Possibly a solution of the two dimensional JC (Jacobian Conjecture).

Abstract:
Several years ago I introduced Newton polytopes related to the potential counterexamples to the JC. This approach permitted to obtain some additional information which though interesting, was not sufficient to get a contradiction. It seems that a contradiction can be obtained by comparing Newton polytopes for the left and right side of a (somewhat mysterious) equality $G_x=-y_F$. 