Dedicated to Professor LAZĂR DRAGOŞ on his 75$^{\text{th}}$ birthday

Self-Propulsion of an Oscillatory Wing Including Tunnel Effects

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Abstract - In the framework of the small perturbations theory, we study the motion of an uniform stream past an oscillating thin wing in a tunnel. Using the theory of distributions we deduce the integral equation for the jump of the pressure past the wing. We solve the integral equation numerically and we calculate the average drag coefficient. We find that for some kind of wings there appears a propulsive force and this force increases when the wing is close to one of the walls of the tunnel.
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