

## **STATEMENT OF PURPOSE**

My motivation for further study and research on Construction materials had evolved from my Masters, most importantly, when I was doing my course work on “Repair and rehabilitation of structures”. The challenges faced during the experimental work and the analysis carried out for an assignment have inspired me to pursue research as my career.

My interest in the construction activities and the core engineering made me join in Civil Engineering for an undergraduate program. I worked on a GIS based planning of road intersection – Hanumanthawaka junction, Visakhapatnam, as a part of my project work to fulfil the criteria for the undergraduate degree. The idea to investigate further and design was not successful due to limited resources and time. As I was interested in continuing my education, I ended up in Construction technology and management by chance for the graduate program. Though I was interested in construction materials during first year of masters, I couldn't work on construction materials due to my professor's interest towards management studies. During my masters, I worked on a model for estimation of activity duration and scheduling of rural roads for Warangal rural district, for the dissertation work. Later I got placement as a GATE faculty to teach construction materials and management subject in one of the noted institutes. I worked in the institute for 9 months with designation as Associate Academics. During this period, various doubts posed by the students made me to refer research journals to clarify them. With the little knowledge gained, I could contact a professor from IIT Madras to continue my research career. The work carried out previously, and my sincerity in research had brought me an opportunity to work in IIT Madras as Project Officer.

The 6 months of the quality time at IIT Madras taught me better fundamentals and complexities associated with research on Construction materials especially Cementitious materials. I worked on a project primarily dealing with characterization and utilization of clay and glass fines as mineral additives in concrete. My work was more concentrated on characterization of materials and microstructural studies of concrete specimens prepared with the addition of these mineral admixtures. During the tenure, my curiosity towards the material behaviour and the research insights developed, made me pursue research on 3D Printing of concrete. This research involves the printing of concrete layer by layer without using the form work. With the intent of doing research in this field, applied for PhD in IIT Guwahati and got selected. Few years down the line, I see myself as an independent researcher or as a member in a research group addressing various issues related to the construction materials or techniques that would help in the prosperity of the country.