

# Dr. Sandi Kumar Reddy



## Contact Information:

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National Institute of Technology Karnataka  
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## Education:

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2010 –2015	PhD in Mining Engineering Institute: National Institute of Technology Karnataka, Surathkal
2005 - 2007	Master's degree in Mine Planning Institute: Institute of Technology Banaras Hindu University (IT-BHU)
2000 - 2004	Bachelor's Degree in Mining Engineering Institute: University College of Engineering (KSM)

## Teaching/Research/Industry Experience:

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September 2019 - Present	Assistant Professor in Department of Mining Engineering Institute: National Institute of Technology Karnataka, Surathkal
December 2017 – September 2019	Scientist in Geomechanics & Ground Control Department Institute: National Institute of Rock Mechanics (NIRM)
December 2014 – November 2017	Scientist in Slope Stability Cell Institute: National Institute of Rock Mechanics (NIRM)
October 2008 – November 2014	Scientist in Mine Design Department Institute: National Institute of Rock Mechanics (NIRM)
October 2006 – September 2008	Jr. Manager Organization: South West Mining Limited (JSW Group)
April 2004 – March 2005	PGPT Organization: Western Coal Fields Limited (CIL Subsidiary)

## Research Areas:

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- Mine Planning
- Rock Engineering

- Slope Stability
- Open pit mining
- Underground Mining
- Blasting
- GIS & Remote sensing
- Geostatistics

#### *Membership of Professional Bodies:*

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Life Member (LM-2930)	Mining Engineers Association of India (MEAI)
Life member (LM-2231)	Indian Society for Rock Mechanics and Tunnelling Technology (ISRMTT)
Member (M-1529484)	Institution of Engineers (India)
Member (410/IND/2021-2040)	International Society for Rock Mechanics and Rock Engineering (India)
Life Member (867)	Society of Geoscientists and Allied Technologies (SGAT)
Life Member (10855-LM)	The Mining, Geological & Metallurgical Institute of India

#### *Awards/Honors/Achievements:*

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- Dr. Rajendra Prasad Gold Medal for best paper titled “Stress distribution on blasting gallery pillar due to goaf formation during extraction”, presented at Indian Engineering Congress held at Chennai, Dec. 21, 2017 (Co-author: Dr. V R Sastry).
- "Best Researcher award" for best paper titled ‘Monitoring the movement of slopes in opencast mines’, presented at International Conference on Advanced Engineering and Information Technology, 7-9 December, 2017, Linton University College, Mantin, Malaysia.
- Second Class Coal Mine Manager (Un-Restricted) Certificate of Competency of the Govt. of India in 2005.
- Second Class Metal Mine Manager (Restricted) Certificate of Competency of the Govt. of India in 2007.
- Best paper award for '*Stability Assessment and Design of Open Pit Slopes of Limestone Mines in India*', 4<sup>th</sup> International conference on Geology and Earth Sciences (ICGES 2023)' 15 -17 June 2023, Bangkok, Thailand.

#### *Supervision of students::*

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PhD: 7 (Ongoing)

MTech (R) :1

BTech: 30

Sr. No.	Area/Topic	Joining Year	Name of student /Roll No.	Role
1	Design and Development of Real Time Environmental Parameters Monitoring System Underground Mining using Internet of Things and Machine Learning	2021-22	Anil S Naik (217MN001)	Main Guide
2	Investigation on estimation and prediction of resistivity of rocks based on physico-mechanical properties of rocks	2021-22	Varalakshmi Pudi (217MN504)	Main Guide
3	Subsidence in underground mines	2021-22	Shashikanth (217MN504)	Main Guide
4	Rock Mechanics & Ground Control in underground mines	2021-22	Venkateshwarlu (217MN505)	Main Guide
5	Pit slope stability assessment under different hydrogeological characteristics of opencast mines	2020-21	RammohanPerumalla (207MN003)	Co-Guide
6	Utilization of gold ore tailings as a partial replacement to the fine aggregates in the production of Geopolymer concrete with recycled coarse aggregates	2021-22	Eshwarayya BL (217MN003)	Co-Guide
7	Seismic performance of underground structures design	2022-23	Abhish MS (227CV001)	Co-Guide
8	Risk assessment and resource estimation of a complex multi-seam coal deposit	2021-2023	203037RT001	Main Guide

*Journal Publications:17+1 (Submitted)*

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- Kumar Reddy, S. and Sastry, V, R. (2012). Induced Stresses in Blasting Gallery Panel during Depillaring based on Field Instrumentation – A Case Study, International Journal of Earth Sciences and Engineering, Volume 05 No 06 (01), 1820-1827.
  - Kumar Reddy, S. and Nagaraj, C. (2012). Longwall Goaf monitoring using Deep Hole Extensometers, International Journal of Earth Sciences and Engineering, Volume 05 No 05 (01), 1402-1405.
  - Kumar Reddy. S., and Sastry. V.R., (2013). Strata monitoring studies in Blasting Gallery panel during depillaring based on field instrumentation, Indian National Group of International Society for Rock Mechanics (ISRM India) Journal, Volume 02 No.1, 25-31.
  - Kumar Reddy. S., and Sastry. V.R., (2013). Gallery monitoring in Blasting Gallery panel during depillaring - a case study, Journal of Mines, Metals & Fuels, Volume 61 No 7 & 8, 257-260.
  - Kumar Reddy. S., and Sastry. V.R., (2016). Stress distribution on blasting gallery barrier pillar due to goaf formation during extraction, Journal of Institution of Engineers Limited (India), Series D, Volume 97, No. 2, 205-213.
  - Kumar Reddy, S., James Paul., and Paul Prasanna Kumar. (2017). Application of slope stability radar in an opencast mine, Journal of Mining Engineers Association of India, Volume 19, No. 5, 10-13.

- Kumar Reddy, S and Rajan Babu A. 2018. Slope stability studies in open pit mines – A case study, Indian National Group of International Society for Rock Mechanics (ISRM India) Journal, Volume 07 No.2, 36-40.
- Kumar Reddy, S, Rajan Babu A and Venkatesh,H.S. 2018. Highwall Slope Stability Assessment of Open Pit Coal Mine- A Case Study, Journal of Engineering Geology, Volume XLIII, No. 1 & 2, 132-141.
- Kumar Reddy. S. Anil S Naik & Mandela Govindaraj(2022). Internet of Things based Data acquisition system for monitoring air quality in underground mines, Journal of Mines, Metals & Fuels, Volume 70 No 12A, 21-27.*DOI: 10.18311/jmmf/2022/29942*
- Sandi Kumar Reddy, Mandela Govindaraj&RammohanPerumulla, (2022). A critical review of FBG sensor for pore water pressure measurements, Journal of Mines, Metals & Fuels, Volume 70 No 12A, 137-142.*DOI: 10.18311/jmmf/2022/29942*
- Sandi Kumar Reddy (2023). Stability assessment and optimal excavated design of a rock slope in an opencast limestone mine, Journal of Mines, Metals & Fuels, Volume 71 No 2, 141-148.<https://doi.org/10.18311/jmmf/2023/32520>  
(<https://www.informaticsjournals.com/index.php/jmmf/article/view/32520>)
- Sandi Kumar Reddy (2023). Monitoring and Prediction of Slope Failure Instability in a Limestone Mine, Journal of Mines, Metals & Fuels, Volume 71 No 2, 163-170.<https://doi.org/10.18311/jmmf/2023/31743>
- Sandi Kumar Reddy (2023). Analysis of Faults' Effect on the Highwall Stability of Medapalli Open Pit Coal Mine, Journal of Geotechnical and Geological Engineering, 41:2969–2986.<https://doi.org/10.1007/s10706-023-02440-6>
- Sandi Kumar Reddy. Anil S Naik & Mandela Govindaraj (2023). Development of a reliable Wireless Communication System to Monitor Environmental Parameters from various positions of Underground Mines to the Surface using ZigBee Modules, Journal of The Institution of Engineers (India): Series D . <https://doi.org/10.1007/s40033-023-00486-7> (Online)
- ESHWARAYYA B L, Mangalpady Aruna, Sandi Kumar Reddy & Anil Sagar S (2023). Study on Physico-Mechanical Properties and Characterization of Gold Ore Tailings and Utilization in Manufacturing of Geopolymer Concrete Along with Class F Fly Ash and Recycled Coarse Aggregates, Journal of Hazardous, Toxic, and Radioactive Waste *DOI: 10.1061/JHTRBP/HZENG-1248* (Online)
- ESHWARAYYA B L, Mangalpady Aruna, Sandi Kumar Reddy & Anil Sagar S (2023). Development of Regression Model and Optimization of Mechanical Properties of Geopolymer Concrete Prepared Using Gold Ore Tailings, Journal of Hazardous, Toxic, and Radioactive Waste *DOI: 10.1061/JHTRBP/HZENG-1259* (Online)

#### *Conference/Seminar Publications:49*

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- Kumar Reddy, S. and Nagaraj, C. (2011). Development and Application of Deep Borehole Extensometers for Monitoring the Caving Behavior in Longwall Workings, International Conference on Underground Space Technology, pp. cm 12-6.
  - Kumar Reddy, S. and Sastry, V, R. (2012). Strata monitoring studies during extraction of Thick Seams by Blasting Gallery Method-A Case Study, World Conference on Applied Science and Engineering Technology, pp. 60-68.
  - Kumar Reddy. S. (2012). Coal as energy - Problems and issues related to mining industry, International Conference on Energy and Environment, 01-04<sup>th</sup> December 2012, Hyderabad.

- Kumar Reddy, S. and Sastry, V, R. (2012). Strata monitoring studies with Convergence Stations in Galleries of Blasting Gallery Panel during Depillaring – A Case Study, Seminar on Ground Control and Improvement organized by Central board of irrigation and power (CBIP). 20-21 Sep, 2012, New Delhi.
- Kumar Reddy. S, Sastry. V.R., and Ram Chandar. K., (2013). Induced blasting practice for hard roof management in Blasting Gallery method- A Case study, National seminar on Explosives & Blasting Techniques for Mining, Quarrying & Infrastructure Industry (EBTMQI), 27-28 September, 2013, Surathkal.
- Kumar Reddy. S., and Sastry. V.R., (2013). Gallery supporting and monitoring in Blasting Gallery panel during depillaring - A Case study, international conference on Developments in best practices in surface and underground mining and innovative developments in mining machinery. 28-30 January 2013, Kolkata.
- Kumar Reddy. S. (2013). Mass production technology in underground coal mines of sccl – An emerging trend, 2<sup>nd</sup> World Conference on Applied Science and Engineering Technology, 8-9 March 2013, Hyderabad.
- Kumar Reddy. S, Sastry. V.R., and Nair Roshan., (2014). Assessment of Mining Induced Stress with Numerical Modelling during Depillaring of Underground Coal Pillars with Blasting Gallery Method, National seminar on Innovative Practices in Rock Mechanics (IPRM), 6-7 February, 2014, Bengaluru.
- S. Kumar Reddy, (2014). Sustainable Development of Pulivendula Baryte Deposit Adopting Suitable Excavation Method, National seminar on Sustainable Development in Mineral & Earth Resources (SDMinER), 21-22 June, 2014, New Delhi.
- Kumar Reddy, S and Rajan Babu A. (2016). Stability analysis of an open pit slope in a Chromite mine, Proceedings of International conference on Recent Advances in Rock Engineering, 16-18 Nov, 2016, Bangalore.
- Kumar Reddy, S and Rajan Babu A. (2016). Stability analysis of a waste dump in Chromite mine: Existing state and planned heightening, Proceedings of 3<sup>rd</sup> International conference on Earth Sciences and Engineering, 17-18 June, 2016, Coimbatore.
- Kumar Reddy, S and Rajan Babu A. (2016). Cavability Studies of Immediate roof of Seam No. 3 of GDK-10 Incline, SCCL- A Case Study, Proceedings of Seminar on Recent Practices and Innovations in Mining Industry, 19-20 February, 2016, Raipur.
- Kumar Reddy, S and Rajan Babu A. (2017). Numerical stability analysis of an open pit mine slope by FLAC/SLOPE- A case study, Proceedings of conference on Numerical modeling in geomechanics, 3-4 March, 2017, IIT-Roorkee.
- Kumar Reddy, S and Rajan Babu A. (2017). Monitoring the movement of slopes in opencast mines, Proceedings of international conference on Advanced Engineering and Information Technology, 7-9 December, 2017, Linton University College, Mantin, Malaysia (ISBN: 978-967-15567).
- Kumar Reddy. S, AmrithRenaldy. T, Meena SS, Bharath Kumar AY and Rajan Babu A. (2019). Slope stability studies in an open pit mine, Proceedings of national conference on Recent Advances in Mining Technology (RAMT-2019), 23-24 May, 2019, Bengaluru.
- AmrithRenaldy. T, Bharath Kumar AY, Meena SS, Kumar Reddy. S, and Rajan Babu A. (2019). Assessment of stability of high walls of a granite quarry, Proceedings of national conference on Recent Advances in Mining Technology (RAMT-2019), 23-24 May, 2019, Bengaluru.

- Kumar Reddy. S, AmrithRenaldy. T, Meena SS, Bharath Kumar AY and Rajan Babu A. (2019). Slope stability study of an open pit mine – A case study, Proceedings of national symposium on Safe and sustainable mining – Future challenges, 5-6 July, 2019, Kanyakumari.
- A Rajan Babu, AmrithRenaldy. T, Meena SS, S Kumar Reddy and AY Bharath Kumar. (2019). Feasibility of extraction of locked up ore in the opencast benches by innovative methods, Proceedings of national symposium on Safe and sustainable mining – Future challenges, 5-6 July, 2019, Kanyakumari.
- Kumar Reddy. S. and Ram Chandar K (2020). Stability assessment of highwall slope of an open pit coal mine – A Case Study, conference on Recent practices and advancement in mineral industry (RPAMI), 21-22 February, 2020, Nagpur.
- Kumar Reddy. S. (2020). Feasibility of extraction of locked up ore in the opencast benches by innovative methods, FDP on Slope and dump stability in open pit mines, 3-8 August, 2020, Hyderabad.
- Kumar Reddy. S. (2020). Slope stabilization techniques in opencast mines, FDP on Slope and dump stability in open pit mines, 3-8 August, 2020, Hyderabad.
- Kumar Reddy. S. (2021). Slope Stability and Stabilization Methods in open pit mines, TEQIP-III Workshop on Slope Stability and Stabilization Methods in open pit mines, 8<sup>th</sup> February, 2021, Surathkal.
- Kumar Reddy. S. (2021). Design of deep excavation slopes in open pit mines, TEQIP-III Workshop on Slope Stability and Stabilization Methods in open pit mines, 11<sup>th</sup> February, 2021, Surathkal.
- Kumar Reddy. S. (2021). Introduction to Planning in Surface Mine Projects, ATAL-AICTEFDP on Planning of Surface Mining Projects, 23<sup>rd</sup> August, 2021, NITK-Surathkal.
- Kumar Reddy. S. (2021). Drilling in Surface Mine Projects, ATAL-AICTEFDP on Planning of Surface Mining Projects, 24<sup>th</sup> August, 2021, NITK-Surathkal.
- Kumar Reddy. S. (2021). Slope Design in Surface Mine Projects, ATAL-AICTEFDP on Planning of Surface Mining Projects, 25<sup>th</sup> August, 2021, NITK-Surathkal.
- Kumar Reddy. S. (2021). Slope Stabilization in Surface Mine Projects, ATAL-AICTEFDP on Planning of Surface Mining Projects, 25<sup>th</sup> August, 2021, NITK-Surathkal.
- Kumar Reddy. S. (2021). Safety in Surface Mine Projects, ATAL-AICTEFDP on Planning of Surface Mining Projects, 26<sup>th</sup> August, 2021, NITK-Surathkal.
- Kumar Reddy. S. (2021). Introduction to slope stability in mining & infrastructure projects, PDP on Design & monitoring of slope stabilization Mining & infrastructure projects, 15<sup>th</sup> September, 2021, ESCI -Hyderabad.
- Kumar Reddy. S. (2021). Slope failures and socio-economic influence on mining & infrastructure projects, PDP on Design & monitoring of slope stabilization Mining & infrastructure projects, 15<sup>th</sup> September, 2021, ESCI -Hyderabad.
- Kumar Reddy. S. and Anil S Naik (2022). Application of Internet of Things in environmental monitoring for Underground Mining : A Systematic Review, National conference on 'Recent Trends in Intelligent Control Communications and Computing Technologies in Mining (RTIC3TM -2022)' 27th March 2022, University College of Engineering, Kakatiya University, Kothagudem.
- RM Perumulla, G Mandela & S Kumar Reddy (2022). A critical review on scope of smart pore water pressure sensors for Slope stability studies, National conference on 'Recent Trends in Intelligent Control Communications and Computing Technologies in Mining (RTIC3TM -2022)' 27th March 2022, University College of Engineering, Kakatiya University, Kothagudem.

- Kumar Reddy. S. (2022). Slope stability and stabilization in opencast mines, keynote for Opencast mining, 28<sup>th</sup> March, 2022, KSMCL -Bengaluru.
- Anil S Naik and Sandi Kumar Reddy(2022). A Comprehensive Review on Role of Internet of Things Technologies in Wireless Environmental Monitoring System for Underground Mining, National conference on 'Challenges in Safety and Environmental Management in Mines (CSEMM 2022)' 17<sup>th</sup>-19<sup>th</sup> June 2022, NIT Rourkela.
- Anuj Kumar Singh and Sandi Kumar Reddy (2022). Geological Modelling and risk management, National conference on 'Challenges in Safety and Environmental Management in Mines (CSEMM 2022)' 17<sup>th</sup>-19<sup>th</sup> June 2022, NIT Rourkela.
- Sandi Kumar Reddy, Mandela Govindaraj & Rammohan Perumulla, (2022). Scope of FBG based Sensors in Mining Engineering, National conference on 'Challenges in Safety and Environmental Management in Mines (CSEMM 2022)' 17<sup>th</sup>-19<sup>th</sup> June 2022, NIT Rourkela.
- G Mandela, S Kumar Reddy & RM Perumulla, (2022). Application of Optical Fiber based FBG sensor in Mining Industry', 3<sup>rd</sup> National conference on COSINE (NCCOSINE-22)' 24<sup>th</sup> -25<sup>th</sup> June 2022, NIE Mysuru.
- Kumar Reddy. S. and Anil S Naik (2022). IoT based Real-Time Air Quality Monitoring System using MQ135 and ThingSpeak for the safety of mine workers in the mining industry, 3<sup>rd</sup> National conference on COSINE (NCCOSINE-22)' 24<sup>th</sup> -25<sup>th</sup> June 2022, NIE Mysuru.
- Kumar Reddy. S. (2022). Production Drilling in Opencast Mines, Workshop on 'Blasting for Mines/Quarries/Infrastructure Projects', 1<sup>st</sup>-2<sup>nd</sup> August, 2022, NITK-Surathkal.
- Kumar Reddy. S. (2022). Introduction to Blasting for Mines/Quarries/Infrastructure Projects, Workshop on 'Blasting for Mines/Quarries/Infrastructure Projects', 1<sup>st</sup>-2<sup>nd</sup> August, 2022, NITK-Surathkal.
- Kumar Reddy. S. and Anil S Naik (2022). An Enhanced IoT and LoRa based Communication System for Underground Mines, Second International Conference on Signals, Machines and Automation (SIGMA 2022)' Organized by Netaji Subhas University of Technology, New Delhi, India, from August 5-6, 2022.
- Kumar Reddy. S. Anil S Naik & Mandela Govindaraj(2022). IoT based Real-Time Air Quality Monitoring System using MQ135 and ThingSpeak for the safety of mine workers in the mining industry, International symposium on Recent trends in Mineral Industry - 2022' 23 -24 September 2022, Osmania University, Hyderabad.
- Anuj Kumar Singh and Sandi Kumar Reddy (2022). Geological Modelling and risk management, International symposium on Recent trends in Mineral Industry -2022' 23 - 24 September 2022, Osmania University, Hyderabad.
- Sandi Kumar Reddy, Mandela Govindaraj & Rammohan Perumulla, (2022). Scope of FBG based Sensors in Mining Engineering, International symposium on Recent trends in Mineral Industry -2022' 23 -24 September 2022, Osmania University, Hyderabad.
- Sandi Kumar Reddy (2022). Critical Highwall Slope Stability Assessment of an Open Pit Coal Mine, International symposium on Recent trends in Mineral Industry -2022' 23 - 24 September 2022, Osmania University, Hyderabad.
- Sandi Kumar Reddy, Anil Naik & Mandela Govindaraj (2022). Wireless Monitoring of Environmental Parameters for Underground Mining using Internet of Things with LoRa Transceiver Module, 7<sup>th</sup> IEEE International Conference on Recent Advances and Innovations in Engineering, 1-3 December 2022, NITK Surathkal.
- Anil Naik, Sandi Kumar Reddy and Mandela Govinda Raj (2022). Implementation of Environmental Parameters Monitoring and Alert system for underground mining using Internet of Things with LoRa Technology (4<sup>th</sup> International Conference on Advanced Technologies for Societal Applications). 9 -10<sup>th</sup> December 2022.

- Sandi Kumar reddy (2023). Highwall Stability Assessment for Sustainable Development in an Open Pit Coal Mine. International Conference on Opencast Mining Technology & Sustainability (ICOMS-2022) organized by Northern Coalfields Limited (NCL), Singrauli, 10-11<sup>th</sup> April 2023.
- Sandi Kumar Reddy (2023). *Stability Assessment and Design of Open Pit Slopes of Limestone Mines in India*, 4<sup>th</sup> International conference on Geology and Earth Sciences (ICGES 2023)' 15 -17 June 2023, Bangkok, Thailand.

*Book Chapters:*

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- Kumar Reddy. S. and Anil S Naik (2022). An Enhanced IoT and LoRa based Communication System for Underground Mines, Signals, Machines and Automation, pp 513-512 (SPRINGER). ISBN978-981-99-0969-8

*Projects Handled (PI/Co-PI):*

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**Significant projects: 8**

Sl. No.	Title of R&D Project	Funding Agency
1	Underground Mine Real Time Air Quality Monitoring and Assessment at Surface Control Room based on LoRa Sensors, IoT and Machine Learning Techniques	VGST (Ongoing)
2	Scientific study for pit slope stability studies of Subbarayanahalli Iron Ore Mine & Thimmapangudi Iron Ore Mine	KSMCL(Ongoing)
3	Investigations of pit slope failure analysis and slope design parameters of Krishna limestone mine	Krishna Mines Ltd.
4	Investigations of slope design parameters of Kaliapani chromite mine	Balasore Alloys Ltd.
5	Investigation of suitable stoping method and supporting system design for the Baryte mines at Pulivndula, Andhra Pradesh	Baryte Mines Association Ltd.
6	Study of optimum pillar design in Blasting Gallery panels in 3seam at GDK-10 Incline, RG-III Area, SCCL	Singareni Collieries Company Ltd.
7	Investigation of Cavability of overlying Strata and Development of Guidelines for estimation of Support Capacity for Longwall Faces	Central mine planning and design institute limited (CMPDI), Ministry of Coal
8	Investigation of effect of dump load on pit stability of Basanth Nagar Limestone mine	Kesoram Industries Ltd.

**Consultancy projects: 66**

<b>S.No.</b>	<b>Title</b>	<b>Sponsoring Agency</b>
1	Strata control investigation in Panel No. CMP-2 during extraction by CM at VK-7 Incline, KGM area, SCCL	SCCL
2	In-situ strength test of pillars in BG panel in 3 Seam at GDK-10 Incline, RG-III Area, SCCL.	SCCL
3	Strata behaviour analysis in BG Panel No. 1D in 3 Seam, GDK-10 Inc., RG-III Area, SCCL.	SCCL
4	In-situ strength test of pillars in WS panel in 2 Seam at GDK-11 Incline, RG-II Area, SCCL.	SCCL
5	Strata monitoring in WS Panel No.4 at GDK-8A Incline, RG-II Area, SCCL.	SCCL
6	Strata monitoring in BG Panel No.3B in 3 Seam at GDK-10 Incline, RG-III Area, SCCL.	SCCL
7	Testing of material properties of OCP-2, RG-II Area, SCCL	SCCL
8	Testing of material properties of OCP-3, RG-III Area, SCCL	SCCL
9	Testing of material properties of OCP-1, RG-1 Area, SCCL	SCCL
10	Soil testing and analysis for the study of stability of dumps at Medapalli OCP, SCCL.	SCCL
11	Strata monitoring in WS Panel No.5 at GDK-8A Incline, RG-II Area, SCCL.	SCCL
12	Strata control investigation in Panel No. CMP-3 during extraction by continuous miner at VK-7 Incline, KGM area, SCCL	SCCL
13	Conducting non-destructive test at PVK-5 man winding shaft.	SCCL
14	Study on the impact of quarry operations to nearby Arkavathy dam and other structures and recommendation for scientific quarrying, Nellahalli village (Quarry lease No. 313, survey No. 298), Kanakapura taluk, Ramnagara district.	Quarry
15	Conducting non-destructive test at shanthikahani man winding shaft.	SCCL
16	Conducting non-destructive test on haulers at gdk-1, 3, 5, 8, 10, 10A, 11, Vakeelpalli, RK1 and Shanthikhani mines.	SCCL
17	Strata control investigations in Panel 38 Level East Panel in V seam at Churcha Mine, SECL.	SECL
18	Strata monitoring in WS Panel No.5 at GDK-8A Incline, RG-II Area, SCCL.	SCCL
19	Strata control investigation in Panel No. CMP-4 during extraction by continuous miner at VK-7 Incline, KGM area, SCCL	SCCL
20	Dump material testing of Kaliapani chromite mine at Kaliapani, Jajpur District, Odisha.	Balasore Alloys Ltd.
21	Determination of physico-mechanical properties of Vemanooru granite rock samples, Archean Industries Pvt. Ltd.	Quarry
22	Slope stability studies of Bicholim Iron ore mine, Sigao and Collem village, Dharbandora taluka, Goa.	Quarry
23	Determination of physico-mechanical properties of Somapuram granite rock samples, Archean Industries Pvt. Ltd.	Quarry
24	Determination of physico-mechanical properties of Chinoor granite rock samples, Archean Industries Pvt. Ltd.	Quarry

25	Determination of physico-mechanical properties of Sathugranite rock samples, Archean Industries Pvt. Ltd.	Quarry
26	Determination of physico-mechanical properties of Ramakuppam granite rock samples, Archean Industries Pvt. Ltd.	Quarry
27	Determination of physico-mechanical properties of Beerna granite rock samples, Archean Industries Pvt. Ltd.	Quarry
28	Review the slope stability measures at Pallava Granites, Chimakurthy, Prakasam District, A.P.	Quarry
29	Slope stability studies of Copila Gaichem Paul Iron ore mine, Sigao and Collem village, Dharbandora taluka, South Goa.	Fomento Resources Pvt. Ltd.
30	Slope stability studies of Kavalapalli granite quarry. Pilery, A.P	Quarry
31	Slope stability studies of Ananthapur granite quarry. Pilery, A.P	Quarry
32	Slope stability studies of Santhekalla granite quarry. Pilery, A.P	Quarry
33	Slope stability studies of Kuppam granite quarry. Pilery, A.P	Quarry
34	Scientific studies to optimize the bench parameters and design of final pit slope stability studies of G V granites quarry in Naganur village, Kulithalai Taluk, Karur district, Tamilnadu.	Quarry
35	Scientific studies to optimize the bench parameters and design of final pit slope stability studies of Magna stone quarry in Thogaimali village, Karur district, Tamilnadu.	Quarry
36	Determination of physico-mechanical properties of GV Granite quarry, T.N.	Quarry
37	Slope stability studies of Bicholim Iron ore mine, Sigao and Collem village, Dharbandora taluka, South Goa.	Vedanta Pvt. Ltd.
38	Slope stability studies of Codli Iron ore mine, Sigao and Collem village, Dharbandora taluka, South Goa.	Vedanta Pvt. Ltd.
39	Scientific study on stability of south side (in-corp) highwall benches at MOCP, RG-1 area, SCCL, Peddapalli District, Telangana State.	SCCL
40	Slope stability studies of Kuppam granite quarry. Pilery, T.N	Quarry
41	Strata Control and Monitoring Plan (SCAMP) for Depillaring Panel No. 9LS & 4LS in Seam 'A' of Kurja Underground Mine, HASDEO Area, SECL.	SECL
42	Strata Control and Monitoring Plan (SCAMP) for Rajnagar R.O Mine, HASDEO Area, SECL.	SECL
43	Scientific Studies Dump Slope Stability with Suitable Bench Parameters for Narrain Iron Ore Mine, Karnataka State.	Vedanta Pvt. Ltd.
44	Scientific studies to optimize the bench parameters and design of final pit slope stability of K Deivendran granite quarry Veeriyampalayam village, Karur, Tamilnadu.	Quarry
45	Design and stability evaluation of proposed deepening of mine workings (from -44 to -66) including the surface dumps stability at Redi Iron Ore Mine of Gogte Minerals.	Fomento Resources Pvt. Ltd.
46	Scientific Study for design of Ultimate Pit Slope, stability assessment and monitoring of slopes of Dharmapura Iron Ore Mine of Sri V.N.K Menon mines, Sandur, Bellary.	Fomento Resources Pvt. Ltd.
47	Scientific Study for design of slopes and stability assessment of slopes of Dolomite Project at Mangampet, APMDC Limited, Andhra Pradesh.	APMDC Limited

48	Scientific Study for slope stabilization and monitoring of ground movement of South Face, Mine I of NLCIL, Neyveli, TN.	NLCIL
49	Slope stability studies for the optimization of bench parameters of SM Block iron ore mine M/s. M. Hanumantha Rao at Narayanpur village, Bellary district, Karnataka.	M. Hanumantha Rao
50	Slope stability studies for the optimization of bench parameters and recommendation for the final pit slope stability of Sadahalli quarry.	Quarry
51	Review the slope stability measures at Megha Granites, Madhalli Village, Chamrajanagar District, Karnataka	Quarry
52	Slope stability studies of Rajesh granite quarry. Kannur, Kerala	Quarry
53	Slope stability studies of Kallaritical granite quarry. Mallapuram, Kerala	Quarry
54	Slope stability studies for the optimization of bench parameters and recommendation for the final pit slope stability of Indaram opencast project, Srirampur area, Singarenicollieries company limited.	SCCL
55	Slope stability studies for the optimization of bench parameters and recommendation for the final pit slope stability of Srirampur opencast project-2, Srirampur area, Singarenicollieries company limited.	SCCL
56	Slope stability studies for the optimization of bench parameters and recommendation for the final pit slope stability of John iron ore mine, Chitradurga, Karnataka.	John iron ore mine
57	Slope stability studies for the dump slope stability of John iron ore mine, Chitradurga, Karnataka.	John iron ore mine
58	Slope stability studies for the optimization of bench parameters and recommendation for the final pit slope stability of Dharmapuri iron ore mine, Bellary, Karnataka.	Veerabhadra Sangappa & Company
59	Third party inspection and certification of underground mine development works at Uti Gold Mine	Hutti Gold Mines Company
60	Scientific study for stability analysis of benches of Basant Nagar Limestone Mine, Telangana State	Kesoram Cements
61	Geotechnical Study of the Quarry for Safe Workings and Optimum Design in Survey No.192, Madahalli Village, Gundlupet Taluk, Chamaraajanagar District, Karnataka	Madesha Quarry
62	Geotechnical Study of the Quarry for Safe Workings and Optimum Design in Survey No.192, Madahalli Village, Gundlupet Taluk, Chamaraajanagar District, Karnataka	Nagappa Quarry
63	Extension of third party inspection and certification of underground mine development works at Uti Gold Mine	Hutti Gold Mines Company
64	Slope Stability Studies for Safe Workings and Optimum Design of M/s Muhammedali P Quarry Located at Morayur Village, Kondotty Taluk, Malappuram District, Kerala	Kerala Quarry

65	Slope Stability Study of the ZamblidadgaDongor Iron Ore & Manganese Ore Mine (M.L.No.3/Fe/Mn/79) of Naraina Sinai Quirtonim for Safe Workings and Optimum Design situated at Cavurem Village, Quepem Taluk, South Goa.	Naraina Sinai Quirtonim
66	Slope Stability Study of the Kalay Iron Ore Mine of Fomento Resources Pvt. Ltd. for Safe Workings and Optimum Design situated at Santona Village, Sanguem Taluka, South Goa District, Goa.	Kalay Mine

*Programs Conducted/Attended:*

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- Slope Stability and Stabilization Methods in open pit mines, Type-National Workshop, Role-Coordinator, Start Date-8th February 2021, End Date-12th February 2021, Sponsored By-NITK.
  - A workshop on 2nd SME NITK for BTech Students organised during 5-6th March 2021 by the department of mining engineering; Sponsored By- Sponsored By-Vedanta Ltd.
  - IIRS Outreach programme on Machine learning to deep learning: A journey for remote sensing data classification, July 05, 2021 to July 09, 2021.
  - IIRS Outreach programme on Remote Sensing of Land Degradation December 01, 2020 to December 07, 2020
  - SAR Application for flood hazard mapping and monitoring July 16, 2021
  - IIRS Outreach programme on geospatial technology for hydrological modelling July 19-30, 2021
  - Planning of surface mining projects, Type-National Workshop, Role-Coordinator, Start Date-23 August 2021, End Date-27th August 2021, Sponsored By-ATAL AICTE.
  - Resource Estimation for Mineral Deposits during 21-09-2021 to 22-09-2021 organised by GSI, Training Institute (Mission-V) Regional Training Division-SR, Hyderabad.
  - Basics of geographical information system and its application conducted by CGMT Division of GSI Training Institute, Hyderabad from 06.01.2021 to 08.01.2021.
  - A workshop on 3rd SME-NITK for BTech Students organised during 11th -12th March 2021 by the department of mining engineering; Sponsored By-Hutti Gold Mines Company Ltd.
  - A webinar conducted on 'Artificial Intelligence & Machine learning in mining with specific applications: Pas-Present & Future' by Dr Ramesh Bhatawdekar, Adjunct Professor, Dept. of mining Engg, IIT Khargapur on 4th February 2021
  - A webinar conducted on 'Mine waste utilization and management' by Dr Anjani Kumar, Ex-Principal scientist, CSIR-CIMFR, Dhanbad on 9th March 2022
  - A webinar conducted on 'Be an entrepreneur' by Dr ShanthAverahally Thimmaiah, Member-BoG, NITK Surathkal on 22nd Oct 2021
  - A webinar conducted on 'Slope Stabilization & Erosion Control Solutions for Mining Applications' by Mrs. Kinjal Parmer, Sr. Manager-technical, Maccaferri Environmental Solutions Pvt. Ltd on 9th October 2020
  - Dr Sandi Kumar Reddy is one of the member from NITK Surathkal for JoSAA verification 2021-22.

- Dr Sandi Kumar Reddy is one of the Member of technical coordinator committee of National Conference on Recent Trends in Intelligent Control Communications and Computing Technologies in Mining (RTIC3TM -2022) organised during 27 March 2022.
- Name-Blasting for Mines/Quarries/Infrastructure projects, Type-Skill Development Workshop, Role-Coordinator, Start Date-1st August 2022, End Date-2nd August 2022, Sponsored By-NITK.