PAL FISCHER, University of Guelph, Guelph, Ontario N1G 2W1
On Schroder equations, linearizability and composition square roots

Results about linearizability and orientation-reversing composition square roots are presented. In addition, a sequence $\{f_n\}$ of strictly increasing and differentiable functions are constructed, defined on an interval I of reals, containing 0 as an interior point with the following properties:

(i) $f_n(0) = 0$, $f_n'(0) = \lambda$, where $0 < \lambda < 1$;

(ii) there is no solution of the Schröder equation
$$\Phi(f_n(x)) = \lambda\Phi(x)$$
on I such that $\Phi(0) = 0$ and $\Phi'(0) = 1$ for any n positive integer;

(iii) the sequence $\{f_n\}$ converges uniformly on I to λx.