

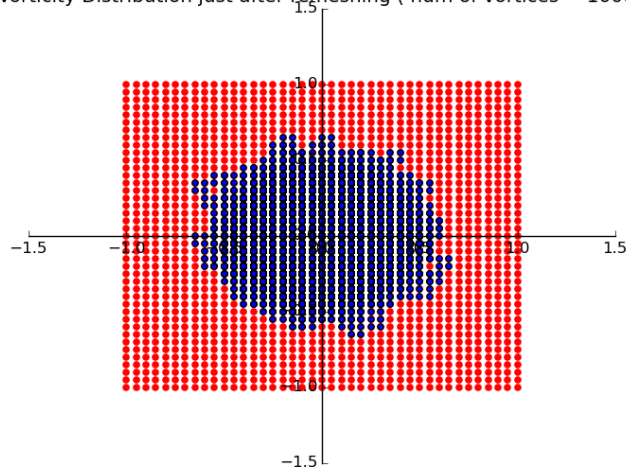
AE 625 -Particle Methods in Fluid Flow  
Simulation  
Assignment 6: Report  
Diffusion of a point Vortex using RVM

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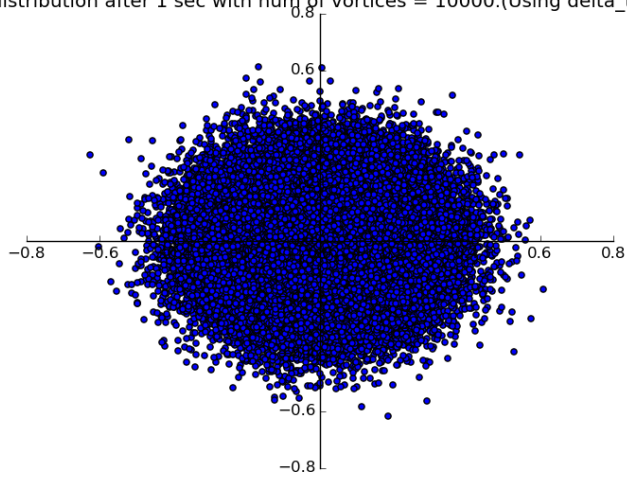
**Remeshing and Vortex Blob distribution and Relative Error Distribution**

*Gridsize* = 41 \* 41  
*x\_limit* = -2to2  
*y\_limit* = -2to2

Vorticity Distribution just after remeshing ( num of vortices = 10000)



vorticity distribution after 1 sec with num of vortices = 10000.(Using delta\_t = 0.1



Relative Error Profile with grid size = 8x8

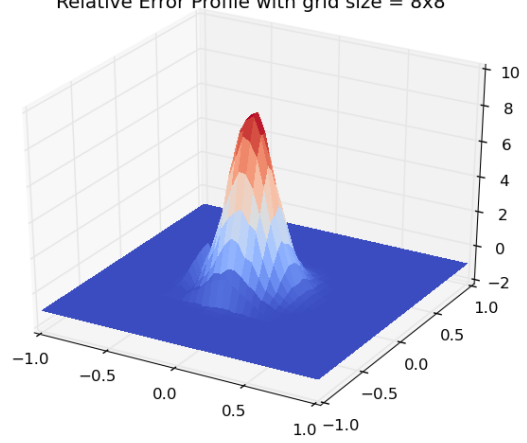


Figure 1: Comparison between the RVM method and Exact Solution

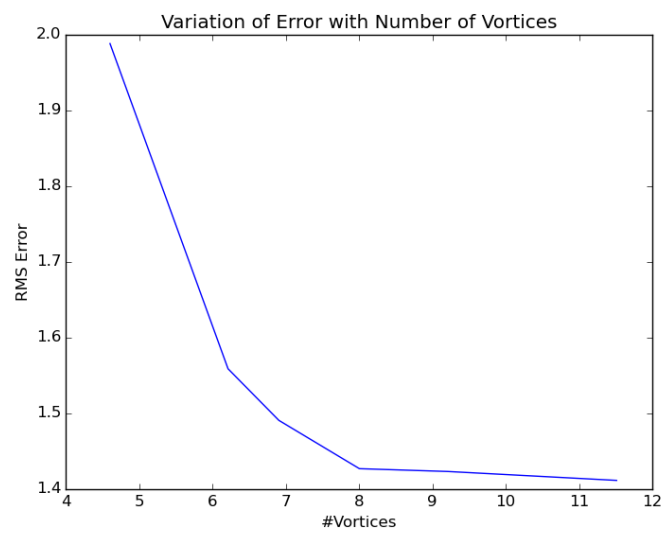


Figure 2: Variation of RMS error with number of vortices