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Andrew V. Sills* (asills@math.rutgers.edu), Dept Mathematics Hill Ctr Busch Campus, Rutgers University, 110 Frelinghuysen Rd, Piscataway, NJ 08854. *Multiparameter Bailey pairs and Rogers-Ramanujan-Slater type identities.*

It is well known that the analytic and combinatorial generalizations of the Rogers-Ramanujan identities due to Andrews, Gordon, and Bressoud explain the standard modules associated with the various levels of $A_1^{(1)}$. From the analytic/combinatorial perspective, the Andrews-Gordon-Bressoud identities may be generated by building a “Bailey chain” from the so-called “unit Bailey pair” and considering associated q -difference equations. I will show how just a few multiparameter Bailey pairs and their associated q -difference equations are sufficient to generate more than half of the 130 Rogers-Ramanujan type identities included in Lucy Slater’s famous list, reveal many new Rogers-Ramanujan type identities, and provide natural combinatorial interpretations for the analytic identities. (Received August 03, 2005)