

- ▶ PIOTR BŁASZKIEWICZ, *Existentially closed valued fields with finite group action*. Instytut Matematyczny, Uniwersytet Wrocławski, pl. Grunwaldzki 2, 50-384 Wrocław, Polska.  
*E-mail:* piotr.blaszkiewicz@math.uni.wroc.pl.

In my talk I will show that the theory of valued fields with the action of the finite group  $G$  by the field automorphisms (fixing valuation ring setwise) has a model companion (named  $G$ -TCVF).

This result is based on the analogous result for the fields with finite group action [3] and existential AKE principle for tame valued fields [1],[2]. I will show that (under certain additional assumptions) theory  $G$ -TCVF is  $NTP_2$  [5]. Finally, I will show how these results can be generalized to the case of action of Prüfer group on the valued field [4].

This is joint work with Jakub Gogolok. Preprint with partial results on this topic can be found on arXiv [6].

[1] FRANZ-VIKTOR KUHLMANN, *Elimination of Ramification I: The Generalized Stability Theorem*, **Transactions of the American Mathematical Society**, vol. 362 (2010), no. 1, pp. 5697-5727.

[2] FRANZ-VIKTOR KUHLMANN, *The algebra and model theory of tame valued fields*, **Journal für die reine und angewandte Mathematik**, vol. 2016 (2016), no. 719, pp. 1-43.

[3] DANIEL HOFFMANN, PIOTR KOWALSKI, *Existentially closed fields with finite group actions*, **Journal of Mathematical Logic**, vol. 18 (2018), no. 1, pp. 1850003 (26 pages).

[4] ÖZLEM BEYARSLAN, PIOTR KOWALSKI, *Model theory of Galois actions of torsion Abelian groups*, **Journal of the Institute of Mathematics of Jussieu**, vol. 22 (2023), no. 6, pp. 2943-2985.

[5] PIERRE TOUCHARD, *Burdens in Henselian valued fields*, **Annals of Pure and Applied Logic**, vol. 174 (2023), no. 10, pp. 103318.

[6] PIOTR BŁASZKIEWICZ, JAKUB GOGOŁOK, *A note on valued fields with finite group actions*, preprint available on arXiv: <https://arxiv.org/abs/2506.13742> (2025)