

TEMPLE UNIVERSITY

Department of Mathematics

Analysis Seminar

Room 617 Wachman Hall

Monday, September 25, 2017, 2:40 p.m.

*Ultradifferential operators in the study of Gevrey
solvability and regularity*

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Abstract: The goal of this talk is to present results on infinite order differential operators and its applications to local solvability of a differential complex associated to a locally integrable structure in a Gevrey environment.

One of the reasons why infinite order differential operators are important in this setting is a structural theorem that says that every ultradistribution of order s can be locally represented by an infinite order differential operator applied to a Gevrey function of order s , this new kind of representation is crucial in several applications that we are going to discuss.