

V Chamanth Sai Reddy

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EDUCATION

Doctor of Philosophy - PhD

Dept of Mining Engineering, IIT Kharagpur

July 2017 – Present

Integrated B.Tech & M.Tech (Dual Degree)

Dept of Mining Engineering, IIT Kharagpur

July 2012 – May 2017

8.76/10

RESEARCH

Development of Finite Element based Digital Image Correlation Algorithm

Computational Geo-mechanics Lab

- Digital Image Correlation (DIC) is a experimental mechanics technique used to measure displacement and strain on the surface of the objects. Currently developing Finite Element based DIC algorithm by integrating finite element principles into image correlation.
- Algorithm passed **DIC Challenge 2.0** conducted under the auspices of the *Society of Experimental Mechanics (SEM)*, USA and accepted for publication.

PUBLICATIONS

Conference Papers

- Reddy, V. C. S. and Deb, D. (2019). **Prediction of failure process in geo-material using finite element based digital image correlation (dic) method.** *Conference on Non Destructive Evaluation (NDE 2019), Indian Society for Non-Destructive Testing (ISNT)*, 5-7, December 2019, Bengaluru, India.
- Reddy, V. C. S. and Deb, D. (2019). **Estimation of geo-material deformation and strain using finite element based dic and smooth particle hydrodynamics (sph).** *4th Annual International DIC Society Conference (iDICs 2019)*, 14-17, October 2019, Portland, Oregon, USA.
- Reddy, V. C. S., Deb, D., Maheshwari, B., Kumar, S., and Gupta, R. K. (2019) **Deformation monitoring using finite element based digital image correlation (dic) method.** *3rd Technical Conference on "Asset Integrity, Reliability Management, Inspection/NDT techniques,"* 5-6, August 2019, New Delhi, India.

TEACHING

Elements of Rock Mechanics

2020 (Autumn)

2nd year B.Tech course

Computational Geo-Mechanics

2020 (spring)

M.Tech course

Numerical Modelling

2018, 2019, 2020 (Autumn)

5th year Dual Degree course

Mine Surveying

2019, 2020 (spring)

2nd year B.Tech course

Mine Hazards and Rescue Lab

2018 (spring)

3rd year B.Tech course

FELLOWSHIPS & SCHOLARSHIPS

Prime Minister's Research Fellowship

Ministry of Human Resource Development, Government of India

Jan. 2019 – Present

Full-Ride Scholarship

Bhashyam Educational Institutions, Guntur, Andhra Pradesh

June 2010 – April 2012

Full-Tuition Scholarship

Bhashyam Educational Institutions, Guntur, Andhra Pradesh

June 2008 – April 2010

INTERNSHIPS & INDUSTRIAL TRAINING

Institute of Reservoir Studies

ONGC Ltd, Ahmedabad, Gujarat

June 2015

Sukinda Chromite Mine

TATA Steel Ltd, Sukinda, Odisha

May 2015

Tummalapalle Mine

Uranium Corporation of India Ltd, Pulivendula, Andhra Pradesh

June 2014

UCIL Mines

Uranium Corporation of India Ltd, Jamshedpur, Jharkhand

Feb. 2014

SECL Mines

South Eastern Coalfields, Coal India Ltd, Chhattisgarh

Dec. 2013

TECHNICAL SKILLS

Programming Languages: C/C++, Python

Developer Tools: Visual Studio, Paraview

Libraries: openCV

Others: Office 365, L^AT_EX