
National Award for Geoscience & Technology

Prof. Sekhar Muddu



Prof. Sekhar Muddu obtained his PhD degree from IISc, Bengaluru in 1993. He completed his B.Tech in Civil Engineering from Jawaharlal Nehru Technological University, College of Engineering, Kakinada in 1984 and did his M.E. in 1987 from IISc, Bengaluru. At present, he is a Professor at Water Resources & Environmental Engineering Group in Department of Civil Engineering, IISc, Bengaluru. His work mainly focussed in the areas of ground water hydrology, agro-hydrology, satellite hydrology and urban hydrology. His interests include analysis of flow and reactive transport in groundwater systems, field-scale experiments in watershed hydrology, hydroclimatic & anthropogenic controls on groundwater, numerical methods, geospatial & geophysical methods, optimization & inverse problems and modelling of environmental hydraulic processes.

He has made significant contribution in the field with advancement in hydrological research to resolve critical gaps in the functioning of ground water systems in tropical semi-arid hard rock aquifers through theoretical, experimental and computational research studies aimed towards applications of water resources and water quality. He has given highly credible interpretation of the rift evolutionary model for the evolution of the present day eastern continental margin of India. He has contributed in advancement in multidisciplinary catchment hydrology science in forested and agriculture dominated systems pioneered through installation of experimental watersheds (e.g. Kabini critical zone observatory). Prof. Muddu findings resolved the major discrepancy in the timing between the plate tectonic reconstructions and the seismic stratigraphy of the Bengal Fan sediments.

Notable contributions being, advances in multidisciplinary catchment hydrology science in forested and agriculture dominated system pioneered through installation of experimental watersheds, deciphering vegetation/human controls on water and elemental budgets in contrasted system. Further, concomitant Algorithm development for retrieval of hydrological variables of soil moisture, soil hydraulic parameters from satellite remote sensing towards providing finger scale hydrological projections.

Under his guidance 15 students have got awarded the PhD degrees and currently 7 students are doing research under him. He is a recipient of Satish Dhawan Young Engineer Award from Karnataka State Govt. for the year 2010. He is a member of many committees of academic importance and editorial boards of scientific journals. He has written 66 research papers and has 02 patents.

In recognition to his outstanding contributions in the field of Geoscience and Technology, Ministry of Earth Sciences (MoES) honours Prof. Sekhar Muddu with the “National Award in the field of Geoscience and Technology” for the year 2018.