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**Sinan Aksoy\***, sinan.aksoy@pnnl.gov, and **Koby Hayashi, Cheonghee Park** and **Haesun Park**. *Hypergraph random walks, Laplacians, and clustering*.

We discuss several approaches for constructing Laplacian matrices for non-uniform hypergraphs. Recent work has suggested utilizing edge-dependent vertex weights to define non-reversible hypergraph random walks. Based on these random walks, we suggest several ways of constructing Laplacians and design clustering algorithms that utilize them as inputs. Using several data sets from real-life applications, we compare the performance of these clustering algorithms experimentally against a variety of existing hypergraph clustering methods. We conclude by highlighting avenues for future work. (Received August 28, 2020)