

Personal Statement

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I started my PhD study in 2010 and meanwhile, work as graduate research assistant in Operation Research. My research is in the area of Applied Mathematics with main focus on the numerical analysis, especially in the field of 'Centroid Voronoi Tessellation' known as 'CVT'. Before being a GRA in OR department, my research was mainly about implementing the algorithm involved with 'CVT' such as Lloyd method and multi-level Lloyd. My current research is focus on Multigrid Optimization.

During the passed one year, I studied the basic and advanced knowledge of Optimization. Combine these background and the instruction from my advisor, I have a very deep understanding of Multigrid Optimization. Finally, I successfully applied this brand new method 'MG/OPT' to 'CVT' resulting in a dramatically improved convergence factor compared to the other methods together with my advisors: Stephen Nash Maria Emelinaenko.

As a big honor, I am invited to give a talk in the minigymposium of ICIAM 2011 – 7th International Congress on Industrial and Applied Mathematics: 'Recent Advances in Studies and Applications of Centroidal Voronoi Tessellations - Part II of II'. My talk title is 'Novel Optimization - based Multilevel CVT Construction Algorithm'. This minigymposium is organized by Lili Ju and Maria Emelianenko.

Therefore, I plan to apply for the travel support funds provided by a grant from the U.S.National Science Foundation.