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**Ikemefuna C Agbanusi\*** (iagbanusi@coloradocollege.edu). *Singular Integrals and Singular Perturbations.*

This talk will highlight some unexpected—at least to the speaker—connections between convergence estimates for some singular perturbation problems and estimates for singular oscillatory integrals and multipliers that lie just beyond the Calderon-Zygmund theory. One example is the multiplier  $m_\mu(\xi) = \frac{|\xi|}{(|\xi|^2 + \mu^2)^{\frac{1}{2}}}$  and its variable coefficient generalizations.

The goal is to find estimates for the corresponding operator whose Fourier transform is  $\widehat{T_\mu f}(\xi) := m_\mu(\xi)\hat{f}(\xi)$  as the parameter  $\mu \rightarrow \infty$  (Received September 16, 2019)