

## Authors' note on the paper:

# Instability of low density supersonic waves of a viscous isentropic gas flow through a nozzle

Weishi Liu and Myunghyun Oh

After the paper was accepted, C.-H. Hsu and T.-S. Yang pointed out to us that the expression for  $w_1$  in display (29) is wrong and it should be  $w_1 = 0$ . We then found an error in our calculation and, indeed,  $w_1 = 0$ . This error affects the claimed main result (Theorem 5.1) since the proof of Lemma 5.3 in the paper relies on the wrong expression (29) for the term  $w_1$ . At this moment, we could not prove Theorem 5.1 with  $w_1 = 0$  and we do not know if the statement in Theorem 5.1 is correct or not.

Also, the following corrections should be made due to this error:

1. Relative parts on  $w_1$  in Lemma 4.1 should be changed with the statement  $w_1 = 0$ .

2. Lemma 4.2 should be changed to:

**Lemma 4.2.** *For every non-transonic wave  $(\bar{\rho}, \bar{u})$ , all eigenvalues are pure imaginary.*

3. In the proofs of Lemmas 4.2 and 4.3, one uses  $w_1 = 0$  at relevant places and the rest remains the same.