientific Expedition to Antarctica (1983- 1984), which succeeded in establishing a permanent

base station for scientific research in a record time of one Antarctic Summer.

SPECIAL ASSIGNMENTS

Dr. Gupta has been a visiting Professor to several universities /institutions in Europe and USA. He has been an advisor/consultant to UNESCO, IAEA, Common Wealth Science Council, ISDR and ICSU on several occasions.

AWARDS/RECOGNITIONS

Dr Gupta has received several awards and recognitions. To mention a few:

Shanti Swarup Bhatnagar Prize (1983); USSR Academy of Sciences ‘100 years of International Geophysics’ Memorial Medal, 1985; National Mineral Award (1991); CSIR Technology Prize for Business Development and Technology Marketing (1997); International Kharazmi Festival Award, Iran (1989); FICCI Award for Outstanding Contributions in Physical Sciences (1999); IGU Millennium Award (1999); National Mineral Award of Excellence (2002); INSA J. L. Nehru Visiting Fellowship (2003); International Oceanographic Commission 22nd Assembly “Brunn Memorial Lecture” (2003); Padma Shri (2006); Prof. Y. Nayudamma Gold Medal (2008); National Ocean Award for Science & Technology (2008); and AGU Waldo Smith Medal (2008).

Fellowship of Academies

Professor Gupta is an elected fellow of all major Science Academies of India; Fellow of TWAS, a Fellow of AGU and has been a Vice President of the Indian National Science Academy.

A COMPLETE LIST OF PUBLICATIONS

Research Publications

1. **Gupta, H.K.** (1964). Direction of approach of short period microseisms at Shillong, Ind. J. Met. Geophys., 15, pp.653-656.
2. **Gupta, H.K.** and H. Narain (1967). Crustal structure in the Himalayan and Tibet Plateau region from surface wave dispersion, Bull. Seism. Soc. America, 57, pp.235-248.
3. **Gupta, H.K.** (1968). Lateral surface wave velocity variation studies, Proc. 'Symp. on Geophys', Indian Geophysical Union, Dec. 1968, pp.139-152.
4. **Gupta, H.K.** and Y. Sato (1968). Regional characteristics of Love wave group velocity dispersion in Eurasia, Bull. Eq. Res. Inst. Tokyo, 46, pp.41-52.
5. **Gupta, H.K.** and I. Mohan (1968). The N.G.R.I. Seismological Observatory, Bull. N.G.R.I., 6, pp.125-133.
6. Narain, H. and **H.K.Gupta** (1968). Observations on Koyna earthquake, J. Ind. Geophy. Un., 5, pp.30-34.
7. Narain, H. and **H. K. Gupta** (1968). The Koyna earthquake, Nature 217, pp.1138-1139.
8. Narain, H. and **H.K. Gupta** (1968). The how and why of Koyna, Science Today, pp.47-51.
9. **Gupta, H.K.** (1969). Studies on seismic wave dispersion, crustal structure of Himalayan region and global seismicity, Ph.D. Thesis, Roorkee University.
10. **Gupta, H.K.** (1969). Recent development in lateral surface wave dispersion studies - A Review, Proc. Sym. Use of Gauribidanur seismic array data, B.A.R.C., pp.58-78.
11. **Gupta, H.K.**, H. Narain, B.K.Rastogi and I. Mohan (1969). A study of the Koyna earthquake of Dec.10, 1967, Bull. Seism. Soc. America, 59, pp.1149-1162.
12. **Gupta, H.K.** (1970). Surface wave studies in India, Ind. Geophy. Union, Tandon Volume, pp 69-81.
13. **Gupta, H.K.** and J.G.Negi (1970). High magnitude global seismicity and lateral velocity gradients, Pure and App. Geophys., 80, pp.92-101.
14. **Gupta, H.K.** and J.G.Negi (1970). Lateral variation of Raleigh-wave dispersion characteristics in Australia, Bull. Seism. Soc. America, 60, pp.1897-1906.

15. **Gupta, H.K.**, I. Mohan and H.Narain (1970). The Godavari Valley earthquake sequence of April 1969, Bull. Seism. Soc. America, 60, pp.601-615. Gupta, H.K., M.V.D. Sitaram and H.Narain (1970). Station factor of N.G.R.I. Observatory for teleseismic events, Bull. N.G.R.I., 8(1&2), pp.1-9.
16. **Gupta, H.K.**, I. Mohan, B.K. Rastogi, M.V.D. Sitaram and H. Narain (1970). Seismological investigations under upper mantle project, Bull. N.G.R.I., 8(3&4), pp.1-18.
17. **Gupta, H.K.**, B.K. Rastogi and H.Narain (1971). The Koyna earthquake of December 10, 1967: A multiple seismic event, Bull. Seism. Soc. America, 61, pp.167-176.
18. Mithal, R.S. And **H.K. Gupta** (1971). Seismic zoning in India, Bull. N.G.R.I., 9 (1&2), pp.9-22.
19. **Gupta, H.K.** and B.K. Rastogi (1972). Earthquake mb vs. Ms relations and source multiplicity, Geophys. J. Roy. Astr. Soc., 28, pp.65-89.
20. **Gupta, H.K.**, I. Mohan and H.Narain (1972). The Broach earthquake of March 23, 1970, Bull.Seism.Soc.America, 62, pp.47-61.
21. **Gupta, H.K.**, B.K.Rastogi and H.Narain (1972). Common features of the Reservoir associated seismic activities, Bull. Seism. Soc. America, 62, pp.481-492.
22. **Gupta, H.K.**, B.K.Rastogi and H. Narain (1972). Some discriminatory characteristics of earthquakes near the Kariba, Kremasta and Koyna artificial lakes, Bull. Seism. Soc. America, 62, pp.493-507.
23. **Gupta, H.K.**, M.V.D.Sitaram and H. Narain (1972). Surface wave and body wave magnitudes of some Sino-Soviet nuclear explosions and earthquakes, Bull. Seism.Soc. America, 62, pp.509-517.
24. **Gupta, H.K.** (1973). Plate tectonics and lateral velocity gradients, Tectonophysics, 16, pp.145-154.
25. **Gupta, H.K.** (1973). Geophysical investigations for the Himalayan region undertaken at the N.G.R.I., Proceedings Seminar on Geodynamics of Himalayan Region, Geodynamic Series, 5, pp.72-96.
26. **Gupta, H.K.** and T. Santo (1973). Worldwide investigation of the mantle Raleigh wave group velocities, Part I, Dispersion data for new 31 great circle paths, Bull. Seism. Soc. America, 63, pp.271-282.
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29. **Gupta, H.K.** (1974). Some seismological observations and tectonics from Hindu Kush to Burma region, *Proceedings 4th Seminar on Himalayan Geology*, Wadia Institute of Himalayan Geology, India, 4, pp.465-480.
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34. **Gupta, H.K.** (1976). Seismological investigations and tectonics of the Kashmir-Hindu Kush-Pamir region, invited paper presented at the International Colloquium on Geotectonics of Kashmir, Karakorum, Hindu Kush, Pamir Orogenic belts, *Proceedings published by Academic Nazionale Dei Lincei*, Rome 21, pp.42-66.
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36. **Gupta, H.K.** and D.C. Nyman (1976). Long period Rayleigh wave group velocities along a great circle path in Southern Asia, *Geoviews*, 2, pp.15-27.
37. **Gupta, H.K.**, D.C.Nyman and M.Landisman (1976). Raleigh wave group velocities between New Delhi, India and Shiraz, Iran, extending to long periods, In Charles L.Drake (Ed) - *Geodynamics: Progress and prospects*, American Geophysical Union, pp.121-127.
38. **Gupta, H.K.**, (1977). Earthquake prediction: facts and fantasies, *Jour. Indian Geophys. Union*, XIV (1-4), p.115-125.
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54. **Gupta, H.K.** and D.D.Singh (1980). Source mechanism study of Quetta earthquake of May 30, 1935. *Geological Bulletin, University of Peshawar*, 13, pp.143-150.
55. **Gupta, H.K.,** C.V.R.Rao, B.K.Rastogi and S.C.Bhatia (1980). An investigation of earthquakes in Koyna region, Maharashtra, for the period October 1973 through December 1976, *Bull. Seism. Soc. America*, 70, pp.1833-1847.
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