

Sen's Lectures General Relativity

Volume 1

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Foreword

The content is due to Prof. Ashoke Sen while all errors in its presentation here are mine. Strictly then this contains not a word of Ashoke Sen and almost thought of mine. That was the disclaimer, wait, one more thing: there's nothing useful any further in this section. So with that I am free to express my motivation for writing this. Ashok Sen needs no introduction. I did not get a chance to learn GR at IISER due to my strange selection of electives. This, however, is something I always wanted to learn. Instead of following my usual route of picking up a text book, I thought perhaps watching Ashoke Sen's lectures delivered at IISc (I think) which some student (Anurag I think) was kind enough to upload online would be quicker. Watching the lectures was a little challenging because the video quality sometimes distorts the text on the blackboard and one has to make educated guesses. Of course Prof Sen speaks out everything he writes, well almost everything, so one can check the logical consistency with his cues to be sure that everything is correct. That's a good exercise. I have tried making notes and then presenting them in a neat format here as a way to make the subject clear to myself but I suspect this would be of use to others as well. Prof. Sen has also delivered more advanced lectures on many other topics which I might try to cover in my subsequent efforts.

Part 1

Riemannian Geometry