BULLETIN (New Series) OF THE
AMERICAN MATHEMATICAL SOCIETY
Volume 7, Number 2, September 1982

THE JACOBIAN CONJECTURE: REDUCTION OF DEGREE AND FORMAL EXPANSION OF THE INVERSE

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INTRODUCTION

A mapping F: $\mathbf{C}^n \to \mathbf{C}^n$, $F(X) = (F_1(X),\dots,F_n(X))$, is a *polynomial mapping* if each F_i is a polynomial. How do we recognize when such an F is invertible? The question is unambiguous since, once F is bijective, its set theoretic inverse is automatically polynomial (see Theorem 2.1). When F is

Received by the editors January 9, 1982.
1980 *Mathematics Subject Classification.* Primary 13B25, 13B10, 13B15, 14E05, 14E07; Secondary 05C05.
[1]Partially supported by NSF Grant MCS 80-05802.
[2]Partially supported by NSF Grant MCS 77-28188.
[3]Partially supported by NSF Grant MCS 80-02844.

0273-0979/82/0000-0754/$12.00