

- Member: *American Institute of Aeronautics and Astronautics*
- Member: *American Mathematical Society*
- Collaborating with Dr. Vladimir Golubev (ERAU, AFOSR) on *Multi-disciplinary Design Optimization of Synthetic Jet Actuators for Transitional Boundary Layer Separation Control*
- First gained interest in **Modular Forms** exactly one year ago.
- **Research Interest:** Investigate the occurrence of doubly-periodic vortex soliton solutions of coupled nonlinear hyperbolic partial differential equations.
- **Research Interest:** Arithmetic on groves of planar binary trees using the Loday-type dendriform dialgebra.
- **Research Interest:** Symbolic computation and term rewriting using abstract syntax trees for expressions.

Michael Reed, Toroidal Vortex Expulsion

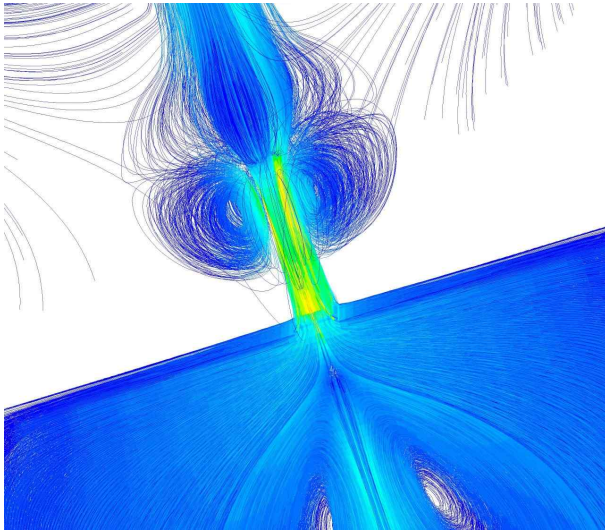


Figure: Vena contracta visible near orifice of asymmetric flow synthetic jet actuator, 3D Reynolds Averaged Navier-Stokes PDE