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Title:	On the ranks and implicit constant fields of valuations induced by pseudo monotone sequences
Authors:	Dutta, Arpan (/jspui/browse?type=author&value=Dutta%2C+Arpan)
Keywords:	pseudo monotone sequences Implicit constant fields
Issue Date:	2022
Publisher:	Elsevier
Citation:	Journal of Pure and Applied Algebra, 226(11), 45689.
Abstract:	Given a valued field (K, v) and a pseudo monotone sequence E in (K, v), one has an induced valuation vE extending v to $K(X)$. After fixing an extension of vE to a fixed algebraic closure $\overline{K(X)}$ of $K(X)$, we show that the implicit constant field of the extension $(K(X)|K, vE)$ is simply the henselization of (K, v). We consider the question: given a value transcendental extension w of v to $K(X)$ and a pseudo monotone sequence E in (K, v), under which precise conditions are w induced by E? The dual nature of pseudo convergent sequences of algebraic type and pseudo divergent sequences is also explored. Further, we provide a complete description of the various possibilities of the rank of the valuation vE, provided that v has finite rank.
Description:	Only IISER Mohali authors are available in the record.
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