

QIANYING HONG

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Education

UNIVERSITY OF GEORGIA Degree expected July 2011
Athens, GA 30602
Ph.D. in Mathematics
Thesis Adviser: Professor Ming-jun Lai

UNIVERSITY OF GEORGIA Degree expected May 2011
Athens, GA 30602
M.S. in Statistics

SUN YAT-SEN UNIVERSITY June 2005
Guangzhou, China
M.S. in Computational Mathematics
Thesis: Image Compression based on Balanced BAT Multiwavelets.

SUN YAT-SEN UNIVERSITY June 2003
Guangzhou, China
B.A. in Information and Computation Science

Research Interests

Numerical Analysis, Approximation Theory, Optimization Theory, Bivariate Splines, Image Processing.

Mathematics Employment and Teaching Experience

2005 - PRESENT GRADUATE TEACHING ASSISTANT University of Georgia
Differential Calculus Lab
This is a course devoted to helping students to use the Maple software to assist their study in Calculus.

Pre-Calculus

This course is designed to prepare students for calculus. It is divided into three major sections—Functions, Logs and Exponentials, and Trigonometry.

Mathematics of Decision Making

This course attempts to convey the flavor and variety of mathematics. It includes topics of Graph theory, Probability, Voting Systems, and Fairness and Game theory.

Analytic Geometry and Calculus

This course concentrates on differential calculus of functions of one variable. Topics covered including the definition of derivative, techniques for computing derivatives, and the application of derivative.

Talks and Posters

Image Segmentation based on Level Set Method. UGA Applied Math. Seminar, Athens(GA, USA), Feb 2011.

The Minimum Surface Area Method for Image Enhancement. 13th International Conference Approximation Theory, San Antonio(Texas,USA), March 2010.

A Bivariate Spline Approach for Image Enhancement. Georgia Scientific Computing Symposium(Atlanta, GA), Feb, 2010. Poster Presented.

Bivariate Spline Approach for Noise Removal. UGA Applied Math. Seminar, Athens(GA, USA), November 2009.

Edge Detection of Noised Image by Level Set Method. UGA Applied Math. Seminar, Athens(GA, USA), April 2008.

New Constructions of Orthonormal Multi-wavelets. International Conference on Applied and Computational Harmonic Analysis at Fudan University, Shanghai(China), June 2007.

Paper Submitted

Q. Hong, M.-J. Lai, A Bivariate Spline Approach For Image Enhancement, submitted to SIAM J. Image Processing., 2010.

Q. Hong, M.-J. Lai, J. Wang, Convergence Analysis of a Finite Difference Scheme for TV Gradient Flow, submitted to SIAM J. Numer. Anal., 2010.

Q. Hong, M.-J. Lai, J. Wang, A Study on the TV-Lp model for Image Denoising and Deblurring. submitted to SIAM J. Applied Mathematics., 2011.

Honors

Excellent Graduate Student Scholarship, Sun Yat-sen University, 2003-2004.

Second Prize Undergraduate Scholarship, Sun Yat-sen University, 1999-2000, 2001-2002.

Third Prize Undergraduate Scholarship, Sun Yat-sen University, 1999-2000.

References

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PROFESSOR QING ZHANG (TEACHING)
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