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Robin M. Lassonde* (lassonde@umich.edu). *Splittings of Non-Finitely Generated Groups.*

In 1998, P. Scott defined the algebraic intersection number of two splittings of a finitely generated group. I prove that this definition also works for arbitrary groups. Whereas Scott's proof relied on local finiteness of the Cayley graph, my proof utilizes Bass-Serre trees. I then modify later results by Scott-Swarup and Niblo-Sageev-Scott-Swarup on splittings of finitely generated groups over finitely generated subgroups to work without any of the finite generation assumptions. I will give motivating examples and present some of the main results. (Received August 16, 2011)