

nsversely at p .

One important corollary of this is that if V and W meet in isolated points, their topological intersection number $\#(V \cdot W)$ is greater than or equal to their set-theoretic intersection $\# \{V \cap W\}$.

▮ Suppose V and W meet nontransversely at p , and $m_p(V \cdot W) = 1$. By P63, $m_p(V \cdot W) = 1 \Leftrightarrow V$ and W meet transversely at p . \Rightarrow Contradiction. If π is one-sheeted branched covering map, then π must be a covering map, since there can not exist branch points. \Rightarrow

Thus, for instance, if the intersection $V \cap W$ of two analytic varieties in M contains more than $\#(V \cdot W)$ points it follows that $V \cap W$ must contain a curve.

▮ If $V \cap W$ does not contain a curve, $V \cap W$ is a set of discrete points. \Rightarrow By the above, $\#(V \cdot W) \geq \# \{V \cap W\}$. \Rightarrow This contradicts to the fact that $V \cap W$ contains more than $\#(V \cdot W)$ points. $\Rightarrow V \cap W$ must contain a curve. \Rightarrow

As a simple consequence of this assertion, note that

If M is any complex submanifold of projective space \mathbb{P}^n , $V \subset M$ an analytic subvariety, then the fundamen