

REMARK ON “WEAK DYNAMICS” AND THE TRANSLATION EQUATION

LUDWIG REICH

*Institut für Mathematik, Universität Graz
Heinrichstraße 36, 8010 Graz*

The problem of weak dynamics (embedding with respect to Aczél–Jabotinsky equations) was mentioned by Gy. Targonski in his talk and considered in a previous remark in the context of formal power series transformations in one indeterminate and with respect to the third Aczél–Jabotinsky equation. However, it can be shown:

This weak embedding problem for formal series $\Phi(x) = \rho x + \varphi_2 x^2 + \dots$, $\rho \neq 0$, may equivalently be considered as an embedding problem for φ with respect to a modified translation equation

$$F(F(x; t, \tau); s, \sigma) = F(x; \sigma t + \tau s, \sigma \tau)$$

where (t, τ) and (s, σ) belong to $\mathbb{C} \times E$, E being a certain subgroup of the complex roots of 1.