

1. Name: **Dr. John Loui Porathur**



2. Date of Birth: **17-May-1973**

3. Current Position and Address: **Principal Scientist, CIMFR, III Floor, MECL bldg., Seminary Hills, Nagpur.**  
(with E-mail & Phone no.) **johnlouip@yahoo.com**  
**9270800908**

4. Educational qualifications: (Graduation and above)

Sl. No.	Degree/ Certificate	Year of Passing	University/ Institute	Subjects
i	<b>B.Tech.</b>	<b>1994</b>	<b>IIT Kharagpur</b>	<b>Mining Engineering</b>
ii	<b>Ph.D.</b>	<b>2000</b>	<b>IIT Kharagpur</b>	<b>Mining Engineering</b>

5. Work experience

Designation	Institution/company	From	To	Nature of work
i) <b>Junior Scientist</b>	<b>CIMFR</b>	<b>10-Nov-1997</b>	<b>31-Dec-2000</b>	
ii) <b>Scientist</b>	<b>CIMFR</b>	<b>01-Jan-2001</b>	<b>31-Dec-2004</b>	
iii) <b>Senior Scientist</b>	<b>CIMFR</b>	<b>01-Jan-2005</b>	<b>31-Dec-2008</b>	
iv) <b>Principal Scientist</b>	<b>CIMFR</b>	<b>01-Jan-2009</b>		

6. Area of specialization: **Rock Mechanics and Mining Methods**

7. Honors/Awards received:

- 1) **National CSIR Young Scientist Award**
- 2) **National CSIR Technology Award**
- 3) **“Hindustan Zinc Ltd. Prize” by Institution of Engineers India**
- 4) **Quality of publication, CIMFR Dhanbad**

8. Fellowships/Scholarships: **Post-Doctoral Fellowship at Korea Institute of Geoscience and Mineral Resources (KIGAM)**

9. No. of Research Publications:

- Papers in journals : **26**
- In conference proceedings : **37**
- Invited/key-note addresses : **1**
- List of best 05 publications :

1	John L. Porathur, S. Karekal and P. Palroy	Web pillar design approach for Highwall Mining extraction	Int. J. of Rock Mechanics and Mining Sciences Vol 64 (2013) pp.73–83
2	John Loui Porathur, S. Srikrishnan, Chandrani Prasad Verma, J. C. Jhanwar, P. Pal Roy	Slope stability assessment approach for multiple seams Highwall Mining extractions	International Journal of Rock Mechanics & Mining Sciences Vol 70 (2014) pp. 444–449
3	John Loui P., Jhanwar J.C., Sheorey P.R.	Assessment of roadway support adequacy in some Indian manganese mines using theoretical	Int. J. of Rock Mechanics and Mining Sciences, 44, 2007, 148-155

		in situ stress estimates	
4	Sheorey P.R., Loui J.P., Singh K.B. and Singh S.K.	Ground subsidence observations and a modified influence function method for complete subsidence prediction	Int.J.of Rock Mechanics and Mining Sciences, Vol.37, 2000, pp.801-818
5	Loui J.P. and Sheorey P. R.	Estimation of non-effective width for different panel shapes in room and pillar extraction	Int.J.of Rock Mechanics and Mining Sciences, Vol. 39, 2002, pp. 95-99

10. Number of Books authored/edited:

11. (a) No. of Patents granted/applied for:

1. **International patent awarded (WO/2008/054118): “Method and apparatus for measuring in-situ stress of rock using thermal crack”**
2. **Patent awarded in South Korea: “Apparatus for measuring insitu stress in rock using low temperature phenomenon”**
3. **Patent filed in India: “A multi-point anchoring system for grouted-type borehole extensometers using quick or slow setting cement capsules”**

(b) Technologies developed, Licensed and/or commercialized:

12. Foreign visits:

Korea (Republic of)	25-Sep-2005	24-Sep-2006	Korea Institute of Geoscience and Mineral Resources (KIGAM)	Post-Doctoral Fellow
Korea (Republic of)	17-Oct-2008	24-Oct-2008	Chonnam National University Gwangju, South Korea	To deliver a special lecture and present paper at Korean Rock Mechanics Symposium 2008
United States of America	03-May-2009	12-May-2009	Colowayo Mine, Colorado and Miller Brother Mine, Kentucky	Visits to Highwall Mining sites at Colorado and Kentucky, Discussions with various rock mechanics experts, for future collaborations, etc.
Australia	05-Feb-2012	12-Feb-2012	CSIRO, Queensland Centre for Advanced Technologies, Technology Court, Pullenvale QLD, Australia	The visit was an integral part of the DST (Department of Science & Technology, GOI) – DIISR (Department of Innovation, Industry, Science & Research, Australia) Joint Research Project Under AUSTRALIA-INDIA STRATEGIC RESEARCH FUND (AISRF) on “Highwall Mining: Design and Development of Norms for Indian Conditions” and the project has been approved for a period of 3 years (2011-2013). It is a Joint venture Project of CSIRO, Australia and CSIR-CIMFR, India.
Canada	09-Aug-2013	17-Aug-2013	Montreal, Canada	To Attend 23rd World Mining Congress held at Montreal, Canada and present a paper on “EXTRACTION DESIGN OF LOCKED-UP COAL BY HIGHWALL MINING IN INDIA”
Australia	09-Feb-2014	17-Feb-2014	CSIRO, Queensland Centre for Advanced Technologies, Technology Court, Pullenvale, Brisbane, QLD, Australia	This is the second scheduled visit as an integral part of Joint Research Project Under AUSTRALIA-INDIA STRATEGIC RESEARCH FUND (AISRF) on “Highwall Mining: Design and Development of Norms for Indian Conditions” , a Joint venture Project of CSIRO, Australia and CSIR-CIMFR, India.
Australia	07-Dec-	15-Dec-	Gwalia Mine, Raleigh	Visits to Underground Mine sites and discussions

	2015	2015	Mine and Western Australia School of Mines in Western Australia	for Bench Marking top down sequence of mining and implementing at Rampura Agucha Mine of Hindustan Zinc Ltd.
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13. Details of Professional memberships:

**Technical Committee, Ministry of Coal “To evolve a set of Forest Clearance principles/norms for underground mines”**

14 . Major contributions: ( Max. 150 words)

**Designed new coal mining technology HIGHWALL MINING for the first time in our country**

A coupled numerical and empirical approach has been developed for extraction design of multiple coal seams by sequential Highwall Mining. The design methodology developed comprehensively incorporates complex geo-mining conditions of multiple coal seams extraction, at the same time include safety and long-term stability post-extraction, protection of surface and optimum coal recovery. A unique design methodology for trench slope with steep angle coupled Highwall Mining web cuts. The design technology was successfully implemented in OCP-II and MOCP of SCCL, Quarry- SEB & AB of Tata Steel Ltd and Sharda Opencast Project of SECL

**Developed a comprehensive 3D Subsidence Prediction Technology and obtained authorization from MoEF for permitting mining below forestland.**

**Developed three dimensional numerical modelling capability for underground metal mines, which enabled companies like Hindustan Zinc Ltd to achieve high production to the tune of 2mT/annum.**

15. Technologies and Products/ Services

- (i) Developed:
- (ii) Licensed:
- (iii) Commercialized:

16. Designs and Prototype Developed:

17. Honours and awards won for technological contributions or sociological impact of R&D:

Signature