NPTEL

NPTEL ONLINE CERTIFICATION COURSE

Discrete Mathematics
Set Theory

De Morgan's Laws – Part 4

With
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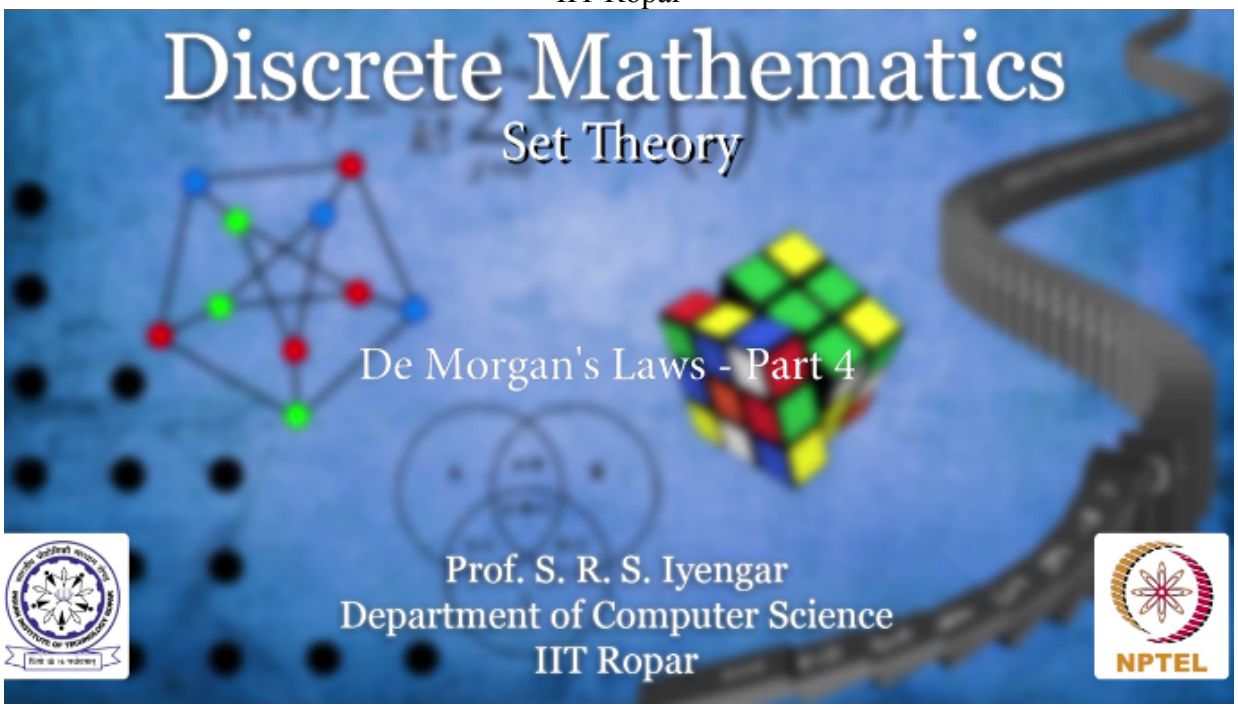
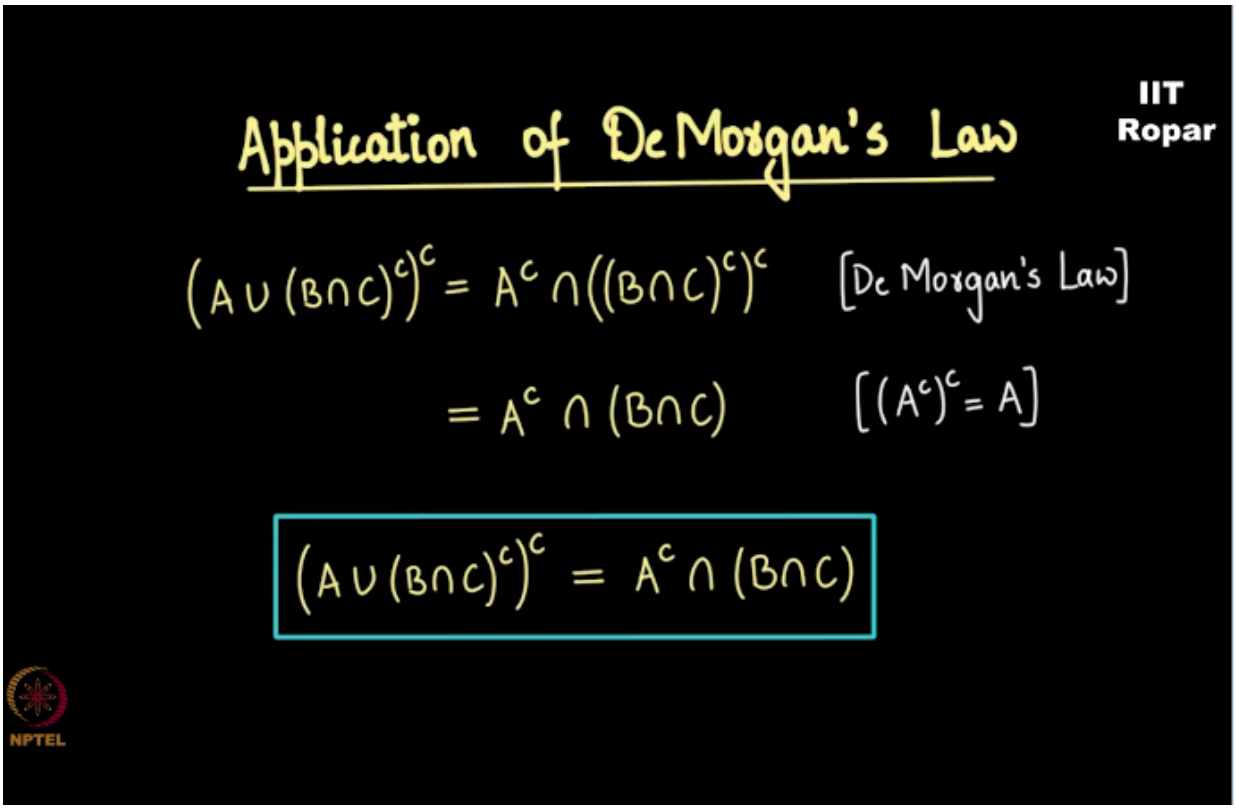


Let us now look at a quick application of De Morgan's Law. So simplify this set theoretic expression A union of B intersection C compliment the whole compliment, which is equal to now apply De Morgan's law for this A union of whatever is here is another set it's whole compliment which is compliment of A intersection union becomes intersection De Morgan's law, and then B intersection C compliment was there, it's compliment, you all know that the compliment of the compliment is itself, and hence this will be A compliment intersection B intersection C, now this is in its simplest form as you can observe, the point is to get rid of big compliments on top of the entire expression, right, this makes better sense than the previous one.



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