1093-05-22 **George E. Andrews*** (gea1@psu.edu), Dept. of Math., 306 McAllister Bldg., The Pennsylvania State University, University Park,, PA 16802. *q-Fibonacci numbers and MacMahon's "almost" proof of the Rogers-Ramanujan identities.* Preliminary report.

In his book on Ramanujan, Hardy tells the incredible story of the discovery of the Rogers-Ramanujan identities. P.A. MacMahon plays a substantial role in this tale. In particular, he devoted an entire chapter in his book, Combinatory Analysis, to these identities where they are presented as unproven conjectures. Neither MacMahon nor Hardy realized that L.J.Rogers had proved them in 1894 in a forgotten paper. In this talk we shall examine some neglected aspects of MacMahon's chapter. We find that he not only developed q-analogs of the Fibonacci numbers, but also wrote down (without realizing its implications) a natural algorithm which when fully implemented provides an independent proof of the Rogers-Ramanujan identities. (Received June 08, 2013)