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Mark Allen* (allen@mathematics.byu.edu), **Dennis Kriventsov** and **Robin Neumayer**.

Sharp quantitative Faber-Krahn inequalities and the Alt-Caffarelli-Friedman monotonicity formula.

We will present new sharp quantitative Faber-Krahn inequalities on simply connected space forms. We will also show how to use the inequality on the sphere to obtain a sharp quantitative form of the Alt-Caffarelli-Friedman monotonicity formula. (Received July 27, 2021)