On backward attractors of interval maps

HANTÁKOVÁ Jana

AGH University of Science and Technology, Poland,
Silesian University in Opava, Czech Republic
E-mail jana.hantakova@math.slu.cz

For a noninvertible discrete dynamical system (X, f) a point x can have many preimages and thus the backward trajectory of x is not unique. Special α-limit set is defined to contain all the limit points of all backward trajectories starting at x, and it turns out that for interval maps it has many interesting properties. For example, x belongs to its own special α-limit set if and only if x is from the attracting center of the interval map [2]. This talk is devoted to the solution of several open problems about topological and dynamical properties of special α-imit sets stated by Kolyada et al. in [3]. The results can be found in the joint work with Samuel Roth [1].

References

[1] J. Hantáková, S. Roth, *On backward attractors of interval maps*, arXiv:2007.10883 [math.DS]

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[3] S. Kolyada, M. Misiurewicz, and L. Snoha, *Special α-limit sets.* Dynamics: topology and numbers, Contemp. Math., **744** Amer. Math. Soc., Providence, RI (2020), 157–173.