Dr. Karra Ram Chandar

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ACADEMIC RECORD (AS OF AUGUST 2026)

60 journal articles **55** conference publications **2** books **4** book chapters **8** completed Ph.D.s **8** R&D projects

320 consultancy projects

APPOINTMENTS

2000–present Faculty, Department of Mining Engineering, NITK Surathkal (currently Professor; joined August 2000)

2019–2021 Head of the Department, Mining Engineering, NITK Surathkal

EDUCATION

Post-Doctoral Fellowship, University of Illinois at Chicago, USA

Ph.D. in Rock Blasting, National Institute of Technology Karnataka, Surathkal

M.Tech in Rock Mechanics, IIT-BHU, Varanasi

B.E. Mining Engineering, Kothagudem School of Mines (Kakatiya University), Telangana — First class with Distinction

MBA in Human Resources, IGNOU

RESEARCH AREAS

Rock blasting and blast-performance optimisation · slope, highwall and dump stability · mine waste utilization · IoT/wireless-sensor-network and machine-learning methods for mine monitoring · dust dispersion

BOOKS

Karra, R.C., Gayana B.C., Shubhananda Rao P. — *Mine Waste Utilization*. CRC Press / Taylor & Francis, 2022. ISBN 9781032214559.

Ram Chandar, K. — *Influence of Initiation System and Pattern on Blast Performance*. Lambert Academic Publishing, 2013.

SELECTED JOURNAL ARTICLES

Performance Evaluation of an IoT-Enabled Wireless Sensor Network for Monitoring Blast-Induced Ground Vibrations. *Int. J. Mining and Mineral Engineering*, 2026. doi:10.1504/IJMME.2026.10078188

Integrated Numerical and Machine Learning Framework for Deformation-Based Assessment of Slopes Over Old Underground Galleries in Opencast Mines. *Discover Applied Sciences*, 2026. doi:10.1007/s42452-026-09181-0

Integrated Slope Monitoring System for Slope Stability Over Old Underground Galleries During Surface Mining Operations Using IoT. *Geotechnical and Geological Engineering*, 2022. doi:10.1007/s10706-022-02369-2

Zigbee Based Wireless Data Acquisition System for Monitoring of Partition Stability Above Old Underground Coal Workings. *Arabian Journal of Geosciences*, 2020. doi:10.1007/s12517-020-5255-6

A Critical Comparison of Regression Models and Artificial Neural Networks to Predict Ground Vibrations. *Geotechnical and Geological Engineering*, 2016. doi:10.1007/s10706-016-0126-3

Prediction of Bond's Work Index from Field Measurable Rock Properties. *Int. J. Mineral Processing*, 2016. doi:10.1016/j.minpro.2016.10.006

Full list: www.ramchandarkarra.com/publications

CONSULTANCY

320 industry-sponsored consultancy projects on controlled blasting, ground-vibration monitoring, and slope/highwall/dump stability, across Karnataka, Goa, Kerala, Tamil Nadu, Andhra Pradesh, Telangana, Odisha, Jharkhand, Gujarat, Rajasthan, Chhattisgarh and Meghalaya. Clients include Coal India, SCCL, JSW, UltraTech, NALCO, Dalmia Cement, Shree Cement, MSPL and Southern Railway; vibration-safe blasting studies near the UNESCO-listed Ramappa Temple.

AWARDS (SELECTED)

PROFESSIONAL SERVICE

2024 Engineers' Day Honour, IE(I) Mangalore

2024 Prof. H. R. Anireddy Memorial Award

2023 MEAI–SCCL Coal Award: Mining Engineer of the Year 2022

2019 MGMI Engineering Gold Medal 2018

2017 National Design Award in Mining Engineering

2015 Smt. Kiran Devi Singhal Memorial Award 2014, MEAI

2012 Young Engineer Award, IE(I) · ISTE–SGSITS National Award

Apex Committee Member, Coal India R&D Board (2024–26)

Expert Committee Member, AICTE (2025–26)

Subject Expert, CMPDI / NaCCER (2024–25)

Syllabus Committee, GATE Mining Engineering

Editorial boards: Mining Engineers' Journal; The Indian Mining & Engineering Journal

Fellow / life member of 10+ societies incl. ISRM, MGMI, ISTE, MEAI, IE(I)

INTERNATIONAL ENGAGEMENT

75+ invited technical lectures in India and abroad; research visits to USA, Australia, Japan, Malaysia, UAE, Hong Kong, Sri Lanka, Vietnam, Thailand and Nepal.