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Elizabeth Meckes and **Tai Melcher***, 141 Cabell Drive, Kerchof Hall, Charlottesville, VA 22904, and **Jing Wang**. *Improved log Sobolev coefficients for compact Lie groups*.

It is a now classical result in stochastic analysis that a lower bound on the Ricci curvature of a Riemannian manifold M implies that a log Sobolev inequality holds for the heat kernel measure on M . In particular, if the Ricci curvature is non-negative, the log Sobolev coefficient is linear. Using basic properties of Lie groups and Brownian motion, we improve this standard estimate for log Sobolev coefficients of the heat kernel measure on compact Lie groups equipped with a bi-invariant metric (and thus of non-negative curvature).

This is joint work with Elizabeth Meckes and Jing Wang. (Received February 04, 2020)