1 Rigidity Conjecture

Theorem 1 (Rigidity Conjecture $R(m)$)**.** Let $a(X) \in \mathbb{C}[X]$ be a polynomial of degree less than or equal to $m+1$ such that $a(X) \equiv X \mod X^2$, i.e. the constant coefficient is zero and the coefficient of X is 1. If m consecutive coefficients of the formal inverse $a^{-1}(X)$ vanish, then $a(X) = X$.

Theorem 2 (Rigidity Conjecture $R(m)_n$)**.** Let $a(X) \in \mathbb{C}[X]$ be a polynomial of degree less than or equal to $m+1$ such that $a(X) \equiv X \mod X^2$, i.e. the constant coefficient is zero and the coefficient of X is 1. If the coefficients of $X^{n+1}, \ldots, X^{n+m}$ of the formal inverse $a^{-1}(X)$ vanish, then $a(X) = X$.