

- HENRY TOWNSNER, *Impredicative ordinal analysis*.

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Ordinal analysis is the branch of proof theory concerned with measuring the strength of a mathematical theory using a transfinite ordinal. We'll introduce some of the main ideas of modern ordinal analysis, especially the use of infinitary sequent calculi and how ordinals arise from these proof systems. Along the way, we'll see Buchholz's classic (but neglected) ordinal analysis of one of the basic impredicative theories,  $\Pi_1^1 - \text{CA}_0^-$ .