Meeting: 1003, Atlanta, Georgia, SS 27A, AMS Special Session on Analysis and Applications in Nonlinear Partial Differential Equations, I

1003-60-21 **George A Anastassiou*** (ganastss@memphis.edu), Department of Mathematical Sciences, University of Memphis, Memphis, TN 38152. *Applications of Geometric Moment Theory related to Optimal Portfolio Management.*

We present a brief description of Geometric Moment Theory for Optimizing general integrals.Then we present solutions of several new Moment problems with applications to Stock market and Financial Mathematics.That is we give methods for Optimal Allocation of funds over Stocks and Bonds at Maximum return.More precisely we present here the Optimal Portfolio Management under Optimal Selection of Securities so to Maximize Profit.These are done within the framework of the models of Optimal Frontier and Optimizing Concavity.Here we only assume as given the knowledge of the annual expectations of Stocks and Bonds. (Received May 09, 2004)