

BIO-DATA/ CURRICULAM VITAE OF

DR. M. GOVINDA RAJ

1. PERSONAL DETAILS

NAME : **DR. GOVINDA RAJ MANDELA**
(first name)

DATE OF BIRTH : **05 01 1964**
DAY MONTH YEAR

PLACE OF BIRTH : **WARANGAL ANDHRA PRADESH**
(District) (State)

NATIONALITY : **INDIAN**

RESIDENTIAL ADDRESS : **DR. M. GOVINDA RAJ,**
(For Correspondence) **REGISTRAR**
AP-10; NITK CAMPUS
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2. **EDUCATIONAL QUALIFICATIONS:** (In Reverse Chronological Order)

Post-Ph.D. Qualifications				
2004	2006	Master of Arts (M.A.) in “Environmental Economics”	(1) Basic Economics (2) Environmental Economics (3) International Environmental Problems	ANNAMALAI UNIVERSITY, Annamalai Nagar, INDIA.

Years attended		Degrees and Academic Distinctions	Main Course of Study	Name, Place and Country
from	to			
1998	2003	DOCTOR OF PHILOSOPHY (Ph.D) (Research Degree)	Thesis Title “ PRODUCTION OPTIMISATION IN OPEN PIT MINES THROUGH SIMULATION MODELS ”	MANGALORE UNIVERSITY, MANGALORE, INDIA
1985	1987	MASTER OF TECHNOLOGY IN MINE PLANNING (M.TECH) (Post Graduate Degree)	MINING ENGINEERING SUBJECTS WITH SPECIALIZATION IN MINE PLANNING & DESIGN	INSTITUTE OF TECHNOLOGY (I.T) BANARAS HINDU UNIVERSITY (B.H.U) ; VARANASI ; INDIA
1981	1985	BACHELOR OF ENGINEERING (B.E) (Graduate Degree ; Passed in First Division with DISTINCTION)	(i) BASIC ENGINEERING SUBJECTS (ii) FIVE COURSES IN GEOLOGY AND SURVEYING (iii) MINING ENGINEERING SUBJECTS	KOTHAGUDEM SCHOOL OF MINES ; KOTHAGUDEM (A.P) ; OSMANIA UNIVERSITY; HYDERABAD ; INDIA
1979	1981	TWO YEAR INTERMEDIATE EXAM (Passed in First Division with Distinction)	MATHEMATICS PHYSICS CHEMISTRY ENGLISH SANSKRIT	GOVERNMENT JUNIOR COLLEGE; HANAMKONDA; WARANGAL; INDIA
1975	1979	SECONDARY SCHOOL CERTIFICATE EXAM (Passed in First Division with Distinction)	English ; Maths ; Physical Sciences ; Biological Sciences; Social Studies Hindi ; Telugu	St.GABRIEL’S HIGH SCHOOL ; KAZIPET ; WARANGAL DIST. ANDHRA PRADESH ; INDIA

2. EXPERIENCE PROFILE:

Currently, I have gained a total working experience of about **24 years** since acquiring my **FIRST** postgraduate degree (M.Tech in Mining Engineering) in 1987. Since then, I have worked in various capacities as Lecturer, Senior Lecturer & Selection Grade Lecturer/ Associate Professor from 1987 to 2001 in National Institute of Technology (NITK), MANGALORE, INDIA.

I was with PLANNING COMMISSION, NEW DELHI, INDIA as Senior Research Officer (S.R.O.) from October 2001 to May 2007 in the POWER & ENERGY Division with overall responsibility for Co-ordination among the various Energy sub-sectors (Coal , Petroleum & Natural Gas , Power and New & Renewable Energy). My responsibilities also covered the EDUCATION and ENVIRONMENT Sectors as relevant to the occasion and situation for addressing the cross-linkages between these and the Energy Sector.

Since my return to NITK, in June 2007 to November 2012, I have been working as the REGISTRAR of the Institute. I am also delivering my Academic Responsibilities as an Professor in the Department of Mining Engineering of NITK.

3. MEMBERSHIPS OF PROFESSIONAL ASSOCIATIONS:

A. LIFE MEMBER OF

- (i) **INDIAN SOCIETY FOR TECHNICAL EDUCATION (I.S.T.E.)**
- (ii) **MINING ENGINEERS ASSOCIATION OF INDIA (M.E.A.I.)**
- (iii) **INDIAN INSTITUTE OF MINERAL ENGINEERS (I.I.M.E.)**

4. TEACHING EXPERIENCE:

About 19 years of teaching experience during which I handled courses in the following subjects:

- (i) **MINE SURVEY – I**
- (ii) **ENVIRONMENTAL MANAGEMENT OF MINES**
- (iii) **MINERAL ENGINEERING/ MINERAL PROCESSING TECHNOLOGY**
- (iv) **DRILLING ENGINEERING**
- (v) **MINE PLANNING & DESIGN**
- (vi) **OPEN CAST MINING**
- (vii) **UNDERGROUND METAL MINING**
- (viii) **MINE LEGISLATION & SAFETY**

5. EMPLOYMENT HISTORY

Sl. No	From	To	Description of duties performed/ assigned	Reason for leaving	Activity / Business of Organization
1.	May 2007	Till Date	<p>POST HELD: Associate Professor in Mining Engineering</p> <p style="text-align: center;">&</p> <p style="text-align: center;">REGISTRAR of the Institute.</p> <p>I Have Joined back the Institute as “Associate Professor” after serving in PLANNING COMMISSION as Senior Research Officer (SRO) at New Delhi. (India).</p> <p>(i) Teaching and Research in Technical Education especially in the Field of Energy & Environment as well as Mining Engineering.</p> <p>(ii) Overseeing the Administration of the Institute by serving as SECRETARY of important Governing bodies like Board of Governors (BOG); Finance Committee (FC) ; Senate ; Building and Works Committee (BWC). Etc.</p>	<p>(i) After completing my stint as a Senior Research Officer in the ENERGY Division, I am back in my parent Institute to contribute the rich knowledge and expertise that I have gained at the National Level, for the development of the Institute.</p>	<p>A National Institute for imparting and Developing Technical Education.</p> <p>A Pace setting institution for addressing a variety of issues connected with Education, Science, Engineering and Innovation etc.</p>
2.	October 2001	30 April 2007	<p>POST HELD: Senior Research Officer in Power & Energy Division of Planning Commission, New Delhi, INDIA.</p> <p>(i) To assist Senior Officers in the Formulation of Five-Year Plans for the Petroleum & Natural Gas sector.</p> <p>(ii) To contribute in the Formulation of Annual Plans, for operationalising the Five-Year Plans.</p> <p>(iii) Participate in review meetings to review Annual Plans implementation with regard to <i>“major Performance indicators”</i> for the sector through Quarterly</p>		<p>NATIONAL ECONOMIC PLANNING for the Country. Planning Commission comprises of around 30 different divisions dealing with different sectors of the economy. The Power & Energy Division deals with Planning and Development in the field of Energy sector. This division has</p>

			<p>Performance Reviews (QPR).</p> <p>(iv) Co-ordinate with other Divisions of PLANNING COMMISSION for exchange/supply of Data /Information.</p> <p>(v) Submit Examination reports on issues brought before the Public Investment Board, Cabinet/CCEA notes for the consideration of the Committee of Secretaries.</p> <p>(vi) Contribute in the formulation of Short, Medium and Long-term Energy/Petroleum Policy in consultation with various concerned Ministries/Departments/Financial Institutions/Industrial and Commercial Associations.</p> <p>(vii) Any other responsibility assigned to me from time to time by the Division based on the exigencies of work.</p>		<p>separate units dealing with Coal, Petroleum, and Power & Non-Conventional Energy sources.</p>
3.	September 1998	October 2001	<p>POST HELD: Selection Grade Lecturer</p> <p>(i) Teaching and Research/ Project Guidance to the students of Mining Engineering.</p> <p>(ii) Conducting Research in the field of Mining Engineering.</p> <p>(iii) Development of Laboratories for B. Tech Mining Engineering Course.</p> <p>(iv) Evaluation & Design of Course Curriculum.</p> <p>(v) Conducting Technical Tours to various Mines and Mineral Processing plants.</p>	<p>To Get a wider understanding of National Planning Exercise in the field of POWER AND ENERGY.</p>	<p>(i) Mainly Teaching and Research in the various branches of Engineering to the students at Graduate, Post Graduate and Research levels leading to B.Tech, M.Tech and Ph.D Degrees.</p> <p>(ii) The Institute is also engaged in the</p>

			(vi) Participation in Co-Curricular and Extra-Curricular activities. Etc.		Community Development Work through Transfer of Technology to rural areas.
4.	August 1993	Sept. 1998	<p>POST HELD: Senior Lecturer</p> <p>(i) Teaching and Research/ Project Guidance to the students of Mining Engineering.</p> <p>(ii) Conducting Research in the field of Mining Engineering.</p> <p>(iii) Development of Laboratories for B. Tech Mining Engineering Course.</p> <p>(iv) Evaluation & Design of Course Curriculum.</p> <p>(v) Conducting Technical Tours to various Mines and Mineral Processing plants.</p> <p>(vi) Participation in Co-Curricular and Extra-Curricular activities. Etc.</p>	I was promoted to the “ Selection Grade Lecturer ” Scale in the same Institute.	<p>(i) Mainly Teaching and Research in the various branches of Engineering to the students at Graduate, Post Graduate and Research levels leading to B.Tech, M.Tech and Ph.D Degrees.</p> <p>(ii) The Institute is also engaged in the Community Development Work through Transfer of Technology to rural areas.</p>
5.	June 1987	August 1993	<p>POST HELD: Lecturer</p> <p>(i) Teaching and Research/ Project Guidance to the students of Mining Engineering</p> <p>(ii) Conducting Research in the field of Mining Engineering.</p> <p>(iii) Development of Laboratories for B. Tech Mining Engineering Course.</p> <p>(iv) Evaluation & Design of Course Curriculum.</p>	I was promoted to the “ Senior Scale Lecturer ” in the same Institute	(i) Mainly Teaching and Research in the various branches of Engineering to the students at Graduate, Post Graduate and Research levels leading to B.Tech, M.Tech and Ph.D Degrees.

			<p>(v) Conducting Technical Tours to various Mines and Mineral Processing plants.</p> <p>(vi) Participation in Co-Curricular and Extra-Curricular activities. Etc.</p>		<p>(ii) The Institute is also engaged in the Community Development Work through Transfer of Technology to rural areas.</p>
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6. LIST OF “SAMPLE TECHNICAL PAPERS” PUBLISHED IN JOURNALS/CONFERENCES/SEMINARS/ SYMPOSIA /WORKSHOPS :

- (1) “Material handling with high angle conveyors”, National Seminar on recent developments in Art & Science of Mining, Surathkal, Jan., 1988. (Co-author: K. Srinivas Rao)
- (2) Mining thick seams – Geological Considerations” National seminar on Recent developments in Art and Science of Mining, Jan., 1988 (Co-author : K.S. Rao & D.V. Reddy).
- (3) “Stability of Curved pit slopes – A FEM Approach” in Indian Geotechnical Conference, Allahabad 1988, (Co-author “ B.K. Srivastava & B.B. Dhar)
- (4) “Human factors in Mining – A crucial aspect of Mechanisation”; in 5th National Convention of Mining Engineers, Kudremukh Feb, 28, March 1990. (Co-author: Sampurna Rao, K.S. Rao & P. Srinivas)
- (5) “Effective Communication Network – A roadway for higher productivity and Safety”, in 5th National Convention of Mining Engineers Kudremukh Feb., 28, March 1, 1990. (Co-authors:Sampurna Rao, Rao & P. Srinivas)
- (6) Distance learning programmes for in service Mining Engineers:- 23rd Annual Convention of ISTE, KREC., Surathkal, Dev. 26th-28th, 1993.(Abst.)
- (7) Trends in Measurement and Monitoring of Ground Movements in open cast Mining”, in Indian conference on Mine Surveying, Ramagundam March 11-12, 1995. (Co-author: Dr. Y.V. Rao)
- (8) Heat Transfer in jointed rock mass – A FEM model in 13th National Heat and Mass transfer conference and second ASME – ISHMT heat and mass transfer conferences, Surathkal, Dec. 28-30, 1995. (Co-author : K.S. Rao & Dr. Y.V. Rao)

- (9) “Computer aided learning environment for underground metal mines” – First International Conference on Educational Computing EDUCOMP 96, 19-21 March 1996. (co-authors Prof. Y.V. Rao and Sri K. Chandrasekaran)
- (10) “Exploration Technologies for commercial rock deposits” in National Conference on Granite Mining, KREC, Surathkal, 1996 pp. 31-34 (Co-author Prof. Y.V. Rao & S. Sridhar)
- (11) “Recent trends in Granite Quarrying – An overview of methods & planning” – National Conference on Granite Mining KREC, Surathkal, 1996. pp. 140 – 142. (Co-author Y.V. Rao & K.S. Rao)
- (12) “Granite Mining and its impact on the environment”-National Conference on Granite Mining, KREC, Surathkal, 1996, pp. 143 – 145 (Co-author Dr. Y.V. Rao)
- (13) Vardhan, H. & **Govindaraj, M.** (2008); “An experimental investigation of the sound level produced by bulldozers with various maintenance schedules”; International Journal of Vehicle Noise and Vibration; Vol. 4(); (pp. 107-122)
- (14) Vardhan, H., **Govindaraj, M.** & Adhikari, G. R. (2008); “Experimental investigation for estimating rock properties using sound levels produced during drilling – an approach”; International Journal of Rock Mechanics and Mining Sciences..
- (15) **Govindaraj, M.**, Vardhan, H. & Rao, Y. V. (2009); “Production optimization using simulation models in mines – a critical review”; International Journal of Operations Research; Vol. 6(3-4);
- (16) Vardhan, H., Adhikari, G. R. & **Govinda Raj, M.** (2009); “Estimating rock properties using sound levels produced during drilling”; International Journal of Rock Mechanics and Mining Sciences; Elsevier; Vol.46(3); pp. 604-612
- (17) **Govindaraj, M.**, Vardhan, H. & Rao, Y. V. (2009); “Development of probabilistic simulation model for production optimization in open pit mines”; Journal of Characterization and Development of Novel Materials; Vol. 1(1); pp. 49-70
- (18) Rajesh Kumar, B., Vardhan, H. and **Govindaraj, M.** (2010); “Estimating rock properties using sound level during drilling: Field investigation”; International Journal of Mining and Mineral Engineering; Vol.2(3); pp. 169-184.
- (19) Rajesh Kumar B., Vardhan, H., **Govindaraj, M.** and Badal Yadav (2010); “A field investigation on the study of relationship between universal compressive strength of the rock and the sound levels produced during drilling ”; Proceedings of the International conference on “Frontiers in Mechanical Engineering” during 20th and 22nd May, 2010; pp. 228-233.
- (20) Rajesh Kumar, B., Vardhan, H. and **Govindaraj, M.** (2011): “Prediction of uniaxial compressive strength, tensile strength and porosity of sedimentary rocks using sound level

produced during rotary drilling.” Rock Mechanics and Rock Engineering; 2011; Springer; Vol.44(5); pp.613-620. (**Impact Factor: 0.990; H Index: 22**)

- (21) Rajesh Kumar, B., Vardhan, H. and **Govindaraj, M.** (2011): “ A new approach for estimation of properties of metamorphic rocks.” International Journal of Mining and Mineral Engineering; 2011; Inderscience; Vol.3(2); pp. 109-123.
- (22) Rajesh Kumar, B., Vardhan, H. and **Govindaraj, M.** (2011): “ Sound level produced during rock drilling vis-à-vis rock properties”. Engineering Geology; 2011; Elsevier; Vol.123(4); pp. 333-337. (**Five Year Impact Factor: 1.892; H Index: 48**)
- (23) Rajesh Kumar, B., Vardhan, H. and **Govindaraj, M.** (2012): “Artificial neural network model for prediction of rock properties from sound level produced during drilling”. Geomechanics and Geoengineering: An International Journal; 2012; Taylor and Francis; DOI:10.1080/17486025.2012.661469 (**H Index: 6**)

6. ADDITIONAL INFORMATION:

(A) Member, Organising Committee for the following Conferences/ Workshops

- (i) National Conference on “Recent Developments in Art & Science of Mining”, KREC, Surathkal, January 1988.
- (ii) 5th National Convention of Mining Engineers, Kudremukh, March 1990.
- (iii) National Conference on Granite Mining KREC, Surathkal, 1996.
- (iv) National Conference on Information Technology for 21st century, Dec., 1996. KREC.

(C) Other Activities/ Information

- (i) Chairman, Board of Examiners in Mining Engineering (96-97), Mangalore University.
- (ii) Vice-President, Society of Mining Engineers, (1997-98).

(D) Research Interactions

- (i) Visited Department of Mining and Petroleum Engineering, Chulalongkorn University, Thailand May 2010, for a period of 6-days for research interaction.
- (ii) Visited the Department of Civil and Geological Engineering, University of , Republic of Korea during November / December 2009 for a period of 8 days.

