

Curriculum Vitae

Sanjit Kumar Pal

Professor and Former Head

Department of Applied Geophysics

Indian Institute of Technology (Indian School of Mines)

Dhanbad-826004

Gravity, Magnetic, Self-potential, Electrical Resistivity Tomography, Induced Polarization Tomography, UAV-based and Satellite Remote Sensing, Multichannel Analysis of Surface Wave, Seismic Refraction Tomography, Ground Penetrating Radar, Very-Low Frequency Electromagnetic (FLF-EM), Data Driven multiparametric AI/ML integration, etc.

DOB: 10-07-1976

Web of Science Researcher ID: **M-2188-2016**

<https://orcid.org/0000-0002-4720-2959>

Scopus Author ID: **36960001700**

- **Expertise :** Near Surface Geophysics; Environmental Geophysics; Mining Geophysics; Archaeological Geophysics, Engineering Geophysics and Geotechnical Modelling, Satellite remote Sensing; Image processing and GIS
- **Teaching:** Satellite remote Sensing, Image processing and GIS, Engineering Geophysics and Geotechnical Modelling, Near near-surface geophysics, Solid Earth Geophysics
- **Field Experience:** Different geophysical, engineering geological, remote sensing data
- **Received the Indian National Geoscience Award 2024 from the President of India on 26.09.2025**
- **Editor of “Pure and Applied Geophysics”, Springer Int.** Q2 5-year impact factor 1.9
- **Associate Editor of “Acta Geophysica, Springer Int”,** Q2 5-year impact factor 2.1
- **Executive Council Member for the Year 2024-2027, “Indian Geophysical Union”**
- **Guest Editor in “Frontiers in Earth Science”** on the Topic: Exploring Near-Surface Geophysics and Tectonics: From Conventional Modeling to AI Solutions
<https://www.frontiersin.org/research-topics/69839/exploring-near-surface-geophysics-and-tectonics-from-conventional-modeling-to-ai-solutions>
- **Guest Editor in “Discover Geoscience”, Springer,** on the Topic: Climate Change and Water Insecurity: Insights from Semiarid Hydrology
<https://link.springer.com/collections/hcjgdifhjd>

Salient Key Points

- Present employment: **IIT(ISM) Dhanbad since 2012**
- Past Employment: **NHPC Limited from June 2004 to January 2012**
- Academic Record: **PhD (IIT Kharagpur) and M.Sc. Tech. Geophysics (BHU, Varanasi)**
PhD Supervised: **29 PhD supervised** (7 Sole guide, 21 Principal Guide with joint guidance, and 1 Co-guidance)
- **PhD Supervised Ongoing: 11 (Sole: 4; Principal guide: 7)**
- Research project ongoing: **8 with total cost of Rs. 39263425.0 (Rs.16132682.0 as PI, Rs. 23130743.0 as Co-PI)**
- Research project Completed: **9 with total cost of Rs. 85458947.0 (Rs. 27058000.0 as PI; Rs. 19800000.0 as PI of Dept. Project; Rs. 38600947.0 as Co-PI)**
- Consultancy project ongoing: **4 with total cost of Rs. 6347220.0 PI**
- Consultancy project completed: **27 (Rs.210.36 Lakh as PI; Rs.79.61 Lakh as Co-PI)**
- EDP Courses: **Rs. 785000.0 as Coordinator and Rs. 944000.0 as a Co-coordinator**
- Publications& Books: **110 Nos. with total JCR IF of ~234, average 2.8 (Q1:22; Q2:24; Q3:25; Q4:35; Non Q: 4);**

- Total JCR impact factor of the published journal : **228.5, with average impact factor 2.75**
- **Peer review of 306 manuscripts**
- Papers in International conference proceedings : **21**
- Papers in National conference proceedings : **33**
- Dissertations of M.Sc. Tech guided : **65**
- Dissertations of M. Tech guided : **22**
- Membership Of Professional Bodies/Organizations : **Six**
- Member of M.Sc. /M.Sc. Tech. of Admission Committee from **2013 to 2018**
- Coordinator, M. Tech. (Earthquake Science and Engineering) w.e.f. **4.12.2017 to 2021**
- Time-Table in-charge since **2012 to December, 2018**
- Research Infrastructure Developments at AGP, IIT(ISM): **21 instruments of total Rs. 430.5 Lakh and 12 software of total Rs. 70.35 Lakh**
- Administrative Guide: **4 PhD Students**
- Head of the Department of Applied Geophysics: **17.08.2022 to 30.06.2025**

Detailed Bio-data

• Employment

Employer	Position held	Date of Joining	Date of Leaving
IIT(ISM), Dhanbad	Professor (Academic Pay level 14A)	17.08.2023	Continuing
IIT(ISM), Dhanbad	Associate Professor in PB-4 /13A2	07.11.2017	16.08.2023
IIT(ISM), Dhanbad	Assistant Professor in PB-4	22.06.2014	06.11.2017
IIT(ISM), Dhanbad	Assistant Professor	02.02.2012	22.06.2014
NHPC Limited	Assistant Manager (Geophysics)	01.04.2010	31.01.2012
NHPC Limited	Geophysicist	05.06.2006 27.06.2005	31.03.2010 31.05.2006
NHPC Limited	Trainee Officer (Geophysics)	26.06.2004	26.06.2005

• Academic Record starting with secondary education

Examination	Branch/Specialization	College/University/Institute	Year
Madhyamik/Matric or Equivalent	General	West Bengal Board of Secondary Education	1992
H.S. or Equivalent	Science	West Bengal Council of Higher Secondary Education	1994
B.Sc.	Mathematic Honours	The University of Burdwan	1997
M.Sc. Tech.	Geophysics	Banaras Hindu University	2001
Ph. D.	Geology and Geophysics	IIT Kharagpur	2009

PhD Supervised

S No	Name of PhD scholar	Date of joining	Date of award	Fellowship	Title of thesis	Guide	Publication	Present position
1	Mr. Abhay Kumar Bharti 2014DR0052	31.01.14	04-11-16	IIT (ISM)	Electrical Resistivity Tomography for mapping of coal mine voids over parts of Jharia and Raniganj Coal fields, India	Dr. S. K. Pal	4(Q1, 3Q2)	Scientist-C, CIMFR - Dhanbad
2	Mr. Jitendra Vaish 2012DR0006	06.02.12	22-01-18	IIT (ISM)	Time-lapse study of coal fire characterization over parts of Jharia Coalfield, India	Dr. S. K. Pal	4 (Q2, Q3, 2Q4)	Executive Engineer, ONGC
3	Miss Komal Rani 16DP000022	3.06.16	01.04.19	NRSC, ISRO	Integrated use of Emissivity, Thermal Inertia and Geophysical Data for Geological Mapping in Parts of Banswara, Rajasthan, India	Dr. S. K. Pal and Dr. Arindam Guha	5(Q2, 3Q4)	Scientist-C, NIO Goa
4	Mr. Satya Narayan 2014DR0184	11.07.14	18.06.19	IIT (ISM)	New insights into the structural and tectonic settings of Bay of Bengal offshore region using combined global gravity model data	Dr. S. K. Pal	3 (Q1, Q2, Q4)	Senior Geophysicist, ONGC

5	Jyoti Sharma 2015DR1023	27.11.14	20.06.20	ISR, Gandhi Nagar	Imprints of Plume-Lithosphere Interaction Beneath the Northwestern Deccan Volcanic Province from Rayleigh and Love Wave Tomography	Dr. S. K. Pal; Dr. M. Ravi Kumar, ISR, Gandhi Nagar; Prof. P.N.S. Roy, IIT, Kharagpur	2 (Q1, Q2)	Scientis-C, Gandhinagar, Gujarat and Postdoc, at Southern Methodist University
6	Mr Sahadev Kumar 2012DR0169, sahadev08@gmail.com	27.08.12	15.03.21	IIT (ISM)	Combined Self-Potential, Magnetic, and Electrical Resistivity Methods for Characterization of Coal Mine Fires in Parts of Jharia Coalfield, India,	Sanjit Kumar Pal (Guide) and Prof. Shalivahan, (Co-Guide)	1(Q4)	Senior Geophysicist, ONGC
7	Mr. Subhendu Mondal 2016DR0062 subhendu.agp@gmail.com	15.02.16	07.10.21	IIT (ISM)	Integrated Remote Sensing and Geophysical Study of Sittampundi Layered Complex area of Tamilnadu	Dr. S. K. Pal and Dr. Arindam Guha	3(2Q1, 1Q2)	Senior Geophysicist, My world Cons. Pvt. Ltd
8	Somak Hajra 17DP000205 somakhajra1990@gmail.com	07/12/16	02.12.21	WIHG	STRUCTURE OF THE CRUST AND UPPER MANTLE BENEATH THE KUMAON HIMALAYA	Dr. S. K. Pal and Dr. Devajit Hazarika, WIHG and Prof. P.N.S. Roy, IIT Kharagpur	3(Q1, Q2, Q2)	Postdoc, University of Alberta
9	Suresh Kannaujiya 2015DR1104	08-01-2016	26.4.22	IIRS, ISRO	Multiparametric Geodetic and Geophysical approaches to unveil the linkage of crustal deformation and seasonal variation in the Northwest Himalaya	Dr. S. K. Pal and Prof. P.N.S. Roy, IIT Kharagpur	3(Q2, 2Q3)	Scientist , IIRS, ISRO
10	Mr. Partha Sarkar 2014DR0051	31.01.2014	25.08.2022	IIT (ISM)	Evaluation of large earthquake potential in north east himalayan fault zone using gps strain and seismicity analysis	SK Pal and Prof.P.N.S Roy	3(2Q2, Q3)	Project Scientist(Tempo), MOES
11	Mr. Avinash Chouhan, 2015DR1179	06.10.2015	14.11.2022	ISR, Gandhi Nagar	Lithospheric structure and geodynamic evolution of the Cambay rift and adjoining region: Insights from gravity data	SK Pal and Dr. P. Choudhury	2 (Q1, Q3)	Assistant Professor, Manipur University
12	Ms. Mamuni Sucheeta Ekka, 2015DR0065	06.02.2015	14.11.2022	IIT (ISM)	Seismic structure beneath Indian Ocean and its seismogenic potential	SK Pal, Prof.P.N.S Roy and Prof. O.P. Mishra	2 (Q1, Q2)	Project Associate, NGRI
13	Miss Dharmita Horo, 16DR000143	01.08.2016	06.12.22	IIT (ISM)	Integrated Geological and Geophysical Studies of the Auriferous zones in parts of North Singhbhum Mobile Belt, Jharkhand, India	SK Pal and Prof. Sahender Singh	2 (Q3, Q4)	-
14	Mr Soumyashree Debasis Sahoo, 16DR000192	01.08.2016	06.12.22	IIT (ISM)	Characterization of crustal structures over Central Indian Ridge: appraisals on the basis of spreading rate, crustal age, and magmatism process	SK Pal and Prof. G.S Rao	5 (4Q2, Q4)	Assistant Professor, IIT Bhubaneswar
15	Shuva Shankha Ganguli 16DP000037	4.7.2016	09.2.2023	-	Gravity-magnetic appraisal of Crustal architecture in parts Southern Granulite Terrain and Cuddaph Basin, India	SK Pal	5	Director(Geophysics) , GSI
16	Sandeep Gupta 14DR0288	08/04/14	09.2.2023	MOES	Seismic Hazard Estimation of Bihar-Jharkhand using GPS, strain	S K Pal, Prof. P.N.S Roy and Dr. V. K. Gahalaut	2	RA, IIRS
17	Ravindra K. Gupta 17DR000427	01.07.17	03.04.2023	IIT (ISM)	Seismic site characterization and site response study of Dhanbad city and Nirsas (India)	Mohir Agarwal and S K Pal	3	RA, IIT Roorkee
18	Saurabh 2016DR0107	19.02.16	28.4.2023	IIT (ISM)	Integrated approach for geophysical investigation within the coal and bauxite mines in parts of the eastern India	SK Pal	1	RA, NTPC
19	Rajwardhan Kumar 2015DR0134	22.09.15	12.5.2023	IIT (ISM)	Integrated geophysical assessment for sustainable mining in parts of Jharia and Raniganj Coalfields, India	SK Pal	1	RA, ISM
20	Ujjawal Kumar 2015DR1096	7.08.15	26.6.2023	IIT (ISM)	New insights on structure and tectonics of a part of Western Indian Ocean using global gravity model data	SK Pal	3	MECL
21	Mr. Sarvesh Kumar 17DR000570	30.10.17	14.07.23	ISRO	Integrated Remote sensing and geophysical study for appraisal of Kimberlite emplacement in parts of the Dharwar and Bundelkhand cratons.	SK Pal and Dr. A. Guha	4	Halliburton
22	John P Pappachen 2016DR1136	08.04.2016	4.10.23	WIHG	Crustal deformation studies in the Garhwal-Kumaun Himalaya, Northwest India: An investigation on the kinematics of plate boundary faults using geodetic measurements	S K Pal and Dr. Rajesh S.	2	
23	Mr. Rajkumar 18DR0008	9.04.2018	04.12.23	MoES	Unraveling geodynamics and earthquake hazards in Northeast Himalayas using Seismo-geodetic data	S K Pal and Dr. S. K. Prajapati	2	MoES
24	Mr. Dharendra Nath Yadav 2015DR1104	09.07.2015	22.3.24	-	Subsurface structure and Seismotectonic Investigations of Kinnaur Himalaya: Constraints from waveform modeling of Seismological data	SK Pal, Dr. N. Kumar, and Prof.P N. S. Roy	3	AMD/DAE
25	Sanjay Kumar Verma 18DP000353	25.08.2017	24.4-2024	WIHG	A study on crustal structure in the northwest Himalaya using ambient noise tomography and gravest mode of free earth oscillations based on superconducting gravimeter data	SK Pal, Dr. N. Kumar, and Prof.P.N.S Roy	2	

26	Naresh Kumar Seelam, 16DP000110	03.10.2016	10.03.2025	-	Interpretation of Seismic and Well Log Data in Eastern Indian Coalfields using Advanced Signal Processing Techniques: A Novel Approach for Building Subsurface Lithological Model	S. K. Pal and G. Srinivasa Rao		CMPDI
27	Arvind Yadav, 16DP000137	20.12.2016	10.03.2025	-	Geological characterization using geophysical techniques for coal exploration in the parts of Talcher and Ib Valley Coalfields, Odisha, India	S. K. Pal and Shalivahan		CMPDI
28	Vijayakumar Dommeti, 16DP000012	24.08.2016	20.5.2025	-	Multi-Scale Geophysical Investigations for Geological Differentiation and Concealed Mineral Targeting in the Cuddapah Basin, Southern Indian Shield	S. K. Pal and G. Srinivasa Rao	3	GSI
29	Vivek G Babu 17DP000187	02.11.2016	16.06.2025	WIHG	Integrated Seismotectonic Investigations of the Northwestern Himalaya: Comprehensive analysis of Seismicity, Stress Regimes, and Subsurface Crustal Structure	SK Pal, Dr. N. A. Kumar, and Dr. D. K. Yadav	3	
30	VARUN KUMAR 18DR0149	29.07.18	27.05.2026	IIT(ISM)	Comprehensive Seismic Hazard Assessment of Indo-Gangetic Basin and Adjacent Shield Region, India	S K Pal, Rajib Sarkar and A. P Singh	3	
Review Report received and Viva-Voce to be conducted								

• Thesis under review							
Sl. No.	Name of JRF	Reg No.	Date of Joining	Date of Pre-Subm	Guide	Broad area of research/ Title of thesis	Paper in SCI journal
29							

• PhD ongoing							
1	Koustav Ghosal	20DR0066					
2	Piyush Priyam	2014DR0025					
3	Vivek Vikash	22DR0344	03/01/23		S K Pal		
4	Nikhil Kumar Baranval	23DP0003			S K Pal		
5	Soumitra Kar	23DR0173	22/12/23		S K Pal		
6	NIHARIKA DAS	23DP0068	22/12/23		S K Pal		
7	Sumit Kumar Bhattacharya	23DP0102	22/12/23		S K Pal		
8	Yashpal Singh Tomar	24DP0198	08-07-2024		S K Pal	Lithospheric heterogeneities of North Eastern Himalaya: Geodynamic implication	
9	Umakanta Das	24DR0213			S K Pal	Mineral prospecting using AI/ML based hyper-spectral remote sensing and geophysical approaches	
10	EMMANUEL SERAPHIMU MREMA	24IM0020	9-11-2024		S K Pal	Sustainable mineral and groundwater exploration	
11	Niva Brahma	2015DR0133					
12	Mrinmoy Roy	24DP0294					
13	SOUMYA MUKHERJEE	25DP0058					
14	Anshu Sharma	25DR0095					
15	Shivani Sharma	24DP0295					
16	Setbandhu Mondal	2015dr1178					
17							

a. Research project ongoing

1. **Pal, S.K. (PI)** Sahoo, P.R and Sahoo, S. D. 3D subsurface modelling of structurally controlled geological provinces for critical mineral resource assessment. **Project cost Rs. 29,78,400.00, sanction dated: 02.09.2025. 02.09.2025 to 01.09.2028** ISRO/RES/4/736/25-26.
2. Saurabh Datta Gupta, and **Sanjit Kumar Pal**, Conduction Land Subsidence study using DINSAR methodology. EOGEP, Durgapur, EOGEP/RG(EAST)-CBM-2001/1/2025-26/09, 5.01.2026. Start date: 06.12.2025 to 05.12.2025. ISM Project No. SRDP1260I, Project Cost: Rs.5,00,000.00
3. Anshumali, Brijesh Kumar Singh, Vittal Hari, Tinesh Pathania, U. K Singh, **Sanjit Kumar Pal**, Pranab Das, “Impact of climate change on vulnerable aquifer systems in and around industrial and mining areas of Damodar River Basin (Eastern India) using GIS based Modified DRASTIC Model and Global Climate Model” Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, New Delhi, vide: 15/1/2023-R&D, 20.12.2024. Start Date: 20.12.2024 to 27.12.2027. ISM project No. SRDP 1158G, 26.12.2024, **Project cost: Rs. 78,79,804.00.**
4. **Pal, S. K. (PI)** Anil Kumar and Anshumali Integrated non-invasive geophysical, archeological and biogeochemical characterization of Itkhoura heritage sites in the Mohane River Valley. **DST (TDT)(SHRI) [Department of Science & Technology {Technology Development & Transfer (Science & Heritage Research Initiative)}].** DST/TDT/SHRI-16/2021(C &G). **Project cost Rs. 1,25,92,682.00. Sanction date: 08.02.2022. DST(TDT)(SHRI)(327)/2021-2022/888/AGP. dated 08.02.2022 to 31.3.2026**
5. **Pal, S. K. (PI)** and Sahendra Singh (Co-PI), Geological and Geotechnical Studies for Jangi-Thopal, Hydroelectric Project, SJVN/2020-2021/745/AGP; SJVN Ltd, Govt. of India, Rs.35,40,000.00 Lakh. Saction date: 03.12.2020 to 20.03.2023.

Research project Completed

1. **Pal, S. K. (PI)**, Bhattacharjee R M, Paul P. S. and Chatterjee R. Study of hazards due to mining induced sub-surface cavities and waterlogged areas in inaccessible old workings in underground coal mines using geophysical technique. Project No. CIL(16)/2020-2021/792/AGP (CMPDI/B&PRO/MT-173). **Project cost**

Rs.19996000.00, Coal India Limited, Ministry of Coal Sanction date: 17.02.2021

Completion : 14.07.2023

2. **Pal, S. K. (PI)** “Integrated Remote Sensing and Geophysical approach for mineral mapping over parts of Dharwar Craton” amounting to Rs. 30.23 Lakhs from the ISRO, DOS, Govt. of India, Bangalore with Ref.No. ISRO/RES/4/630/2016-17, 28-10-2016. IIT(ISM) Ref.No.ISRO(3)/2016-17/493/AGP, Rs.3562000.00, sanction date: 28.10.2016, completion date: 19.02.2021
3. **Pal, S. K. (PI) and Roy, P. N. S. (Co-PI)** Project entitled “Geotechnical characterization of Jharia Coal field area using geophysical techniques” 3159000.00. Revised amounting to **Rs. 3500000.00 Lakhs** from the DST with Ref. No. SB/S4/ES-640/2012. ISM Ref. No. DST(98)/2014-2016/384/AGP. As intimated vide letter dated 26.02.2014. sanction date : 26-12-2013, completion date :27.02.2018
4. **Prasoon Kumar Singh (PI) and Pal, S. K. (Co-PI)** Development of guidelines for delineation of water stressed area and designing of environmental friendly water storage structure for meeting the water needs in mining areas. Project No. CIL(20)/2021-2022/845/ESE. **Project cost Rs.1,07,84,000.00, Coal India Limited, Ministry of Coal, Sanction date: 04.01.2022 to 10.09.2025**
5. **Roy, P. N. S. (PI) and Pal, S. K. (Co-PI),** Seismic Hazard Estimation for Bihar-Jharkhand: Using GPS strain, seismicity and seismic study. **Project sponsored by MOES [MoES/P.O.(Seismo)/1(148)/2012], Project outlay Rs.13978000.0 Lakhs. Sanction date: 5.8.2013; completion date :31.03.20.**
6. **Pasupuleti S. (PI), Khatri V.N. (Co-PI), Choudhary, B.S. (Co-PI), Pal, S. K. (Co-PI), Sinha A. (Co-PI)** Hydrology Study in Chandmari Mine Lease of Hindustan Copper Ltd (HCL), Khetri Nagar, Rajasthan. **Project cost Rs. 14,07,947/-. Hindustan Copper Ltd (HCL), Khetri Nagar, Rajasthan. Project No. HCL/2023-24/1006/CE. Start Date: 10.5.2023 to 09.11.2023.**
7. **Murthy V.M.S.R., Kumaraswamidhas L.A., Krishna D G, Sahoo P.R., and Pal SK,** Assessment of Rock Mass Rippability through Geotechnical Investigations for Aiding Selection of Suitable Ripper for Joda East and Khondbond Mines of Tata Steel Limited” **Rs. 28,59,687.00, PROJECT NO: TATA STEEL/2023-2024/1070/MECH. Start date: 29.01.2024 to 18.12.2025**
8. **Murthy V.M.S.R., Kumaraswamidhas L.A., Krishna D G, Sahoo P.R., and Pal SK,** Assessment of Rock Mass Rippability through Geotechnical Investigations for Selection of Suitable Ripper and its Operating Parameters for Sandstone Formations of West Bokaro Mine, Tata Steel Limited. **Rs. 42,79,109.00, PROJECT NO : TATA STEEL/2023-2024/1069/MECH. Start date: 29.01.2024 to 28.07.2024**

9. Samadder S.R. (PI), **Pal, S. K. (Co-PI)** Rejuvenation of existing waterbodies and identification of suitable locations for storing surface water for sustainable water supply in Dhanbad Municipal Corporation Area. Rs.820000.00, IIT(ISM)/2022-2023/905/INSTITUTE. Sanction date: 18.07.2022 to 18.07.2023
10. Mohanty P.R., Shalivahan, **Pal S. K.**, Srinivasa Rao Gangumalla, Mohit Agrawal, To augment the post-graduate teaching and research facilities in the Department of Applied Geophysics. DST sanctioned letter No. SR/FST/ES-1/2017/12, 16-01-2018. Rs.198.00 Lakhs. DST-FIST(197)/2018/580/Institute. Department of Science & Technology. Sanction date: 16.01.2018
11. Shalivahan, Mohanty P.R., Chatterjee Rima, Pal S. K., FIST Program-2010, project sponsored by DST, Project outlay Rs.12000000.00 Lakhs. No. SR/FST/ESI-104/2010 dated 24th December, 2010. **To strengthen the Post-graduate teaching in the area of petrophysics in the department of Applied Geophysics. Under this project Electrical Resistivity Tomography equipment with software have been purchased and are being used for research work. Sanction date:24.12.2010; date of commencement : 18.01.2011, Completion date: 16.01.2017,**
12. Mohanty P.R., Shalivahan, **Pal S. K.**, Maiti, S. UGC-CAS, **FNo.560/1/CAS/2009/SAP-1, UGC assistance to Department of Applied Geophysics, ISM, at the level of CAS under special Assistance Programme. (ISM grant number UGC(72)/2011-2012/296/AGP)** project sponsored by UGC, Project outlay Rs.8000000.00. **Under this project Electrical resistivity Tomography equipment with software are being purchased. Sanction date:21.04.2011 to Completion date: 31.03.2017.**
13. Vasanta Govind Kumar Villuri, Srinivas Pasupuleti, Soyeb Alam, S.R. Samadder, Anup K Prasad, **Sanjit Kumar Pal**, V.M.S.R. Murthy, Dheeraj Kumar, Sarat Kumar Das 2019, Preparation of Master Plan – 2030 for Dhanbad Municipal Corporation, PROJECT NO : GTG/2019-2020/666/INSTITUTE, Rs. 32,15,000.00, Sanction date:27.6.2019 to 31.12.2024
14. Anshumali, Pathania T., **Pal S.K.**, Chanda K., Renu V, Barman B., 2021, Delineation of the Administrative Boundary of the Banki River, Garhwa District, Jharkhand: An Implication in Restoration and Conservation of the Ganga River Basin. IIT(ISM)/2021-2022/826/INSTITUTE. **Rs. 21,00,000.00; 20.9.2021 to 31.05.24**
15. Anshumali, Singh P.K., Singh U.K., Srinivas Pasupuleti, **Pal S.K.**, Mishra B.K., Renu V, Chanda K., Pathania T., 2021, Identification of suitable sites and designing of environmental friendly rainwater harvesting structures for catching the rain where it

falls when it falls in the IIT(ISM) campus area. PROJECT NO : IIT(ISM)/2021-2022/803/INSTITUTE. Rs. 8,80,000.00. Sanction date :01.06.2021.

- **Consultancy project ongoing**

1. **Pal, S. K.(CI)** 2026 High-resolution Electrical Resistivity Tomography to establish the water table and groundwater conditions in the Raikela Mines. M/s. Geetarani Mohanty Raikela Iron Ore Mines, Keonjhar, Odisha CONS 7676C Sanction date:03.06.2026, Rs. 21,24,000.00
2. **Pal, S. K.(CI)** and Bhattacharjee R M. 2026 Geophysical assessment of inter-seam parting, its stability and presence of water body in relation to XVII Bottom seam. M/S Indradeep Infra India Ltd, Saraidhela, Dhanbad, Jharkhand. CONS T338C Sanction date:03.06.2026, Rs.1770000.00
3. **Pal, S. K.(CI)** ERT/IP 2026 study for Manganese at Saveli, Maharashtra. M/s Spectra Geo Services Pvt Ltd, Hyderabad. CONS 7707C Sanction date:08.06.2026, Rs. 4,13,000.00
4. **Pal, S. K.(CI)** 2026 Geophysical investigation for seepage study at Mali-RWR. M/S. ADANI Infrastructure Management, Godda. CONS 7717C Sanction date:17.06.2026, Rs. 15,34,000.00
5. **Pal, S. K.(CI)** and Bhattacharjee R M 2025. Geophysical study to ascertain the status of filling as well as stability of workings beneath and within 45m of D.C. Railway line. AMP Colliery, Barora Area, Sitarampur, BCCL. Sanction date: 18.12.2025. Rs.12,98,000.00
6. **Pal, S. K.(CI)** and Bhattacharjee R M 2025. Geophysical investigation for stability assessment of Panagarh section of NH-2. National Highways Authority of India. CONS 7469C. Sanction date: 08.05.2025. Rs. 16,52,000.00

- **Consultancy project completed**

7. **Pal, S. K.(CI)** 2025 Geophysical Investigation of Tilpara Barrage. Dam Safety Organization, Irrigation and Waterways Directorate, Govt. of west Bengal, Kolkata. CONS/7468C. Sanction date: 08.05.2025. Rs.38,94,000.00.
8. **Pal, S. K.(CI)** 2025 GPR study for utility characterization in Maharashtra. CONS 7465C. Fugro Geotech (India) Pvt. Ltd., Navi Mumbai. Sanction: 01.05.2025. Rs.4,01,200.00
9. **Pal, S. K.(CI)** 2024 GPR study for characterization and utility mapping at Jaipur International Airport Rajasthan. CONS/7260/2024-25. Rs.4,00,020.00. Sanction date: 21.06.2024 Pramodya Digital Survey Ltd

10. **Pal, S. K.(CI)** and Sahoo P R 2024 Geophysical study for Manganese around Chipurupalle, Andhra Pradesh. CONS/7314C, BUP Radhakrishna Exploration Pvt. Ltd, Meral,Indas, Bankura, West Bengal. Rs.1,50,000.00. Sanction date: 02.09.2024
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5. Gupta RK, Agrawal M, Pal SK, Srivastava S, Kumar R, 2018. through Joint Analysis of MASW and Microtremor data in Dhanbad, Jharkhand, India, AGU Fall Meeting Abstracts. [2018AGUFM.S23C0544G](#)
6. Sarkar P, Singha Roy PN, **Pal SK**, 2018. Seismicity and stress field variations across the North East India: A finite element modelling approach, AGU Fall Meeting Abstracts
7. Hajra S, Hazarika D, Bankhwal M, Kumar N, **Pal SK**, Singha Roy PN, 2018. Average Crustal Thickness and Poisson's Ratio Beneath a Broadband Seismological Profile Along the Kali River Valley, Kumaon Himalaya, AGU Fall Meeting Abstracts
8. **Pal SK**, Kumar S, Bharti AK, Pathak VK, Kumar R, **2016**. Electrical Resistivity Tomography for coal fire mapping over Jharia coal field, India, American Geophysical Union, Fall Meeting 2016, abstract #NS33B-1954.
9. Rajkumar T, Pal SK, **2016**. Inversion of Reflected Travel Time Curve Using a Continuous Genetic Algorithm, 78th EAGE Conference and Exhibition 2016
10. Bharti A K, **Pal S K**, Ranjan S K, Priyam P, Pathak V K (2016) Coal Mine Cavity Detection Using Electrical Resistivity Tomography: A Joint Inversion of Multi Array Data. 22nd European Meeting of Environmental and Engineering Geophysics, EAGE, held in Barcelona, Spain. DOI: 10.3997/2214-4609.201602084.
11. Singh, B.B.; Srivardhan, V.; **Pal, S.K.** ; Kanagaraju, S.K.; Kumar S. and Vaish J., 2015, Particle Swarm Optimization Inversion of Self Potential Anomaly for Detecting Coal Fires, a Case Study - Jharia Coal Field. Third Sustainable Earth and Sciences conference in Celle, Germany, EAGE, DOI: 10.3997/2214-4609.201414282
12. Srivardhan, V., and **Pal, S. K.**, 2015, Shale Volume Estimation Using Factor Analysis and Neural Network. 6th International Geosciences Student Conference, 13-16 July, Prague, pp-2016.
13. **Pal, S. K.**, Kumar U, Majumdar, T. J., 2014, Utilization of High resolution GOCE gravity data for mapping of gravity field and structures Western offshore, India. 5th International GOCE User Workshop, 25-28 November 2014, UNESCO, Paris, France.

14. **Pal, S. K.** and Majumdar, T. J., 2013, High resolution EIGEN-6C2 gravity data for geological appraisal over the Singhbhum-Orissa Craton, India, International Conference on Future Challenges in Earth Sciences for Energy & Mineral Resources, Department of Applied Geology, ISM Dhanbad, November 14-16, 2013.
 15. Vaish, J., and **S. K. Pal**, 2013, Interpretation of Magnetic Anomaly data over East Basuria region using an Enhanced Local Wavenumber (ELW) Technique, 10th Biennial International Conference & Exposition, Kochi, P11, Society of Petroleum Geophysicists (SPG). spgindia.org/10_biennial_form/P110
 16. Vaish, J., and **S. K. Pal**, 2013, Subsurface Coal fire mapping of Patherdih Colliery, a part of Jharia coal field, India. International Conference on Future Challenges in Earth Sciences for Energy & Mineral Resources, Department of Applied Geology, ISM Dhanbad, November 14-16, 2013.
 17. **Pal, S. K.** and Majumdar, T. J., 2012, Geological appraisal of the 85oE Ridge, Bay of Bengal using GRACE and GOCE anomaly, First International GOCE Solid Earth Workshop, University of Twente, Netherlands, 16-17 October 2012, 33-34.
 18. **Pal, S. K.**, Bhattacharyya, R., Majumdar, T. J. and Bhattacharya, A. K., 2007. Geological interpretation of Bouguer gravity anomaly map over Singhbhum shear zone: a vertical derivative approach. International Conference on “Current Trends in Remote Sensing and GIS (CTRGA 2007)” at IIT, Kharagpur during Feb. 15-17, 2007 (Proc. Abs. p. 40).
 19. Bhattacharya, A. K., Srivastava, P. K., and **Pal, S. K.**, 2004. Change Detection Analysis of Eastern Coastal Zone of India using Satellite Remote sensing Data and GIS, International Conference on Remote Sensing & GIS for Environmental Studies, Germany, October, 7-8. Gottinger Geographische Abhandlungen 13, 10-15
- d. Papers in conference proceedings**
1. Rajat Sanyal and **Sanjit Kumar Pal** 2017, Presented a paper on Recent Archaeological Investigations at Asuralay (District Birbhum, West Bengal)“, at the International symposium on Recent Field Researches and Scientific Studies in Indian Archaeology, during the Joint Annual Conference of the ISPQS, IAS and HCS, held at the Banaras Hindu University, in November 2017.
 2. **S. K. Pal et al.** 2017, **Depth estimation of subsurface coal fire over part Jharia coal field using magnetic method**, 39 Annual convention of AEG, at BHU, Varanasi, October 5-7, 2017.
 3. **S. K. Pal**, 2018 Mapping of coal mine cavities and coal fire fronts over Raniganj and Jharia coalfields using integrated Geophysical techniques, ETGRMI 2018 APPLIED GEOPHYSICS IIT(ISM), March 9-11, 2018.

4. Saurabh, S.K. Pal, Piyush Priyam, Rajwardhan Kumar and Vipin K. Pathak 2016, Application of Seismic Refraction Tomography to delineate subsurface cavity : A case study in Jharia Coalfield region. 1st Triennial Congress of FIGA, 53rd Annual Convention of IGU & 34th Annual Convention of AHI on “Geosciences for Sustainability ”at Indian School of Mines, Dhanbad, November 8-10, 2016.
5. Rajwardhan Kumar, Abhay Kumar bharti, Piyush Priyam, Saurabh And S K Pal 2016, Application of electrical resistivity tomography for delineation of underground mine goaf in Jharia coal field. 1st Triennial Congress of FIGA, 53rd Annual Convention of IGU & 34th Annual Convention of AHI on “Geosciences for Sustainability ”at Indian School of Mines, Dhanbad, November 8-10, 2016.
6. Subhendu Mondal, Arindam Guha, **Sanjit Kumar Pal**, Biswajit Ghosh, K. Vinod Kumar. Synergistic use of ground magnetic data, laboratory spectroscopy, Landsat 8 derived spectral map to delineate rock types of Sitampundi layered complex, Tamilnadu, India. ISRS-ISG National Symposium, IIRS, Dehradun, 7-9 December, 2016.
7. Rajesh S., John P Pappachen, and **S K Pal**. 2016, **Near** and far field co-seismic offsets of 25th April 2015 Mw 7.8 Nepal earthquake from continuous GPS data” at 53rd Annual convention of **Indian Geophysical Union(IGU)** held at Indian Institute of Technology (IIT-ISM) Dhanbad during November 8-10,2016
8. A.K. Chouhan, S.V. Rao, R.K. Singh, N. Kumar, P. Choudhury, **S.K. Pal**, & B.K. Rastogi, 2016, New insight of crustal structure of cambay basin by 2.5D gravity modelling. 38th annual convention Seminar and Exhibition on Exploration Geophysics, Association Exploration Geophysics , 20-22 October, Hyderabad.
9. Vipin Kumar Patahk and **S.K. Pal**, Appraisal of surface geology and subsurface structural features over Singhbhum-Orissa Craton, India using high resolution EIGEN6C4 gravity data. Developments in Geosciences in the Past Decade – Emerging Trends for the Future and Impact on Society” 58th Annual General Meeting of the Geological Society of India, IIT Kharagpur, 21-23 October, 2016
10. **S. K. Pal**, Sahadev Kumar, Piyush Priyam, Saurabh Srivastava and Subhendu Mondal, **2016**, Subsurface Coal fire mapping using geophysical methods: some case studies over Jharia coalfields, India. Developments in Geosciences in the Past Decade - Emerging trends for the future & Impact on society and 58th AGM of Geological Society of India. Department of Geology & Geophysics, IIT Kharagpur from 21-23 October 2016.
11. Sahadev Kumar, **S. K. Pal**, Shalivahan Srivastava, D.C. Panigrahi, Saurabh Srivastava and Jitendra Vaish’ 2016. **Delineation of conceal Coal fire over Jharia coalfield**,

- India.** National Seminar on Environment and Development in Eastern India(status, Issues & Challenges) during 17-18 December, Ranchi, Ranchi University.
12. Satya Narayan, Vipin Kumar Patahk, T.J. Majumdar, **S.K. Pal**, Ujjawal Kumar and Saurabh. 2016. Utilization of GECO global gravity data and edge enhancement technique in delineation of structural features over parts of 85⁰E ridge. 1st Triennial Congress of FIGA, 53rd Annual Convention of IGU & 34th Annual Convention of AHI on “Geosciences for Sustainability ”at Indian School of Mines, Dhanbad, November 8-10, 2016.
 13. Piyush Priyam, **S.K. Pal**, Vipin K. Pathak. Rajwardhan and Saurabh, 2016. Application of Electrical Resistivity Tomography and Seismic Refraction tomography for exploration and identifying nature of massive and fractured Basalts over Birbhum district, West Bengal India. 1st Triennial Congress of FIGA, 53rd Annual Convention of IGU & 34th Annual Convention of AHI on “Geosciences for Sustainability ”at Indian School of Mines, Dhanbad, November 8-10, 2016
 14. Pathak V.K., Narayan S., Kumar Ujjawal, Goswami O.P. and **Pal S.K., 2015**, Structural mapping over Singhbhum-Orissa Craton, India using high resolution EGM2008 gravity data and in situ gravity data. 52nd Annual Convention of IGU, NCAOR, Goa during 3-5 November, 2015.
 15. Kumar Rajwardhan, Bharti, A.K. Kumar Sahadev and **Pal S.K., 2015**, Delineation of Underground cavities Using Electrical Resistivity Tomography (ERT) method. 52nd Annual Convention of IGU, NCAOR, Goa during 3-5 November, 2015.
 16. Priyam P., and **Pal S.K., 2015**, Interpretation of Bouguer gravity data by spectral analysis and downward continuation, over parts of Rajmahal trap area. 52nd Annual Convention of IGU, NCAOR, Goa during 3-5 November, 2015.
 17. Singh Rashmi and **Pal S.K, 2015**, Detection of coal fire zone in Patherdih Colliery, Dhanbad using magnetic modeling. 52nd Annual Convention of IGU, NCAOR, Goa during 3-5 November, 2015.
 18. Ranjan S. K., Yadav R.K. and **Pal S.K, 2015**, Near surface characterization using multi modes of love wave. 52nd Annual Convention of IGU, NCAOR, Goa during 3-5 November, 2015.
 19. Bharti, A.K., **Pal, S.K.**, and Jitendra Vaish, **2014**, Application of Self-potential method for coal fire detection over Jharia Coal field, *Indian Geophysical Union, 19 - 21 November, 2014*, Kurukshetra University, Kurukshetra, p59-62.
 20. Ranjan, S.K. and **Pal, S.K. 2014**, Characterization of shallow structure by MASW technique using multimode surface wave dispersion. *Indian Geophysical Union, 19 - 21 November, 2014*, Kurukshetra University, Kurukshetra, p161-164.

21. Piyush Priyam, **Pal, S.K.** and Maurya, Ved P., **2014** Delineation of inter-trappean basalts and possible coal seams over Birbhum District, West Bengal. *Indian Geophysical Union, 19 - 21 November, 2014*, Kurukshetra University, Kurukshetra, p152-133.
22. Gupta Sandeep Kumar, and **Pal, S.K.**, 2014, Digital image enhancement of Singhbhum Shear Zone and surroundings using Landsat ETM+ data. *Indian Geophysical Union, 19 - 21 November, 2014*, Kurukshetra University, Kurukshetra, p195-196.
23. **Pal, S. K.** and Vaish, J., 2014, Coal fire mapping of East Basuria, a part of Jharia coalfield, India: a magnetic gradient approach 6th National Seminar on Surface Mining (NSSM) on January 10-11, 2014.
24. **Pal, S. K.** and Vaish, J., **2013**, Magnetic method of investigation for Coal fire mapping of East Basuria Colliery, a part of Jharia coal field, India, XIII convention of Mineralogical Society of India, 20th – 21st March 2013, **University of Mysore, Department of Studies in Earth Science, Manasagangotri, Mysore, India.**
25. **Pal, S. K.** and Majumdar, T. J., **2012**, Utilization of GRACE gravity data for geological interpretation over a part of the Singhbhum Shear Zone, *49th annual convention on “towards the energy security - exploration, exploitation and new strategies”, Indian Geophysical Union, 29 - 31 October, 2012, Gandhinagar.*
26. Vaish, J., and **S. K. Pal**, **2012**, Geological appraisal of Jharia coalfield using GRACE gravity data, *49th annual convention on “towards the energy security - exploration, exploitation and new strategies”, Indian Geophysical Union, 29 - 31 October, 2012, Gandhinagar.*
27. Vaish, J., and **S. K. Pal**, **2012**, Geotechnical characterization of a part of Jharia coal field using Refraction Micro Tremor method, **National workshop “Engineering Geophysics for civil engineering and Geo-Hazard” 22-23 November 2012, CSIR-CBRI, IIT Roorkee.**
28. Rahut, A.K. and **Pal, S.K.**, **2008**. Contour mapping and Terrain Analysis using SRTM data: a case study of dam area, Dibang Multipurpose Project, Arunachal Pradesh, India. *Challenging in Engineering Geology, Indian Society of Engineering Geology , 03-05 December 2008, Hyderabad, India.*
29. Kapil, S. L., Jyotirmoy and **Pal, S.K.**, **2007**. Combined Approach of Seismic Refraction and Resistivity Imaging in Geotechnical Exploration: A Case Study. *Silver Engineering Experiences and Practices, CSMRS, New Delhi*, May 18 & 19, Paper No. NP-114.
30. **Pal, S. K.**, Majumdar, T. J., and Bhattacharya, A. K., **2005**. Utilization of MODIS Multispectral Thermal Infrared Data over Singhbhum–Orissa Craton: A MNF Transform Approach. *Workshop on MODIS data utilization at SAC during April 19-20, 2005.*
31. Srivastava, P.K., **Pal, S.K.** and Bhattacharya, A.K., **2002**. An Integrated Remote Sensing and Geophysical Methods for Ground Water Prospecting in a Hard Rock Area. *39th Annual Convention Meeting of National Geophysical Union, NEERI, Nagpur 4th-6th Oct 2002.*

- **Membership Of Professional Bodies/Organizations**

1. Indian Geophysical Union: Life Member (**L-3235**)
2. Indian Society of Engineering Geology: Life Member
3. Association of Exploration Geophysicists: Life Member
4. Indian Society of Remote Sensing: Life Member

5. Geological Society of India: Life Member (3296)

- **International Collaboration:**

1. Dr. Amin Beiranvand Pour, Institute of Oceanography & Environment (INOS), Higher Institution Center of Excellence (HICoE) in Marine Science, University Malaysia Terengganu (UMT), 21030 Kuala Nerus, Terengganu, Malaysia.
2. Dr. Saumitra Misra, Department of Geology, School of Agricultural, Earth and Environmental Sciences, Room No. 123, University of KwaZulu-Natal, Private Bag X54001, Durban 4000, South Africa.
3. Dr. Snehamoy Chatterjee, Department of Geological and Mining Engineering and Sciences, Michigan Technological University, 1400 Townsend Drive; 601 Dow Building, Houghton, MI 49931, USA
4. Prof. Manoj Mukhopadhyay, Dept. of Applied Physics, PNG University of Technology, Morobe Province, Lae, Papua New Guinea. Phone:+675 4734913.

- **Institute responsibility**

1. **Head of the Department of Applied Geophysics, IIT(ISM) w.e.f. 17.08.2022 till date**
2. **DPGC member 2020 to August 2022**
3. **In-charge of Winter Geophysical Field Training, 2018-19**
4. **In-charge of research scholars for AGP 2012 to 2016**
5. **DPGC Convener 2019 to 2020**
6. **Member of M.Sc. /M.Sc. Tech. of Admission Committee from 2013 to 2018**
7. **Coordinator, M. Tech. (Earthquake Science and Engineering) w.e.f. 4.12.2017 to 2021**
8. **Time-Table in-charge since 2012 to December, 2018**
9. **DSC member of different PhD students of Geology, Math, Civil, Mining, Env. Sc. Departments**

- **Other Academic activities**

1. **Testimony issued to the students for internship, PhD Positions, Projects, etc., in India and abroad**
2. **Regularly Review of multiple National and International SCI journals**

- **Experience in research / consultancy project**

- **EDP Courses:**

1. As a staff “24 weeks Intensive course on rock Mechanics in Hard Rock Mining (for HZL, Vedanta)”
2. As a staff “Executive Development on Advances in Drilling, Blasting and Mechanical Excavation Techniques for improved Safety and productivity in Coal Mines.”
3. As a staff “Geo-electrical methods for near surface geophysics, “ROCK MECHANICS IN HARD ROCK MINING” 06, 2014 to March 28, 2014.”

4. As a staff “Conventional and Nonconventional Geophysical Methods for Engineering Geophysical Investigations of Hydroelectric Projects “Importance of Survey & Investigation in Hydropower Projects for NHPC Executives”. March, 18 to 21, 2013.”
 5. As a staff “Geophysical field training in “Geo Technical Engineering and Soil Mechanics” June 3rd to 12th, 2013, for DRDO officers”
- **Familiar with Technical Software:**
 1) Geotools, 2) MTEDITOR, 3) SSMT200, 4) Geosoft, 5) Surfseis, 6) SeisImager, 7) RES2DINV, 8) SeisOpt@2D 3.0, 9) SeisOpt ReMi 4.0, 10) GeoTom CG, 11) Divine 3.11, 12) Winseism, 13) BlastWare, 14) ERDAS Imagine 9.0, 15) ARCGIS 9.0, 16) ENVI 4.0, 17) MATLAB, 18) Seisan 8.1.3, 19) Autocad2004 etc. 20) Rayfract® software, 21) Geomotions Suite Basic, 22) winMASW, 23) REFLEXW complete 2D/3D, 24) Geosoft, 25) RES2D/3D Inversion
 - **Instrument Handled:**
 1) FlashRES Universal 61-Channel 64 Electrode, 2) Magnetometer GSM-19TG, 3) AMT MTU-5A, 4) Stratavizor-NZ / GEODE, 5) IGIS DDR-2, 6) Terraloc MK6, 7) Terrameter SAS300C, 8) Terrameter SAS 4000, ES 464 LUND, 9) Borehole Sparker P-Wave Probe SBS-42, Impulse Generator, 3D Borehole Geophone, 10) BlastMate 11) Broadband Seismometer Guralp CMG40T, 13) Geotech S13J Shotperiod Seismometer, 14) 130 Accelerometer, 15) 130 Reftek Digital Recorder, etc. , 16) TIPIX 3000 IP , 18) Syscal R1 Plus, 19) Well Logging, 20) Geode 24 Channel Digital Seismograph, 21) IGIS DDR-2 resistivity meter,
 - **INDUSTRIAL EXPERIENCE:**
 About EIGHT YEARS INDUSTRIAL EXPERIENCE IN NHPC LIMITED (Service certificate, enclosed) in Engineering Geophysics and Geotechnical investigation
 - **Highlights of Industrial research works:**
 - A. Running and maintenance, data acquisition and processing of six Micro Earthquake station and one Accelerograph station around Subansiri Lower HE Project.
 - B. Geotechnical Instrumentation for monitoring and implementation of Hydroelectric projects: (MPBX, SPBX, Load cell, Inclinator, Tape Convergence, Topographic Marker, Inverted Pendulum, Tendon, Piezometer, Rock Anchoring, Stress Meter, Strain Meter, Temperature Meter).

C. EIGHTEEN TECHNICAL REPORTS ON GEOPHYSICAL INVESTIGATION for Hydroelectric Project (Internal Geophysical Report prepared and submitted to NHPC Limited, Sector-33, Faridabad, India) as detail below:

1. Kapil, S.L., Jyotirmoy, **Pal, S.K.**, and Khanna, P., 2011, Geophysical survey involving MASW and ReMi Technique for assessment of rock mass characteristics of Swazye Hydroelectric Project, Myanmar (Unpublished report, NHPC Limited).
2. Nagar, V., **Pal, S.K.**, and Sen, A., 2011. Ultrasonic Velocity measurement study on rock core samples for determining dynamic elastic parameters for Chamkharchu-I HE Project, Bhutan. GEOPHYSICAL REPORT NO. NH/EG/GEOPHY/144.
3. **Pal, S.K.**, Nagar, V., and Sen, A., 2011. Report on Geophysical Resistivity survey for sitting of tube well in Semna Colony, Dulhasthi Power Station. GEOPHYSICAL REPORT NO. NH/EG/GEOPHY/143.
4. Nagar, V., **Pal, S.K.**, and Sen, A., 2011. Report on Geophysical Resistivity survey for sitting of tube well in NHPC Office Complex, Faridabad. GEOPHYSICAL REPORT NO. NH/EG/GEOPHY/141.
5. **Pal, S.K.**, and Jyotirmoy, 2010. Report on Resistivity study for Ground water survey at Loktak HE Project, 2010.
6. **Pal, S.K.**, Jyotirmoy and Murgapan, S., 2009. Report on Geophysical survey involving seismic refraction and resistivity imaging, Tawang H.E. Project (Stage-I and stage-II), Arunachal Pradesh. GEOPHYSICAL REPORT NO. NH/ED/SBP/GEOPHY/26, 2009.
7. **Pal, S.K.**, 2009. Final report on Earth Resistivity measurements for design of Earthmat at Dam foundation Subansiri Lower H.E. Project, March 2009.
8. **Pal, S.K.**, 2009. Final report on Earth resistivity measurements for design of Earthmat at Intake-I and Intake-II foundations, Subansiri Lower H. E. Project, February 2009.
9. Kapil, S. L., Jyotirmoy, **Pal, S.K.**, Giri, T.V., 2007. Report on Geophysical survey involving seismic tomography, seismic refraction and resistivity imaging, Tawang H.E. Project (stage-II), Arunachal Pradesh. GEOPHYSICAL REPORT NO. NH/ED/SBP/GEOPHY/25, July 2007.
10. Kapil, S. L., Jyotirmoy, **Pal, S.K.**, Giri, T.V., 2007. Report on Geophysical survey involving seismic tomography, seismic refraction and resistivity imaging, Tawang H.E. Project (stage-I), Arunachal Pradesh. GEOPHYSICAL REPORT NO. NH/ED/SBP/GEOPHY/24, July 2007.
11. Kapil, S.L., Jyotirmoy, and **Pal, S.K.**, 2006, TLDP-IV, Resistivity Imaging survey for ground water mapping and groutability verification GEOPHYSICAL REPORT NO. NH/ED/SDBP/GEOPHY/23, 2006.

12. Kapil, S.L., Jyotirmoy, and **Pal, S.K.**, 2006. TLDP-III, Resistivity Imaging survey for land sliding mapping, GEOPHYSICAL REPORT NO. NH/ED/SDBP/GEOPHY/22, 2006.
13. Kapil, S.L., Jyotirmoy, and **Pal, S.K.**, 2006. Report on seismic tomography scanning for assessment of rock mass characteristics of dam site area Kotlibhel HE Projects (Stage-II) Uttaranchal, NHPC, GEOPHYSICAL REPORT NO. NH/ED/SDBP/GEOPHY/21, MAY 2006.
14. Kapil, S.L., Jyotirmoy, and **Pal, S.K.**, 2006. Report on seismic tomography scanning for assessment of rock mass characteristics of dam site area Kotlibhel HE Projects (Stage-IB) Uttaranchal, NHPC, GEOPHYSICAL REPORT NO. NH/ED/SDBP/GEOPHY/20, MAY 2006.
15. Kapil, S.L., Jyotirmoy, and **Pal, S.K.**, 2006. Report on Geophysical survey involving seismic tomography, seismic refraction and resistivity imaging Siang Lower HE Project (I-site) Arunachal Pradesh. NHPC, GEOPHYSICAL REPORT NO. NH/ED/SDBP/GEOPHY/19, March, 2006.
16. 15. Kapil, S.L., **Pal, S.K.**, and Jyotirmoy, 2005. Report on shear wave velocity measurement at Lower Siang (I-Site) H.E. Project, Arunachal Pradesh. NHPC, GEOPHYSICAL REPORT NO. NH/ED/SDBP/GEOPHY/17, December, 2005, p1-9.
17. Jyotirmoy, **Pal, S.K.**, and A.Sen, Report on Geophysical investigation at alternate Dam sites (Site-I and Site-K), Lower Siang HE Project, Arunachal Pradesh. NHPC, GEOPHYSICAL REPORT, January, 2005, p1-7.
18. Kapil, S.L., **Pal, S.K.**, 2005. Report on shear wave velocity measurement at Dibang multipurpose project Arunachal Pradesh. NHPC, GEOPHYSICAL REPORT NO. NH/ED/SDBP/GEOPHY/16, December, 2005, p1-8.

- **Laboratories developments, Installation and maintenance of Software/Instruments in NHPC:**

1. Execution of Deep Seismic reflection survey for Hydroelectric Project, NHPC Limited, 2010-2011
2. Purchase and installation of ReMi™ 1D/2D S-Wave modeling software, 2010-2011, Subansiri Lower HE Project, NHPC Limited
3. Repairing of broad band Seismometer, Short Period Seismometer, Digital data recorder and renovation of six Micro earthquake station, Purchase and Installation of GPS, Solar panel, industrial Battery, Data card and new Digital data recorder broad band Seismometer, Accelerometer etc., 2007-2011.

4. Repairing and maintenance of Geophysical Survey equipments: Terraloc MK6, Terrameter SAS300C, Terrameter SAS 4000, ES 464 LUND, Borehole Sparker P-Wave Probe SBS-42, 2004-2006

- **Past Research work**

1. **Worked as SRF in a Research Project:** Majumdar, T. J., Bhattacharya, A. K. , **Pal, S. K.**, Srivastava, P. K., and Bhattacharyya, R., 2011. Usage of MODIS Multichannel Thermal IR data for targeting specific mineralized areas in Singhbhum Shear Zone: A Joint project between SAC (ISRO) and IIT (Kharagpur), funded by ISRO.
2. **PhD Completed:** **Pal, S.K.**, 2009, A Geographical Information System based integrated study of Remote sensing and Gravity data for geological appraisal of parts of Singhbhum-Orissa Craton, India. Ph.D. dissertation submitted in the Department of Geology and Geophysics, IIT Kharagpur, India.
3. **M.Sc.Tech. dissertation:** **Pal, S.K.**, 2001, Geoelectrical Sounding study for locating suitable groundwater Zone in the eastern part of Sheoganj Block, Sirohi District, Rajasthan. M.Sc.Tech. dissertation submitted in the department of Geophysics, Banaras Hindu University.