

**GAUTAM RAWAT, WIHG, DEHRADUN, INDIA**



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**RESEARCH GROUP:                    GEOPHYSICS**

**FIELD OF SPECIALIZATION:    GEOELECTRICAL MODELLING, EM GEOPHYSICS,  
SEISMOTECTONICS, TIME SERIES PROCESSING**

**EDUCATION:**

PhD. (Geophysics) from Indian Institute of Technology, Roorkee

M.Tech. (Applied Geophysics), University of Roorkee, Roorkee

BSc. (Computer Science), Gurukul Kangri Vishwavidyalaya, Hardwar

**PROFESSIONAL EXPERIENCE:**

Project Scientist: Dec, 1999-Feb 2005 in Indian Institute of Geomagnetism, New Mumbai

Scientist 'B': March 2005 - March 2010 in Wadia Institute of Himalayan Geology,  
Dehradun

Scientist 'C': March 2010 – March 2015 in Wadia Institute of Himalayan Geology,  
Dehradun

Scientist 'D': March 2015 onwards in Wadia Institute of Himalayan Geology, Dehradun

**TEACHING EXPERIENCE:**

**SERVICES:**

**a. Supervision/Guidance to Ph.D. Students:**

**: Mr Dhamodharan S.**

**b. Membership:**

- i) Member of Indian Geophysical Union, India
- ii) Member of Indian Science Congress, India

**PH.D. ADVISOR: DR B.R.ARORA , DR. P.K.GUPTA**

**LIST OF PUBLICATIONS**

**(a) SCI Papers**

1. Arora, B.R., Unsworth, Martyn J. and Rawat, Gautam., (2007). "Deep resistivity structure of the Indian Northwestern Himalaya and its tectonic implications" *Geophys. Res. Lett.* 34, lo4307, doi:10.1029/2006GL029165.
2. Arora, B.R., Kumar, Naresh., Rawat Gautam and Paul, Ajay.,(2008),"A Peep into Himalayan Seismicity", *Mem. Geological Society of India*,72, pp 29-46
3. Arora,B.R ., Kamal., Kumar, Amit.,, Kumar, Naresh and Choubey, V.M.(2008), First observations of free oscillations of the Earth from First Indian superconducting gravimeter, V 95,No. 11, Dec 2008, *Current Science*.
4. F. Dudkin., Rawat, Gautam., B.R.Arora, V. Koreponov, O. Leonteyav and A.K.Sharma (2010) "Application of Polarization ellipse technique for analysis of ULF magnetic fields from two distant stations in Koyna-Warna seismoactive region, west India." *Nat. Haz. Earth Syst Sc. (NHSS)* V10, 1513-1522 Doi: 10.5194/nhess-10-1513-2010
5. Arora, B.R., Choubey, V.M., Naresh Kumar and Gautam Rawat. (2011). "Multi-Parameter Geophysical Observatory: Initiative for Integrated Earthquake Precursory Research", Invited contributions to proceedings of National Conference on "Geosciences and Water Resources for Sustainable Development" Department of Geophysics, Andhra Univ. Feb 11-12, 2011, pp 6-16.
6. Kumar, Naresh., Rawat, Gautam., Choubey,V.M. and Hazarika, D.,(2013) "Earthquake Precursory Research in Western Himalaya based on the Multi-Parametric Geophysical Observatory Data", *Acta Geophysica*, DOI: 10.2478/s11600-013-0133-1
7. Rawat, Gautam., (2014) "Characteristic ULF band magnetic field variations at MPGO, Ghuttu for the 20 June 2011 earthquake in Garhwal Himalaya" , *Current Science*, 88-93,
8. Rawat, Gautam., Arora, B.R. and Gupta, P.K.(2014) " Electrical resistivity cross section across the Garhwal Himalaya: proxy to fluid seismicity linkage" *Tectonophysics*, <http://dx.doi.org/10.1016/j.tecto.2014.09.015>
9. Rawat, Gautam., Chauhan,Vishal., Dhamodharan,S.,(2016) "Fractal dimension variability in ULF magnetic field with reference to local earthquakes at MPGO, Ghuttu" *Geomatics, Natural Hazards and Risk*, Doi:10.1080/19475705.2015.1137242

10. Kumar Naresh, Chauhan, Vishal, Dhamodharan, S., Rawat Gautam, Hazarika, Devajit, Gautam, PKR., (2017) Prominent precursory signatures observed in soil and water radon data at multi-parametric geophysical observatory, Ghuttu for Mw 7.8 Nepal earthquake” Current Science, 112 (5), 907-909
11. Kumar, Sachin, **Rawat, Gautam**, Dhamodharan, S., Sen, Kaushik., Maiti, Sauman (2019) “Dimensionality analysis of MT impedances of Tso- Morari Dome: implication for structural Interpretation” Himalayan Geology, 40(2),190-198
12. **Rawat, Gautam.**, Philip, G., N. Suresh., Medha., Yadav, Rekha., (2019), “Electrical resistivity tomography along the Himalayan Frontal Thrust in the northwestern Frontal Himalaya for active tectonics studies” Modeling Earth Systems and Environment (2019) 5:1563–1568 <https://doi.org/10.1007/s40808-019-00604-z>

#### (b) Non-SCI Articles

1. गौतम रावत (2015), उत्तराखण्ड में भूकम्पीय जोखिम, अश्मिका पृ. 30-31

#### (c) Chapter in Books

1. Arora, B.R., Rawat, Gautam., Mishra, S. S., (2012) "Indexing of ULF Electromagnetic Emission to Search Earthquake Precursors", in "The Frontier of Earthquake Prediction Studies", Ed. by M. Hayakawa, Nihon-senmontosho-Shuppan, Tokyo, pp346-362, 2012.
2. **Rawat G.**, Bartarya S.K., Singh B., Bhasin R.K. (2020)“Geophysical Characterization of Chumathang (Ladakh) Hot Spring.” In: Biswas A., Sharma S. (eds) Advances in Modeling and Interpretation in Near Surface Geophysics. Springer Geophysics. Springer, Cham, DOI [https://doi.org/10.1007/978-3-030-28909-6\\_13](https://doi.org/10.1007/978-3-030-28909-6_13)

#### (g) Articles in Proceeding Volumes

1. B.R. Arora, P.B.V. Subbarao, Gautam Rawat, A.K. Singh., 2001 “Deep electrical conductivity distribution around Bhuj earthquake affected region” in the proceedings of International conference on seismic hazard with particular reference to Bhuj earthquake of January 26, 2001 (3-5 Oct 2001, New Delhi)
2. B.R. Arora, Gautam Rawat, P.B.V. Subbarao, et al., 2001 “A Long period Magneto telluric study in Dharwar region” in the proceedings of Joint assembly of IAGA and IASPEI in Hanoi, Vietnam (19-31st Aug 2001)
3. B.R. Arora, Gautam Rawat, A.K. Singh., 2002, Mid Crustal conductor below the Kutch rift basin and its seismogenic relevance to the 2001 Bhuj Earthquake. in DST news letter on Deep Continental studies (Aug 2002)
4. B.R. Arora, Gautam Rawat, Vipul Nagar., 2003, ” Long period Magnetotelluric measurements in NW –Himalaya: Implications for mantle conductivity” in the proceedings of 23rd general assembly of International union of geodesy and geophysics (IUGG) held at Sapporo, Japan during June 30 – July 11,2003

5. Gautam Rawat , B.R.Arora and Vipul Nagar., (2004),”Deep electromagnetic Imaging of the Himalayan collision zone by Long period Magnetotelluric”, In the proceedings of 17 EM international workshop on Electromagnetic Induction in the earth, Hyderabad, India during 18-25 October 2004.
6. B.R. Arora and Gautam Rawat., (2004), “Sub Lithospheric electrical anisotropy beneath higher Himalaya: Suggestion for decoupled lithosphere” In the proceedings of Post workshop on multidisciplinary studies in Himalaya after 17th EM international workshop on Electromagnetic induction in the earth, Hyderabad, India during 23-25 Oct 2004.
7. Roger Olleson, R.K.Bhasin, A. Ragnarsson, B.Richter, Bhoop Singh, S.K.Bartarya, S.K.Rai, and Gautam Rawat “Pilot project study for utilisation of geothermal energy in north-western Himalayas” Proceedings in world geothermal congress 2015