

Abstract Submitted  
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**Skyrmion dynamics with spin waves**<sup>1</sup> YIZHOU LIU, Department of Electrical Engineering, University of California-Riverside, JIADONG ZANG, Department of Physics and Astronomy, Johns Hopkins University, GEN YIN, SHANSHAN SU, ROGER LAKE, Department of Electrical Engineering, University of California-Riverside — A magnetic Skyrmion is a topological stable spin texture configuration that has attracted wide attention due to its unique properties such as the Topological Hall Effect and current-driven motion. The interaction between a magnon and a single Skyrmion has been studied recently. There are still many questions concerning the interaction of magnons and multiple Skyrmions in confined geometries. We theoretically study the interaction between magnons and Skyrmions by micromagnetic simulations. We simulate Skyrmion dynamics in some various confined geometries to observe their behavior. These interesting properties may be useful for future Skyrmion-based spintronic devices.

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