Nithyagopal Goswami

Geomechanics Engineer

Expertise	Slope Stability, Soil Liquefaction, Underground Structures, Machine Learning
Education	Ph.D. (Geotechnical Engineering), 2019 Rensselaer Polytechnic Institute, Troy, New York
	M. Tech. (Rock Engineering), 2013 Indian Institute of Technology Delhi, New Delhi, India
	B. Tech. (Mining Engineering), 2011 National Institute of Technology Karnataka, Surathkal, India
Professional Affiliations	Member: American Society of Civil Engineers

Professional Experience

2022 – Present	*Itasca Consulting Group, Inc., Minneapolis, Minnesota* *Geomechanics Engineer*
2018 – 2021	*LANGAN Engineering and Environmental Services, Inc., Parsippany, New Jersey* *Geotechnical Staff Engineer II, III*
2014 – 2018	*Rensselaer Polytechnical Institute, Troy, New York* *Graduate Teaching/Research Assistant*
2017	*New York State Department of Environmental Conservation (NYSDEC), Albany, New York* *Environmental Engineer*
2014	*Snowy Mountains Engineering Consultants (SMEC) India Private Ltd., Gurgaon, India* *Graduate Engineer*
2013	*Indian Institute of Technology Delhi, New Delhi, New Delhi, India* *Research Associate*

Project Experience

Warehouse Design: Perform Finite Element Analyses (FEA) using PLAXIS to assess the behavior of Rigid Inclusion Elements subjected to static and dynamic loads. Conduct settlement analysis using SETTLE3D of a proposed transformer pad to be constructed adjacent to the warehouse footprint.

Liquefaction Experiments and Analysis Project (LEAP): Performed Finite Element Analysis (FEA) using OPENSEES to simulate centrifuge results of dynamically induced soil liquefaction in sloping grounds. Developed a validation framework for the comparison of 28 experiments and 8 unique constitutive models.

Lenz Lake Maintenance Project: Conducted bathymetric survey of the bottom of Lenz Lake to quantify movement of sediments. Performed Finite Element Analyses (FEA) using Slope/W to assess the stability of the slope subjected to minor erosion of dam.

Shongtong Karcham Hydroe-elctric Power Project: Led a cross-functional team to the Himalayas for rock classifications and environmental impact assessment. Performed Finite Element Analyses (FEA) using Phase2 to optimize excavation support system of tunnels and caverns in Himalayan rocks. Utilized Dips and UnWedge to assess stability of underground structures against wedge failure from structural discontinuities.