Motivic Vitushkin's invariants

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I will explain how, in a joint work with Immanuel Halupczok (Düsseldorf Univ.), we define in definable nonarchimedean geometry a sequence of invariants which is the counterpart in this context of the sequence of Vituskin's invariants in real geometry. For this we use the theory of t-stratification in its uniform version.

We also define a notion of preorder on the ring of constructible functions, which is compatible with motivic integration. As in the real case, our invariants are sub-additive with respect to this relation and related to a notion of metric entropy.