1116-03-691 **Lou van den Dries*** (vddries@illinois.edu), IL. *Transseries: algebra and model theory.*

The field of Laurent series (with real coefficients, say) has a natural derivation but is too small to be closed under integration and other natural operations such as taking logarithms of positive elements. The field has a natural extension to a field of generalized series, the ordered differential field of transseries, where these defects are remedied in a radical way. I will sketch this field of transseries. Recently it was established (Aschenbrenner, Van der Hoeven, vdD) that the differential field of transseries also has very good model theoretic properties. I will discuss this in the later part of my talk.

Here is a link to our book on the subject: http://arxiv.org/abs/1509.02588 (Received September 10, 2015)