Logic Seminar

Distality Rank
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Abstract: We develop distality rank as a property of first-order theories and give examples for each rank \( m \) such that \( 1 \leq m \leq \omega \). For NIP theories, we show that distality rank is invariant under base change. We also define a generalization of type orthogonality called \( m \)-determinacy and show that theories of distality rank \( m \) require certain products to be \( m \)-determined. Furthermore, for NIP theories, this behavior characterizes distality rank \( m \).