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Shunlong Luo, Jie Shen* (j52shen@uwaterloo.ca) and **Yi Shen.** *Noether Theorem for random locations.*

We propose a unified framework for random locations exhibiting some probabilistic symmetries. A theorem of Noether's type is proved, which gives rise to a conservation law describing the change of the density function of a random location as the interval of interest changes. We also discuss the boundary and near boundary behaviour of the distribution of the random locations. (Received August 14, 2018)