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Giulio Peruginelli* (gperugin@math.unipd.it), Dipartimento di Matematica, Via Trieste 63, 35121 Padova, Italy, and **Dario Spirito**. *Valuation domains of the field of the rational functions associated to pseudo-monotone sequences*. Preliminary report.

Let V be a valuation domain with quotient field K . If V has rank one, Ostrowski introduced in 1935 the notion of pseudo-convergent sequence in order to describe all the possible rank one extensions of V to $K(X)$.

In 2010, Chabert generalized this notion and gave the definition of pseudo-monotone sequence, in order to describe the polynomial closure of a subset S of V , which is the largest subset T of V with the property that if $f \in K[X]$ maps S into V then $f(X)$ maps also T in V .

In this talk, we will show how the notion of pseudo-monotone sequence can be used to generalize Ostrowski's result for general valuation domains V in order to describe all the possible extensions of V to $K(X)$.

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