

## Logic Seminar

### *Truncation in the Differential Field of Transseries*

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**Abstract:** The theory of analyzable functions is based on the idea that certain classes of (germs of) functions equipped with a valuation can be understood by embedding them into fields of generalized series. One such clear example is the case of Analytic functions and Taylor expansions. We are interested in the cases in which this embedding can be obtained in a truncation closed way. That is embeddings in which all truncations of a series in the image of the embedding belong to the image as well. We will recall previously known results for certain classes of valued fields, and when can a truncation closed embedding be extended to specific ring extensions. We will then present results in the cases of differential ring and differential field extensions. We will conclude with an application in the field of Logarithmic-Exponential Transseries.

Tuesday, January 24 at 4:00 PM in SEO 427