J. Malinen, O. Nevanlinna, V. Turunen and Z. Yuan: *A lower bound for the differences of powers of linear operators*; Helsinki University of Technology Institute of Mathematics Research Reports A467 (2004).

Abstract: *Let T be a bounded linear operator in a Banach space, with $\sigma(T) = \{1\}$. In 1990, M. Berkani presented a conjecture on the decay of differences $(I - T)\,T^n$ as $n \to \infty$. More precisely, either*

$$\liminf_{n\to\infty}\, (n+1)\|\,(I - T)\,T^n\| \geq 1/e$$

or $T = I$. We prove this claim and discuss some of its consequences.

Jarmo.Malinen@hut.fi, Ville.Turunen@hut.fi