1131-11-261   **Aaron Levin*** (`adlevin@math.msu.edu`), Department of Mathematics, Michigan State University, 619 Red Cedar Road, East Lansing, MI 48824. *Greatest common divisors and Diophantine approximation.* Preliminary report.

In 2003, Bugeaud, Corvaja, and Zannier gave an (essentially sharp) upper bound for the greatest common divisor $\gcd(a^n - 1, b^n - 1)$, where a and b are fixed integers and n varies over the positive integers. In contrast to the elementary statement of their result, the proof required deep results from Diophantine approximation. I will discuss a higher-dimensional generalization of their result and some related problems, all centered around greatest common divisors. (Received July 17, 2017)