

- ▶ AVIGAD, JEREMY, *Computability and convergence*.
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Countless theorems of analysis assert the convergence of sequences of numbers, functions, or elements of an abstract space. Classical proofs often establish such results without providing explicit rates of convergence, and, in fact, it is often impossible to compute the limiting object or a rate of convergence from the given data. This results in the curious situation that a theorem may tell us that a sequence converges, but we have no way of knowing how fast it converges, or what it converges to.

On the positive side, it is often possible to “mine” quantitative and computational information from a convergence theorem, even when a rate of convergence is generally unavailable. In this talk, I will discuss examples that illustrate the kinds of information that can and cannot be obtained.