



Universität Konstanz

**Fachbereich
Mathematik und Statistik**
Schwerpunkt
Reelle Geometrie und Algebra

Einladung

Im Oberseminar *Reelle Geometrie und Algebra* hält

Gabriel Lehericy

(Universität Konstanz)

am **Freitag, 25.11.2016**, einen Vortrag zum Thema:

A Baer-Krull theorem for quasi-ordered groups

Der Vortrag findet um **13:30 Uhr** in **F426** statt.

Alle Interessenten sind herzlich eingeladen.

Abstract: The notion of compatibility between orders and valuations is an important topic in real algebra. One can give several characterizations of compatibility via conditions on the residue field, the group of units or the valuation ring. An important result is the Baer-Krull theorem, which describes valuation-compatible orders modulo orders on the residue field. In [?], the authors gave a theorem characterizing v -compatible quasi-orders. During her talk in this seminar, Salma Kuhlmann formulated a Baer-Krull theorem for quasi-ordered fields. The use of quasi-orders enables us to make statements and proofs applicable to both ordered and valued fields.

The goal of this talk is to present analogous results for abelian groups. In particular, we want to consider quasi-orders generalizing both ordered and valued groups, find a characterization of compatibility between a valuation and a quasi-order, and finally state an analog of the Baer-Krull theorem for quasi-ordered abelian groups.

[1] Salma Kuhlmann, Mickael Matusinski, Françoise Point, *The valuation difference rank of a quasi-ordered difference field*, due to appear in the volume "New Pathways between Group Theory and Model Theory", Proceedings Memorial Conference Rüdiger Göbel (2016), Springer

Sebastian Gruler
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