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**You Lu, Rong Luo\*** (rluo@mail.wvu.edu), **Michael Schubert, Eckhard Steffen** and  
**Cun-Quan Zhang.** *Flows of signed graphs without long barbell.*

Many basic properties in Tutte's flow theory for unsigned graphs do not have their counterparts for signed graphs. However, signed graphs without long barbell in many ways behave like unsigned graphs from the point view of flows. In this paper, we study whether some basic properties in Tutte's flow theory remain valid for this family of signed graphs. (Received September 08, 2019)