Pure Mathematics Seminar

Unnormalized differences of the zeros of the first derivative of completed L-functions

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A classical problem in the number theory is to identify the location of the zeros of the Riemann zeta function. The completed Riemann zeta function is an entire function and shares the same complex zeros with the Riemann zeta function. Repeated differentiation of such entire function evens out the spacing of the zeros. In this talk, we will discuss certain distributions of differences of zeros of derivatives of the completed Riemann zeta function and other L-functions. We will show that these distributions are able to determine the location of the zeros of the Riemann zeta function and other L-functions. In particular, we will indicate the connection between the rank of an elliptic curve over the field of rationals and the gap distributions of the zeros of the derivative of the completed L-function associated to the quadratic twist of the elliptic curve.

Date: **Friday, March 9, 2018**
Time: **12:00 pm**
Place: **Edinburg:** EMAGC 1.410, **Brownsville:** BLIBR 2.206

The talk will delivered live at the *Brownsville* campus and will be streamed to the Edinburg campus

Coffee will be served.

For further information or for special accommodations, please contact Dr. Sergey Grigorian via email at [sergey.grigorian@utrgv.edu], or Dr. Alexey Garber at [alexey.garber@utrgv.edu], or visit the webpage http://www.utrgv.edu/math/news-events/seminars/puremath/index.htm