

# jmp97

## Final

During the Fall 2008 semester I have worked on the Flocculator Research Design Team. Most of the research and analysis has been completed jointly with my research partner, Yong Sheng Khoo. We meet twice a week in the Swanson Computer Lab to work on the weekly tasks. As described by the schedule and the weekly meetings, we have researched [turbulence models](#), developed a [UDF function to extract the G-pheta value](#), created [multiple turn geometries](#), created automatic scripts to generate meshes in GAMBIT (Yong) and set up and run cases in FLUENT. Additionally, since the mid-term, the [flocculation tank geometry has been optimized based on uniformity of energy dissipation, performance parameters have been calculated, sensitivity to Reynolds number has been determined for the optimal geometry](#) and the [profile of energy dissipation has been categorized for different geometries](#). The above results have mainly been a collaborative effort.

Individually, I have examined the development of turbulence models by reading background literature including *Turbulence Modeling for CFD* by Wilcox, and *Fundamentals of Turbulence Modeling* by Chen. Additionally I have looked for the tie in between [shear stress and floc particle](#) to relate the resulting shear stress plots to floc sizes.

**Content created by Anonymous**

There are no pages at the moment.