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Byungchul Cha* (cha@muhlenberg.edu), 2400 Chew Street, Allentown, PA 18104. *Linear independence of zeta zeros in function fields*. Preliminary report.

The Linear Independence (LI) assumption, sometimes called Grand Simplicity Hypothesis, is the assumption that the ordinates of nontrivial zeros of the Riemann zeta function are linearly independent over the rationals. LI has been used in the past by many authors in analytic number theory, including Rubinstein and Sarnak in their work on prime number races and Ng in his work on the growth of the summatory function of the Moebius function. We give some applications of LI in the function field case, exhibiting a strong resemblance to the number field case. In particular, we prove certain function field analogs of the aforementioned works of Rubinstein and Sarnak, and Ng. (Received November 20, 2008)