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(57) Abstract :

The present invention discloses a Synthetic jet array configuration based system involving one or more synthetic jet actuator (SJA) device comprising said one or more synthetic jet actuator (SJA) device, each including a cavity with a small opening at one end and an oscillating medium attached at the other end, said oscillating medium is configured for time-periodic oscillation. The one or more synthetic jet actuator (SJA) devices are independently controlled and placed adjacent to each other including provision of a selective non-linear phase delay in the oscillation between inner and extreme actuators of the array which reduce drastic interaction between vortices in the near field, allowing the vortices to evolve effectively, and constructive merging between same natured vortices which enhance the jet strength in the far field.

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