

In this lecture we'll revise the classical theory of program approximation based on Scott-continuity and Böhm trees. Subsequently, we will present the more recent theory proposed by Ehrhard and Regnier and based on Taylor expansion. We will first introduce the resource calculus and its properties, and then the Taylor expansion associating each term with a power series of resource terms. In the final part of the lecture we will show how to apply this technique to prove classical results in λ -calculus in an easier (that is, inductive) way.