Title: A function which has Vanishing Mean Oscillation on the unit circle but is not essentially bounded.

Abstract: It is known that if $BMO$ is the space of all functions on the unit circle $\mathbb{T}$ having bounded mean oscillation, then $L^\infty(\mathbb{T}) \subseteq BMO$. One can then ask if the same is true for $VMO$, the subspace of functions in $BMO$ that have vanishing mean oscillation. In this talk, we will construct an example of a function $G$ with $G \in VMO$ but $G \notin L^\infty(\mathbb{T})$. 