1077-11-1742   **Youness Lamzouri*** (`lamzouri@math.uiuc.edu`), University of Illinois at Urbana-Champaign, Department of Mathematics, Urbana, IL 61801, and **Leo Goldmakher**, Department of Mathematics, University of Toronto, Toronto, On M5S 2E4, Canada. *Large odd order character sums.*

In 1932, Paley showed that there are infinitly many quadratic characters χ mod q whose character sums get as large as $\sqrt{q}\log\log q$. This lower bound is optimal, in view of an upper bound of the same order proved by Montgomery and Vaughan under the assumption of the Generalized Riemann Hypothesis GRH. In this talk, I will show how to obtain omega results for odd order character sums which are best possible, unconditionally. Previously, such bounds were only known under the assumption of the GRH. This is a joint work with Leo Goldmakher. (Received September 20, 2011)

1