

On the Spectrum of Dynamical systems on Trees

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In their famous paper Schweizer and Smítal [Trans. Amer. Math. Soc. 344 (1994) 737–754] introduced the notion of distributional chaos for continuous maps of the interval and spectrum and weak spectrum of dynamical system. Among other they have proved that in the case of continuous interval maps the both spectrum and weak spectrum is finite and generated by points from basic sets. Here we generalize mentioned results for the case of continuous maps of finite tree. While the results are similar, the original argument is not applicable directly and needs essential modifications. In particular it was necessary resolve problem of intersection of basic sets which was crucial point.

An example of one-dimensional dynamical system with infinite spectrum is presented.

References

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