

Statement of Research Interest

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Born in the lap of the Himalayas in a country marred by the dearth of infrastructure, I had seen the problems caused by inadequate transportation facilities from a very young age and from a very close distance. I remember the time when people of my village had to walk for hours to get to the nearest bus stand. This was the enticing factor behind me studying Civil Engineering with a zeal to make an impact on the transport sector of my country so that others do not have to face the same troubles that I had to face. This one thing was the driving force behind my B. Tech project which I did on analysis and design of flexible pavement behaviour of road materials and I wish to continue further.

Past Research

The design of roadways consists of geometrical design, pavement design including base course to surface course. For the design of pavement, codes and standards are being referred to. Instead of following the codes strictly, failure of pavement occurs before its design life span. A lot of factors take charge in the failure process including poor construction but there might be a space in codes and standards to correct for the design. In the B. Tech project, including both major and minor projects, I tried to find out the possible solution and cause of the failure of pavement before its design life span. Based on my interest I completed two projects entitled; "*Stress-Strain Analysis of Flexible Pavement Incorporating Viscoelastic Response of the Bituminous Material and the design of Pavement*" and "*Analysis and Design of Flexible Pavement and a Re-Look into Pavement Cross-Sections in IRC:37*" during my B. Tech. Both the projects were research-based. The projects were much appreciated not only by my guide but also by other revered faculty members of the department. I remember senior teaching telling me that the project has the potential to form a full-fledged Masters' thesis with some additions to the contents.

Future Interests

I wish to extend this work of mine at your esteemed institution as it is well known around the academia about the prowess of the Department of Civil Engineering and IIT Kharagpur. Many pieces of research have been carried out in the field of pavement materials and modification of it. The plastic road concept has been successfully tested and practiced in many parts of the world. I also want to perform research on making pavements bio-friendly and want to contribute to the design of pavement in an effective way to increase the life span of it.