

Introduction to Spectral Sequences

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I will give an introduction to spectral sequences. In the talk the basic definitions and main theorems will be presented, along with a couple of interesting examples. A bit more detailed, I will try to motivate the use of them, give the definitions, talk about the spectral sequence of a filtration and of a double complex, present the Grothendieck spectral sequence and finally from it derive the Leray and from the latter the Serre. In the last one some standard applications will be mentioned like cohomology of $\mathbb{CP}(n)$.