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([brian\\_raines@baylor.edu](mailto:brian_raines@baylor.edu)). *Internal Chain Transitivity and  $\omega$ -limit sets in Baire space.*

For a dynamical system  $f : X \rightarrow X$  on a compact metric space, it is well-known that the  $\omega$ -limit sets of  $f$  are internally chain transitive. Furthermore, under appropriate conditions on the map  $f$  and space  $X$ , internal chain transitivity completely characterizes the  $\omega$ -limit sets.

In this talk, we allow  $X$  to be non-compact and explore the relation between internal chain transitivity and the  $\omega$ -limit sets of a dynamical system. In particular, we will consider the shift map acting on Baire space, the space of sequences of natural numbers, as well as some invariant subspaces thereof. (Received September 17, 2019)