1163-13-661 **Giulio Peruginelli*** (gperugin@math.unipd.it), Padova, Italy, and **Dario Spirito** (spirito@math.unipd.it), Padova, Italy. *Extending valuation domains through pseudo-monotone sequences, I.*

Let V be valuation domain with quotient field K. In case V has rank one, in 1935 Ostrowski introduced the notion of pseudo-convergent sequence in order to describe all the possible rank one extensions of V to the field of rational functions $K(X)$, when K is algebraically closed. The same notion was used a few decades later by Kaplansky to characterize immediate extensions of a general valuation domain.

In 2010, Chabert generalized the concept of pseudo-convergent sequence through the definition of pseudo-monotone sequence, in order to describe the polynomial closure of a subset S of a rank one valuation domain V in the context of the rings of integer-valued polynomials.

In this talk, we will show how Ostrowski's result can be generalized for general valuation domains by means of pseudo-monotone sequences. Loosely speaking, we will show which extensions of V to $K(X)$ can be approximated by pseudo-monotone sequences. We also characterize algebraic properties of these valuations. (Received September 11, 2020)