Dr. ANKESH KUMAR
Assistant Professor
Department of Applied Mechanics
SVNIT Surat, Gujarat - 395007, India
Mobile: +91-9873937637
E-mail: *kumarankesh09@gmail.com*
ankesh@amd.svnit.ac.in

EDUCATION:

Doctor of Philosophy in Geotechnical Engineering, Department of Civil Engineering, Indian Institute of Technology (IIT) Delhi, India (2019)
Masters of Technology, (Rock Engineering & Underground Structures), Indian Institute of Technology (IIT) Delhi, India (2012)
Bachelors of Technology (B. Tech), in Department of Civil Engineering from National Institute of Technology (NIT) Trichy, India (2009)

RESEARCH TOPICS:

- PhD dissertation topic **– "Engineering Behavior of Oil Shale under High Pressure after Thermal Treatment"**
- Masters dissertation topic – **"Dynamic Response of Block Foundation Resting on Soil-Rock and Rock-Rock System under Vertical Excitation"**
- Bachelor's final year project topic - **"Design of Channels using Modified Kennedy's Equation and Flood Frequency Analysis".**

ACADEMIC HONORS AND PROFESSIONAL MEMBERSHIPS:

- IGS – HEICO Prize for the best paper on "Rock Mechanics" published in Indian Geotechnical Journal
- Associate Member of ASCE
- Indian Geotechnical Society, Life Member
- Life Member of IGS – Delhi Chapter

PUBLICATIONS:

JOURNAL PAPERS

- **Ankesh Kumar**, Bappaditya Manna, and K. S. Rao. "Effect of vertical vibration on block foundation resting on homogeneous and layered medium." *International Journal of Engineering Research*, pp 452-456, Vol 2, no. 7, 2013
- **Ankesh Kumar**, Bappaditya Manna, and K. S. Rao. "Dynamic response of block foundations resting on soil–rock and rock–rock system under vertical excitation." *Indian Geotechnical Journal* , pp 83-95, Vol 43, no. 1, 2013
- Renuka Darshyamkar, **Ankesh Kumar**, and Bappaditya Manna. "Investigation of block foundations resting on soil–rock and rock–rock media under coupled vibrations." *Journal of Rock Mechanics and Geotechnical Engineering* , pp 305-317, Vol 9, no. 2, 2017
- Swapnil Mishra, K. S. Rao, N. K. Gupta, and **Ankesh Kumar**. "Damage to Shallow Tunnels under Static and Dynamic Loading."*Procedia Engineering*, pp 1322-1329, Vol 173, 2017
- Swapnil Mishra, K. S. Rao, N. K. Gupta, and **Ankesh Kumar**. "Damage to shallow tunnels in different geomaterials under static and dynamic loading." *Thin-Walled Structures*, pp 138-149, Vol 126, May 2018

- Nishant Roy, Shiv Dayal Bharti, and **Ankesh Kumar**. "Seismic isolation of tunnels in blocky rock mass using expanded polystyrene (EPS) Geofoam." *Innovative Infrastructure Solutions.* Pp1-38, Vol 4 (1), 2019.

CONFERENCE PAPERS

- Aditya Singh, **Ankesh Kumar**, and K. S. Rao. "Strength Behaviour of Anisotropic Rock Under True Triaxial Stress State. *10th Asian Rock Mechanics Symposium, Singapore*, 2018.
- K. S. Rao, and **Ankesh Kumar**. "Engineering behavior of Indian oil shales." *Rock Mechanics and Rock Engineering: From the Past to the Future*, pp 307, 2016
- K. S. Rao, and **Ankesh Kumar**. "Petrophysical and engineering behavior of oil shale from Assam, India." In *Rock Dynamics: From Research to Engineering: Proceedings of the 2nd International Conference on Rock Dynamics and Applications*, p. 171. CRC Press, 2016
- E. T. Chala, K. S. Rao, Swapnil Mishra, and **Ankesh Kumar**. "Geomechanical properties of volcanic rocks from Deccan Traps,India". *VII Brazilian Symposium on Rock Mechanics – SBMR*, 2016
- K. S. Rao, and **Ankesh Kumar**. "Geological and engineering behavior of oil shale." *Journal of Engineering Geology (Special Publication)*, pp 319-331, 2015
- **Ankesh Kumar**, and K. S. Rao. "Engineering behavior of oil shales at elevated temperature and confining pressure." In *5th Young Indian Geotechnical Engineers Conference*. 2015
- Renuka Darshyamkar, Bappaditya Manna, and **Ankesh Kumar**. "Dynamic Response of Block Foundation Resting on Layered System under Coupled Vibration." In *Advances in Structural Engineering*, pp. 1575-1585. Springer, New Delhi, 2015
- A. K. Gautam, **Ankesh Kumar**, and Bappaditya Manna. "Dynamic Behaviour of Socketed Single Pile in Rocks under Vertical Vibration." *INDOROCK-2014: 5th Indian rock conference.* 2014
- **A. Kumar**, B. Manna, and K. S. Rao. "Behaviour of Block Foundation Resting on Soil-Rock and Rock-Rock Medium Under Vertical Vibration." *INDOROCK 2013 At: JUIT Campus, Waknaghat, Himachal Pradesh, Fourth Indian Rock Conference.* 2013

OTHER ACTIVITIES :

- Workshop on "Tunnelling in Himalayas" at IIT Delhi (2013)
- Workshop on Tunnelling in Himalayas at IIT Jammu (2017).
- **Large Scale Direst Shear testing** of jointed rocks for **Anji khad Rail Link Project (IRCON)**
- Numerical Simulation of Delhi metro tunnel under blast loads
- Involved in the Development of **Impact Testing Facility and Creep Testing Facility** at **IIT Delhi**

NUMERICAL SKILLS:

ABAQUS, FLAC 2D/3D, UDEC, RocScience (RS2 and RS3), Plaxis 2D/3D

AREA OF RESEARCH:

Machine Foundation, Soil Dynamics, Rock Mechanics, Analysis of Underground Structures, Engineering Geology, Petrology, Physical and Numerical Modelling, Numerical Methods in Geotechnical Engineering, Slope Stability (rock/soil), and Blast/Impact Loading in Geo-Materials.