1125-11-1156   **Kannan Soundararajan*** (`ksound@stanford.edu`), Department of Mathematics, Stanford University, Stanford, CA 94305. *Tao's work on the Erdos discrepancy problem.*

The Erdos discrepancy problem asks whether every assignment of signs to the natural numbers must have large imbalances among the multiples of some integer. In 2015 Tao found a remarkable proof that there must be such irregularities. The key is a logarithmic version of the Chowla and Elliott conjectures from multiplicative number theory, which Tao established building upon another breakthrough of Matomaki and Radziwill on multiplicative functions in short intervals. My goal will be to describe some of the story and ideas behind this proof. (Received September 15, 2016)