1043-14-54 **Stefan Maubach*** (s.maubach@science.ru.nl), Dept. of Mathematics, Radboud University, Postbus 9010, 6500GL Nijmegen, Netherlands. *The Nagata automorphism is shifted linearizable.*

It is already known for a long time (due to Bass) that the Nagata automorphism $N$ is not linearizable. However, it turns out that $2N$ $(= 2I \circ N)$ is linearizable, but then again $-N$ is not. We will discuss this phenomenon in great generality, and will be able to show of many exponents of homogeneous derivations that they are what we call "shifted linearizable". In particular, we explain what this all means for the Nagata automorphism.

I will point out how this result is related to the story of the Markus-Yamabe conjecture and will revive a conjecture of Gary Meisters in a slightly different form. It is nice to see that this very algebraic work touches dynamical systems and complex analysis.

This work induces the following natural question: is the automorphism group generated by the linearizable automorphisms?

This is joint work with Pierre-Marie Poloni. (Received August 13, 2008)