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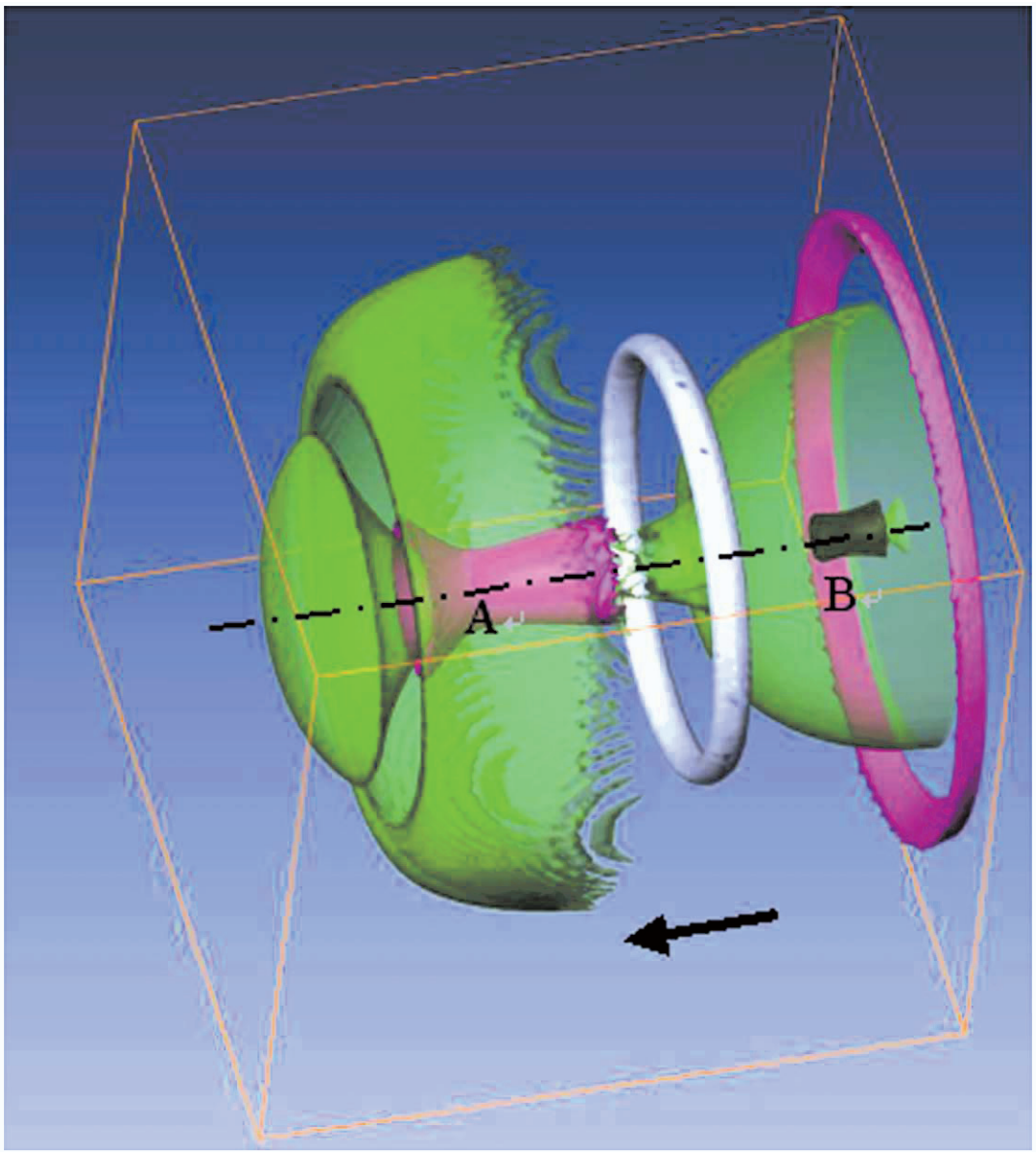
## 2. Shock/vortex Ring Interaction and the Generation of Acoustic Waves (1)

***Ding, Z.*[1)]*, Hussaini, M. Y.*[1)] *and Erlebacher, G.*[1)]

1) *School of Computational Science and Information Technology, the Florida State University, Tallahassee, Florida 32306-4120, USA*




Simulation result for the pressure field due to the passage of a vortex ring (R=50, Γ=0.01) through a stationary Mach 1.5 shock at t=39.0 is shown. The interaction results in a toroidal acoustic wave, which at large times, self-interacts on its symmetry axis at the two points A and B and generates high amplitude pressure disturbances. The pressure disturbance is a compression at A and a rarefaction at B. The shock is located on the right and the mean flow is from right to left. Pink color represents compression, green and black colors represent rarefaction. The outer contour of the vortex ring (based on the velocity magnitude) is also shown (in white color).