STELIOS SACHPAZIS, Université de Montréal
Prime values of divisor-bounded multiplicative functions with small partial sums

There are results of analytic number theory which require information about the prime values of a multiplicative function, in order to provide information about its averages. A characteristic example of such a result is the Landau-Selberg-Delange method. In this talk, we are interested in the opposite direction. In particular, we are going to see that if f is a suitable divisor-bounded multiplicative function with small partial sums, then $f(p) \approx -p^{i\gamma_1} - \cdots - p^{i\gamma_m}$ on average, where the γ_j's are the ordinates of the zeros of the Dirichet series corresponding to f. This extends an existing result of Koukoulopoulos and Soundararajan and it is built upon ideas coming from previous work of Koukoulopoulos for the case $|f| \leqslant 1$.