



**Tuesday, 16 April 2013 at 16:00 c.t.**  
**Seminar room 0815, 8th floor, physics highrise**

## Top-pair Production at Threshold

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### Abstract

A future electron-positron linear collider will offer the possibility to measure the top-antitop production cross section at the production threshold. Such a threshold scan allows for a very precise and theoretically clean extraction of the top-quark mass, if the cross section can be predicted at the percent level. In this talk I will give an overview over the calculation of the cross section at the next-to-next-to-next-to leading order. I will give a detailed introduction of the effective theory framework and then focus on two particular pieces of the cross section: the matching coefficient of the vector current and effects due to the finite width of the top quark.