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# CORRIGENDUM

# Three-dimensional interaction between uniform current and a submerged horizontal cylinder in an ice-covered channel – CORRIGENDUM

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In the **Appendix B** of Yang, Wu & Ren (2021), we made the statement that the Green function $G$ has the symmetry property with respect to the field point $P(x_1, y_1, z_1)$ and field point $P_0(x_0, y_0, z_0)$, or $G(x_1, y_1, z_1; x_0, y_0, z_0) = G(x_0, y_0, z_0; x_1, y_1, z_1)$. This is not always correct.

The mistake arose from the statement below (B2) that 'Although $G$ and $\xi$ involve only the real part, we may use the whole complex function here'. In the derivations followed, the full complex functions of $G_i$ and $\xi_i$ $(i = 0, 1)$ in (B1) and (B2) were directly used without taking their real parts, which led to an incorrect conclusion. However, it should be noted that when $0 < Fn < Fn_c^{(1)}$, $G_i$ and $\xi_i$ contain only the $k_0$ component. $G_i^{(0)}$ is fully real and $\xi_i^{(0)}$ is fully imaginary, and they can be taken out of the operator Re{ }. Therefore, the symmetry property is satisfied within this range.

In summary, the symmetry property $G(x_1, y_1, z_1; x_0, y_0, z_0) = G(x_0, y_0, z_0; x_1, y_1, z_1)$ holds only when $0 < Fn < Fn_c^{(1)}$, and it is incorrect when $Fn > Fn_c^{(1)}$.

This mistake is confined solely to the **Appendix B**, and it does not affect any other formulas or results presented in the paper.

## Reference

Yang, Y.F., Wu, G.X. & Ren, K. 2021 Three-dimensional interaction between uniform current and a submerged horizontal cylinder in an ice-covered channel. *J. Fluid Mech.* **928**, A4.