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Chris Jennings-Shaffer and **Holly Swisher***, swisherh@math.oregonstate.edu. *Mock modularity of a generalized rank for overpartitions.*

We investigate the modular properties of a new family of partition ranks for overpartitions, which gives both the Dyson overpartition rank and the M_2 overpartition rank as special cases. We show that the generating function for these overpartition ranks is the holomorphic part of a certain harmonic Maass form of weight $\frac{1}{2}$, and give precise transformation formulas for this Maass form along with a few rank generating function identities. This work is joint with Chris Jennings-Shaffer. (Received February 06, 2017)