

1129-12-358

Julia Hartmann* (hartmann@math.upenn.edu), 209 S 33rd Street, DRL/Department of Mathematics, Philadelphia, PA 19146. *Differential Torsors and Differential Embedding Problems*.

We introduce the notion of a differential torsor, which allows us to state and prove a converse to Kolchin's structure theorem for Picard-Vessiot rings. This is used to obtain a patching result for Picard-Vessiot rings. As an application, we deduce the solvability of differential embedding problems over one variable complex function fields. (Joint work with A. Bachmayr, D. Harbater, and M. Wibmer.) (Received March 20, 2017)