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Tim Ferguson, Tao Mei* (tao_mei@baylor.edu) and **Brian Simanek**. *Monotonicity of Markov semigroups and H^∞ -calculus*.

I plan to explain a recent discovery of a monotonicity that is satisfied by all subordinated Markov semigroup of operators. For the classical Poisson semigroup P_t generated by the square root of Laplacian, this property simply means that $P_t - \frac{t}{s}P_s$ is positive preserving for any pair of parameters $s > t > 0$. I will explain how this monotonicity helps us to prove a bounded H^∞ -calculus for general “Laplacian” operators on BMO. (Received January 08, 2020)