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**Julie Bergner\*** (jbergner@math.ucr.edu). *Homotopical versions of Hall algebras*. Preliminary report.

The classical notion of the Hall algebra associated to an abelian category plays an important role in representation theory due to its relationship with quantum groups. However, in more recent attempts to strengthen this connection, the need has arisen for a higher-order or homotopical version of the Hall algebra. In this talk we'll look at "derived Hall algebras" associated to certain model categories or more general homotopy theories and give a brief look at why they are useful. (Received August 27, 2008)