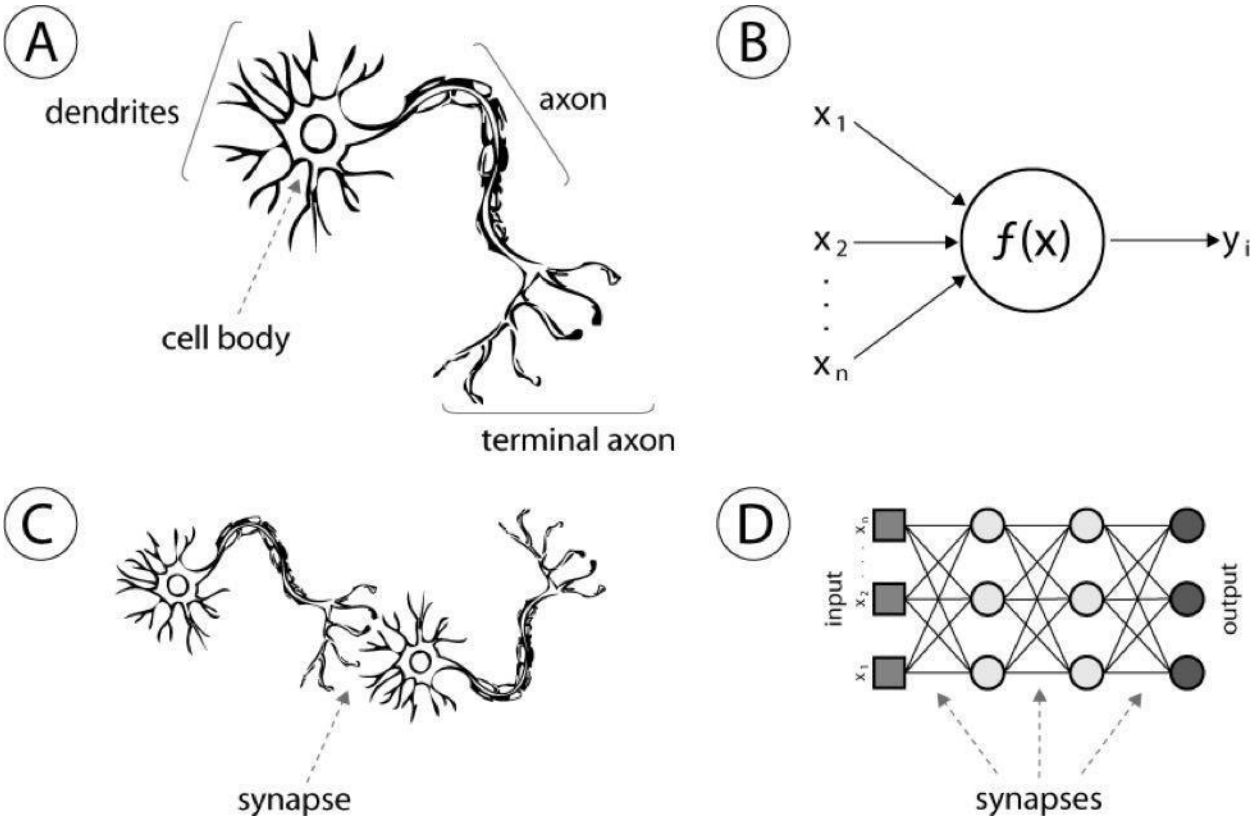
MAY 8, 2019

Wednesday, May 8, 2019
5:30 PM (1.0 PDH)



PRESENTATION
5:30 PM (1.0 PDH)

Title : **Artificial Neural Network Applications in Geotechnical Engineering**

Speaker : James Namekar, Ph.D., P.E. w/ *Geotech Engineering and Testing*

Dr. James Namekar, P.E. is a project manager at Geotech Engineering and Testing (GET) with the responsibility for the daily operations of geotechnical and environmental engineering, data analyses and the preparation of report recommendations. He has a Ph.D from University of Hawaii at Manoa, Manoa, Hawaii. He has 14 years of experience in the fields of geotechnical, environmental, materials and forensic engineering. His experience is in public infrastructure, including water, wastewater, roads, bridges, freeways, retaining walls, embankments, commercial and high-rise buildings, rail, parks, underground utilities, airports, ports, flood control channel, and subdivisions. His other experience includes planning and supervising geotechnical explorations, subsurface investigations, coordinate laboratory testing and analyze results, date review, report preparation and post-design services. His other experience includes research and development in the field of deep foundations, slope-stability, retaining walls, unsatured soil mechanics. Mr. Namekar s geotechnical experience has been in landslide investigations, static and seismic slope stability analysis for embankments, cut slopes, ground improvements, jet grouting, shallow and deep foundation design and special inspection, horizontal directional drilling, settlement, lateral earth pressure, rigid pavement design. He has a lot of experience with design of foundations on expansive soils. He has also been involved in conducting many environmental site assessment studies, including Phase I and II environmental site assessment studies.

ABSTRACT : Artificial Neural Networks (ANNs) are a form of artificial intelligence which attempt to mimic the behavior of human brain and nervous system. Over the last few years, the use of artificial neural networks (ANNs) has increased in many areas of engineering. ANNs have been applied very widely in geotechnical engineering due to

their strong ability to learn from data and model the non-linear relationship between the variables to solve the nonlinear problems. Applications of ANNs in the field of geotechnical engineering will be discussed, showing the versatility of this technique. Strengths and limitations of ANNs compared with traditional approaches will also be discussed.