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Fatma Cicek* (fcicek@ur.rochester.edu), 60 Crittenden Blvd Apt 326, Rochester, NY 14620,
and **Steve Gonek**. *The distribution of $\log \zeta(s)$ near its zeros.*

Selberg's central limit theorem asserts that the distribution of the logarithm of the Riemann zeta-function near the critical line is an approximate two-dimensional normal distribution. Selberg's method and later Hejhal's work on the distribution of $\log \zeta'(s)$ used continuous moments to obtain results about the distribution. In this talk, we will investigate the distribution of the zeta-function and its derivative by calculating the following discrete moments

$$\sum_{T \leq \gamma < 2T} (\log |\zeta(\rho + w)|)^k \quad \text{and} \quad \sum_{T \leq \gamma < 2T} (\log |\zeta'(\rho)|)^k.$$

Our results are conditional on the Riemann Hypothesis together with a zero-spacing hypothesis. This is joint work with Steve Gonek. (Received September 18, 2018)