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**Dionisios Margetis\*** ([dio@math.umd.edu](mailto:dio@math.umd.edu)), 2106 William E. Kirwan Hall, Department of Mathematics, University of Maryland, College Park, MD 20742. *Boson gas at finite temperatures: Effect of pair excitation.*

In this talk, I will discuss the formal derivation from microscopic dynamics as well as predictions of nonlinear evolution equations for a trapped gas of repulsively interacting Bosons at finite temperatures below the phase transition. A particular feature of these equations is that they include the nonlocal effect of "Bogoliubov rotation" or "pair excitation", which is responsible for phonons. (Received July 26, 2017)