

## **BIO-DATA**

Dr. Channabassamma N

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Nationality: Indian

Date of Birth: 17/Dec/1987

Linguistic Proficiency: English, Kannada, Hindi, Telugu.



### **Education Qualification**

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<b>Degree</b>	<b>Year of Passing</b>	<b>Specialization</b>	<b>University/Institution</b>	<b>Percentage or CGPA</b>
<b>Bachelor of Engineering (BE)</b>	2009	Civil Engineering	Visvesvaraya Technological University Belagavi, Karnataka.	77.17%
<b>Master of Technology (M Tech)</b>	2013	Geotechnical Engineering	National Institute of Technology Karnataka, Surathkal.	8.67 (CGPA)
<b>Ph.D.</b>	2025	Rock Mechanics	National Institute of Technology Karnataka, Surathkal	9.54 (CGPA)

### **Work Experience in teaching 12 years**

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- NITK Surathkal | Aug 2021 – Nov 2025  
Ph.D. Research Scholar in the Mining Department  
Completed Ph.D. in rock blasting, utilizing high-speed cameras to enhance and analyze blasting techniques.
  - ISTS women's college Rajanagaram | March 2018 - Aug 2021  
Assistant Professor  
Worked as an assistant professor at ISTS Women's College, Rajanagaram, from March 2018 to Aug 2021.
  - NIT Raichur | August 2013 - Feb 2018  
Assistant Professor  
Worked as an assistant professor at Nit Raichur Engineering College, Raichur.

## Software Proficiency

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- AUTOCAD, PLAXIS, SLIDE, 3DEC, PROANALYST, ROCKSCIENCE, etc.

## Industrial Training

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- At BMRCL Metro, Bangalore, worked on “SETTLEMENT ANALYSIS OF UNDERGROUND METRO STATION.”

## Honours and Awards

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- Awarded **GOLD MEDAL** for scoring the highest marks in the “**IRRIGATION AND HYDRAULICS ENGINEERING**” subject in B.E at VTU Belagavi in the 2010 convocation.

## Workshops handled at NITK

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- 7 days DST-SERB Sponsored Workshop in the Department of Mining Engineering 2024 at NITK Surathkal.
- SME NITK Annual Convention in the Department of Mining Engineering 2022, 2023, 2024.
- Workshop on “Safety Data Analytics Application in Mining and Other Core Industries” organized by the Department of Mining Engineering 2024 at NITK Surathkal.
- Two-day National Workshop on “Rock Blasting Innovations for Safety and Efficiency” “RISE-25” is supported by the Ministry of Mines, Govt. of India, and jointly conducted by the Department of Mining Engineering, NITK, CSIR Dhanbad, and the Department of Mining Engineering, Anna University, Chennai.
- One day National Workshop on “Health and Safety in Mines” (HSM- 2025) organized by the Department of Mining Engineering 2025 at NITK Surathkal.

## Conferences attended and handled

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- Organising Secretary for the International Conference on Mining for a Greener Future, (ICMGF)NITK 2024, organized by the Department of Mining Engineering at NITK Surathkal.
- Attended the International Conference on Recent Trends on Sustainable Mining & Green Energy Evolution (RTSMGEE – 2023), organized by the Department of Mining Engineering at IIT- BHU Varanasi.

## Membership in Professional Bodies

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- Student Member of the American Society of Civil Engineering (AIRSA): ID Number -1047005092
- Lifetime Member of the Indian Geotechnical Society (IGS): ID Number - LM5899
- Lifetime Member of the Institution of Engineers India (IEI): ID Number – M-1817293
- Student Member of the International Society for Rock Mechanics and Rock Engineering (India) (ISRMRE): ID Number - 509/STU/2025-2027/CN

## Peer-Reviewed Journal Articles

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1. **N Channabassamma**, Avchar Akhil, Vedala Rama Sastry, Tripathi Kumar Anup, P Sahana (2024). Parametric Analysis of Mine Bench Blasting Using High-Speed Video Camera. **Journal of Disaster Advances (Scopus)**. Published **doi: <https://doi.org/10.25303/185da18023>**.
2. **N Channabassamma**, Avchar Akhil, Vedala Rama Sastry (2025). Influence of Stiffness Ratio and Powder Factor on Burden Rock Movement in Blasting Operations: A Case Study on Limestone Mines. **Journal of Disaster Advances (Scopus)**. Published **doi: <https://doi.org/10.25303/185da82091>**.
3. **N Channabassamma**, Avchar Akhil, Vedala Rama Sastry, Swamy V Sahas, Kolkar Ranjit (2025). Predicting Burden Rock Velocity in Limestone Mines Using Artificial Neural Network Models. **Journal of Disaster Advances (Scopus)**. Published **doi: <https://doi.org/10.25303/185da1330138>**.
4. Vedala Rama Sastry, Sridevi, **Channabassamma N** (2022). Modeling of Twin Underground Cavern using 3DEC: A Case Study. International Journal of Geotechnical Engineering. 2022 Jul 11;8(1):1-3. **Published.**

5. **Channabassamma N**, Akhil Avchar, Vedala Rama Sastry, Hemanth Agarwal, Sahas V Swamy (2024). Image Processing Technique to Find the Burden Rock Velocity and its Interdependency on Bench Blasting Parameters - a case study. **Journal of Sustainable Mining (Elsevier Q2)**. Accepted for publication.
6. **Channabassamma N**, Akhil Avchar, Sahas V Swamy (2025). Prediction of Burden Rock Velocity in Bench Blasting by Hybrid Grey Wolf Optimizer-Random Forest Model. **Rock Mechanics Bulletin (SCI Q1)** (Completed major reviews).
7. **Channabassamma N**, Akhil Avchar, Vedala Rama Sastry, Sahas V Swamy, Sangamesh N (2025). A Hybrid XG Boost combined with Bio-inspired Ant Colony Optimization for Estimating Burden Rock Velocity using Geotechnical and Blasting Parameters. Under preparation. 11th Mining Congress Oct 29-30, 2025. (Full paper reviewed for Acceptance in Springer Book Series).
8. Sahas V Swamy, **Channabassamma N**, Bojja Shiva Kumar, Bijay Mihir Kumar, Karra Ram Chandar, Amrites Senapati, Akhil Avchar. (2025). "A Hybrid Random Forest Optimized with the Dolphin Swarm Algorithm for Predicting P-Wave Velocity of Igneous Rocks Using Ball Mill Grinding Characteristics". 11th Mining Congress Oct 29-30, 2025. (Full paper reviewed for Acceptance in Springer Book Series).

### Ongoing Journal Articles

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1. **Channabassamma N**, Akhil Avchar, Vedala Rama Sastry, Sahas V Swamy, Ranjit Kolkar (2025). Prediction of Face Burden Rock Velocity in Limestone Mines using MLR, ANN, and XG Boost: A Comparative Analysis. Under preparation.
2. Sahas v Swamy, **Channabassamma N**, Akhil Avchar, Amrites Senapati (2025). Investigation of Spectrally Selective Tungsten-Alumina Thin Film Coatings for High-Temperature Solar Thermal Receivers. ASME. Under preparation.

### Consultancy Projects Handled at NITK

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1. Stability analysis of Rock Slopes and waste Dumps in KTK OC Project, Bhupalapalli Area, The Singareni Collieries Company Limited, Telangana.
2. Slope Stability Study of the Final Pit Wall / Highwall of BBH Iron Ore Mines, Minerals Enterprises Limited, Chitradurga.
3. Stability Analysis of the Structures Standing on Vulnerable Slopes in Munnar – Edge Resort, Paulachan Resort, Breeze Resort, Munnar- Etty Road, Munnar.

4. Analysis of the overall pit slope of BPA – II Extension Project, Bellampalli Area, The Singareni Collieries Company Limited, Telangana.
5. Assessment of the performance of blasting operations and overall pit slope in the surroundings of Choutapalli Limestone Mine of M/s My Home Industries Private Limited Telangana.
6. Assessment of the performance of blasting operations and overall pit slope in the surroundings of Yepalamadhavaram Limestone Mine of M/s My Home Industries Private Limited, Telangana.
7. Assessment of the Performance of Impact of Blasting operations and overall pit slope on the surroundings at DORLI OC-II PROJECT, BELLAMPALLI AREA, Telangana.

All the above projects were carried out as a project assistant under Prof. V R Sastry (Retd) (project investigator).

### Co-curricular and Extra-curricular Activities

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- Very active in organizing and participating in co-curricular and extracurricular activities.
- Members of various academic bodies at the institute where I worked.
- Hostel girls' Mess In charge: NIT Raichur.
- Active in Sports and Yoga.
  
- Actively engaged in participating and organizing the events in the institutes.

### REFERENCES

- Dr. Akhil Avchar | National Institute of Technology Karnataka Surathkal, India  
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- Dr. Sripad Naik, Director | National Institute of Rock Mechanics (NIRM), India  
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- Dr. Bijay Mihir Kunar | National Institute of Technology Karnataka Surathkal, India  
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