**عنوان مقاله:**

Study on the Ability of Electrostatic Modeling for Numerical Simulation of Plasma Actuators

**محل انتشار:**

شانزدهمین کنفرانس سالانه بین المللی مهندسی مکانیک (سال: 1387)

تعداد صفحات اصل مقاله: 7

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**خلاصه مقاله:**

In this Study we have shown that by Electrostatic modeling it is possible to incorporate the effect of the plasma actuator on the flow, into Navier-Stokes computations as a body force vector. It is based on the assumption of different time scales that play different roles in the physics of the plasma actuator and allows decoupling the problem into two separate parts associated with: the plasma body force formation and the fluid flow response. We have applied this model to an asymmetric electrode arrangement in quiescent flow. We have also compared the Electrostatic modeling results with the experimental results reported previously, and shown besides some discrepancies Electrostatic model could simulate plasma actuator effect properly.

**کلمات کلیدی:**

Plasma Actuator, Flow control, EHD, Barrier discharge, Electrostatic

**لینک ثابت مقاله در پایگاه سیویلیکا:**

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