

# Dr. Vinoth, Srinivasan.

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National Institute of Technology Karnataka, Surathkal,  
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## A. Academic Qualifications

Degree	Department	Institute/University	Specilization
Ph.D.	Department of Mining Engineering	College of Engineering Guindy Campus, Anna University, Chennai.	Microseismic Monitoring
M.Sc.	Department of Applied Geology	School for Earth and Atmospheric Sciences, University of Madras, Chennai.	Applied Geology
B.Sc.	Department of Applied Geology	Government Arts College, Salem – 7., Periyar University, Salem, T.N., INDIA.	Applied Geology

- **Title of Ph.D. Thesis:** Microseismic Studies for Slope Stability Monitoring in an Indian Opencast coal mine

## B. Professional Experience

Position	Department	Institute/University	Duration	Research
Assistant Professor	Civil Engineering	National Institute of Technology Karnataka Surathkal, INDIA.	2019 - Present	Engineering Rock Mechanics
National-Postdoctoral Fellow	Earth Sciences	Indian Institute of Technology Bombay Mumbai, INDIA.	Mar' 2017- Mar' 2019	Rock Mechanics and Rock Fracturing
Institute Postdoctoral Fellow	Mining Engineering	Indian Institute of Technology (IIT(ISM)), Dhanbad, INDIA	Jul' 2015 – Jan' 2019	Induced Seismicity
Research Associate (Graduate Study)	Mining Engineering	College of Engineering Guindy, Anna University, Chennai, INDIA	Jun'2008 – Apr'2015	Mining Subsidence, Microseismic Monitoring

## C. Academic Courses

- MTech (Geotechnical Engineering)
  - Rock Mechanics and Rock Engineering
- BTech (Civil Engineering)
  - Engineering Geology
  - Oil and Natural Gas Production
  - Geology Lab
- BTech (Mining Engineering)
  - Mining Geology
  - Advanced Mining Geology
  - Mining Geology Lab

#### D. Current Research Activities and Interest

- Rock Mechanics and Rock Engineering
- Subsurface Energy Engineering
- Geological Carbon Storage
- Engineering Geology
- Machine Intelligence in Geosciences

#### D. Research Group – Engineering Rock Mechanics Laboratory

<u>Degree</u>	<u>Specialization</u>	<u>Completed</u>	<u>Ongoing</u>
Ph.D.	Rock Mechanics and Rock Engineering	NIL	2
	Geosciences	NIL	3
MTech.	Geotechnical Engineering	1	3
BTech.	Civil Engineering	4	2

#### E. List of Publications

##### a) Journals

1. **Vinoth Srinivasan**, Tushar Gupta, T.A. Ansari, T.N. Singh., 2020. An experimental study on rock damage and its influence in rock stress memory in a metamorphic rock - Bulletin of Engineering Geology and the Environment – DOI: <https://doi.org/10.1007/s10064-020-01813-y>
2. **Vinoth Srinivasan**, Ashutosh Tripathy, Tushar Gupta, T.N. Singh. 2020. An investigation on the influence of thermal damage on the physical, mechanical and acoustic behaviour of an Indian Gondwana Shale– Rock Mechanics and Rock Engineering. DOI: <https://doi.org/10.1007/s00603-020-02087-2>
3. Ashutosh Tripathy, Anil Kumar, **Vinoth Srinivasan**, K.H. Singh, T. N. Singh. 2019. Fractal Analysis and Spatial disposition of Porosity in Major Indian gas shales using Low-Pressure Nitrogen Adsorption and Advanced Image Segmentation. *Journal of Natural Gas Science and Engineering*, Vol. 72, pp. 103009. DOI: <https://doi.org/10.1016/j.jngse.2019.103009>
4. T.A. Ansari, **Vinoth Srinivasan**, A. Das, T.N. Singh., 2019. Slope Instability Analysis in Phyllitic Rock in Lesser Himalayan using Different Modeling Approach – Bulletin of Engineering Geology and the Environment, Vol. 78, pp.5695–5706.DOI: <https://doi.org/10.1007/s10064-019-01498-y>
5. Ashutosh Tripathy, **Vinoth Srinivasan**, T. N. Singh., 2018. A Comparative Study on the Pore Size Distribution of Different Indian Shale Gas Reservoirs for Gas Production and Potential CO<sub>2</sub> Sequestration. *Energy&Fuels*.vol.32(3). pp.3322-3334. DOI: 10.1021/acs.energyfuels.7b04137.
6. Gangadharan R, Nila Rekha, **Vinoth S.**, 2016. Assessment of groundwater vulnerability mapping using AHP method in coastal watershed of shrimp farming area, *Journal of Arabian Geosciences*, vol. 9. No.107, 1-14. doi:10.1007/s12517-015-2230-8
7. **Vinoth S**, Ajay Kumar L, Kumar E., 2015. Slope Stability Monitoring by Quantification and Behavior of Microseismic Events in an Opencast Coal Mine. *Journal of the Geological Society of India*, vol.85, pp.450 - 456.DOI:10.1007/s12594-015-0236-1
8. **S Vinoth**, L Ajay Kumar., 2014. Applying Real Time Seismic Monitoring Technology for Slope Stability Assessment – An Indian Opencast Coal Mine Perspective. *International Journal of Mining Science and Technology*, vol. 24(1), pp.75 – 80. <https://doi.org/10.1016/j.ijmst.2013.12.013>

9. Ajay Kumar, Edwin David Raj, Amrith Renaldy, **S, Vinoth.**, 2009. Seismic Monitoring in Surface Mines. *Journal of Underground Space and Tunnel*, Korean Society of Rock Mechanics, vol. 19, (13), pp.174-180.
10. L Ajay Kumar, Edwin David Raj, Amrith Renaldy, **S Vinoth.**, 2008. Recent developments in open pit slope monitoring, *Mining Engineer's Journal of India*, vol.10 (2), pp.11–14,22.

**b) Chapters in Books**

1. N.N. Sirdesai, V. Srinivasan, R. Singh and T. N. Singh, 2018, Thermo-Temporal behaviour of uniaxial compressive strength of a fine-grained Indian sandstone, *Geomechanics and Geodynamics of Rock Masses: Selected Papers from the 2018 European Rock Mechanics Symposium*, 377-382, CRC Press, ISBN: 9781138327481.
2. A. Tripathy, V. Srinivasan, K. K. Maurya, N. N. Sirdesai and T. N. Singh, 2018, Acoustic and failure behaviour of Gondwana shale under uniaxial compressive and indirect Brazilian tensile loading – an experimental study, *Geomechanics and Geodynamics of Rock Masses: Proceedings of the 2018 European Rock Mechanics Symposium*, 687-694, CRC Press, ISBN: 9781138616455

**c) Conferences**

1. Ashutosh Tripathy, **Vinoth Srinivasan**, T. N. Singh., 2018. Pore Characterization of Cambay Shale using Low-pressure Gas Adsorption and MIP Analysis. 80<sup>th</sup> EAGE Conference and Exhibition 2018 (Extended Abstract). DOI: 10.3997/2214-4609.201801172.
2. **S Vinoth**, L Ajay Kumar., 2014. Microseismic studies applied for slope stability monitoring in an Indian Opencast Coal mine. Proceedings of National Seminar on Innovative Practices in Rock mechanics, Bengaluru, Karnataka, India, February 6-7, 2014.
3. Lekha Sharma, Tushar Gupta, **Vinoth Srinivasan**, T.N. Singh., 2017. An experimental Study on Effect of Joints and Infillings on the Dynamic Wave Velocities. Proceedings of INDOROCK-2017 - Seventh Indian Rock Conference. Pp.503-508.
4. **Vinoth S**, Ajay Kumar L and Mishra, A.K., 2016. Status and Developments of Slope Monitoring Techniques in Opencast Mines. Proceedings of Sixth Indian Rock Conference INDOROCK-2016, Mumbai, INDIA. Pp.767-781.
5. **S Vinoth**, Ajay Kumar, L., 2015. Experimental Study on Monitoring of Slope Stability Using High Resolution Microseismic System in an Indian Opencast Coal Mine. In - All India Seminar on Slope Stability Issues in Opencast Mining and Civil Engineering (SSIOCM15) July 25-26, 2015, Organized by Department of Mining Engineering, NIT, Rourkela, India.

**E. R&D projects**

- a. **Principal Investigator** – DST - Science and Engineering Research Board (SERB) Startup Research Grant project entitled “*Interaction of various environmental factors on the fracturing behaviour and damage mechanism in rocks*” for a duration of 2 years with the total project cost of Rs.32,64,000/- (Grant No.: SRG/2021/001541)
- b. **Principal Investigator** – DST - Science and Engineering Research Board (SERB) National Postdoctoral Fellowship project entitled “*A study on Influence of Thermal Damage on In-Situ Stress Conditions of Rocks using Kaiser Effect Method (Rock Stress Memory) and Its Significance in Evaluation of Damage Accumulation and Rate of Deformation in rocks*” as Principal Investigator for a duration of 2 years with the total project cost of Rs.19,20,000/- (Grant No. PDF/2016/004096)

**G. Other professional activities, such as workshops, seminars and consultations**

1. Member of Organizing Committee, INDOROCK 2017 – Seventh Indian Rock Conference, organized by Department of Earth Sciences, Indian Institute of Technology, Bombay
2. Associated with more than 11 consultancy research activities in various inter-disciplinary areas of mining such as the slope stability analysis, rock blasting and its environmental implications surrounding mining areas such as rough stone quarries, small scale mining and for large coal mining companies.

**H. Professional Honours, Awards, and Fellowships**

1. Member – Board of Studies for Department of Applied Geology, Government Arts College (Autonomous), Salem – 636007, Periyar University, Tamil Nadu, India.
2. 2017 - Recipient of National-Postdoctoral fellowship sponsored by Science and Engineering Research Board (SERB), Government of India.

**I. Professional Memberships**

1. Member – International Society of Rock Mechanics (ID: US1377)
2. Member – American Society of Rock Mechanics
3. Life Member – Indian Science Congress (Earth System Science) (ID: L40737)
4. Life member – Indian Geotechnical Society (ID: LM-5074)