1116-65-1997   **Thomas Trogdon*** (`trogdon@cims.nyu.edu`), Courant Institute of Mathematical Sciences, 251 Mercer St., New York, NY 10012. *Applications of Riemann–Hilbert problems.*

The theory of Riemann–Hilbert problems is a powerful tool of nonlinear analysis. It gives detailed asymptotic expansions and high-accuracy numerics for many problems in integrable systems and random matrix theory. In this talk I will discuss some new applications of the method and, in particular, discuss its application to the statistical behavior of the conjugate gradient algorithm. (Received September 21, 2015)