1145-11-2728 **Benjamin Linowitz**, **D. B. McReynolds**, **Paul Pollack** and **Lola Thompson***
(`lola.thompson@oberlin.edu`). *Counting quaternion algebras.*

We discuss how classical techniques from analytic number theory can be used to count quaternion algebras over number fields subject to various constraints. In particular, we will show how to construct Dirichlet series whose coefficients give us these counts. Because of the correspondence between maximal subfields of quaternion algebras and geodesics on arithmetic hyperbolic manifolds, these counts have interesting applications to the field of spectral geometry. (Received September 25, 2018)