

REPORT

World Logic Day, January 14th, 2021

The [logic group of the University of Turin](#) and the [logic group of the University of Udine](#) jointly organized an online seminar to celebrate the WLD 2021.

Date and time: January 15th, 2021, from 16:30 to 18:30

Speaker: [Anton Freund](#) (TU Darmstadt)

Title: Ackermann, Goodstein, and infinite sets

Abstract: In this talk, I show how Goodstein's classical theorem can be turned into a statement that entails the existence of complex infinite sets, or in other words: into an object of reverse mathematics. This more abstract approach allows for very uniform results of high explanatory power. Specifically, I present versions of Goodstein's theorem that are equivalent to arithmetical comprehension and arithmetical transfinite recursion. To approach the latter, we will study a functorial extension of the Ackermann function to all ordinals. The talk is based on a joint paper with J. Aguilera, M. Rathjen and A. Weiermann.

The [video](#) of the talk is available on our [channel](#).