

1046-46-149

Berhanu T Kidane* (berha001@bama.ua.edu), 319 Grace street Apt 38, Tuscaloosa, AL 35401, and **Tavan T Trent** (ttrent@as.ua.edu), Department Mathematics, The University of Alabama, Box 870350, Tuscaloosa, AL 35487. *The Corona Theorem for Infinitely Many Functions on the Multiplier Algebra of the Weighted Dirichlet Spaces.*

In this talk, we prove the Corona Theorem on the multiplier algebra of the Weighted Dirichlet Spaces (D_α) for infinitely many functions, for the weight $\alpha \in (0, 1)$. The main outline of the proof goes as follows: first, we find estimates for the weighted Dirichlet norm that is expressed on the boundary of the unit circle, which basically enable us to extend multipliers on the weighted Dirichlet Spaces to multipliers on weighted Harmonic Dirichlet Spaces. Subsequently, using techniques employed by Tavan Trent to prove the Corona Theorem for infinitely many functions from the multiplier algebra on Dirichlet Space (un-weighted), we prove the (D_α) Corona Theorem. (Received August 06, 2008)