

Yunho Kim, Ph.D. Candidate

Contact Information	Department of Mathematics University of California at Los Angeles 405 Hilgard Avenue Los Angeles, CA 90095-1555 USA http://www.math.ucla.edu/~yuno1123	yuno1123@math.ucla.edu
Research Interests	Calculus of variations, Optimization Theory, Partial Differential Equations, Inverse Problems, Computational Mathematics, Image Analysis, Probability Theory	
Education	University of California at Los Angeles , Los Angeles, California, USA Ph.D., Applied Mathematics (expected to graduate in June 2009) — Thesis Advisor: Professor Luminita A. Vese — Tentative thesis title : Variational Methods - Theory and its applications to Image denoising and deblurring problems M.S., Mathematics, June 2007 Pohang University of Science and Technology (POSTECH) , South Korea B.S., Mathematics, February 2000 • Graduation with <i>Magna cum laude</i>	
Awards	<ul style="list-style-type: none">• Beckenbach Dissertation Year Fellowship, 2008• SIAM travel award, 2008• Graduate Division Fellowship, 2004• Korea Science and Engineering Foundation Fellowship, 2004• Brain Korea 21 Scholarship, 2003• Exchange Program Scholarship - Australia, 1998	
Conference Participation/Invited Talks	<ul style="list-style-type: none">• Nonlinear PDE seminar, UC Irvine, CA Invited speaker• Math Colloquium, CSU Channel Islands, CA Invited speaker• Graduate Summer Internship Program, UCLA contributed talk• SIAM conference on imaging science, San Diego, CA contributed talk• CNA summer school, CMU, Pittsburgh, PA contributed talk• Optimal Transport, IPAM, Los Angeles, CA	<ul style="list-style-type: none">March 2009October 2008July - September 2008July 2008May - June 2008March - June 2008

..... core participant/talk

- SPIE conference 2008 **January 2008**

..... paper presentation

- The 2nd Cornell Probability Summer School, Ithaca, NY **June 2006**

Fellowships

University of California at Los Angeles, Los Angeles, California, USA

Teaching Assistant **Fall 2005 - Winter 2008**

- Lower Division courses
 - Calculus, Integration and infinite series
- Upper Division courses
 - Real Analysis, Optimization, Probability
- Graduate courses
 - Algebraic Topology

Research Assistant **Fall 2006, Spring 2008**

- n-particle exclusion process under the supervision of professor T. Liggett
- variational methods for image denoising and deblurring with professor L. Vese

Seoul National University, Seoul, South Korea

Master's study - Differential Geometry **2000, 2003**

Teaching Assistant **2003**

- Calculus, Differential Equations

Computer lab. Assistant **2000**

POSTECH, Pohang, South Korea

Exchange student - Australia **1998**

Editorial Activities

Journal manuscript reviewer

- Inverse Problems and Imaging Journal

Professional Experience

Korean Army, South Korea

Computer programmer and Web developer **November 2000 - January 2003**

- Produced web content for a Korean Army Base.
- Assisted in administration of IBM AIX, Microsoft Windows NT operating systems.

Service

Vice president of Mathematics Student Council, POSTECH, **1997**

Computer Skills

Matlab : linear algebra, Fourier transforms, nonlinear numerical methods

Programming: C, C++, UNIX shell scripting, ASP, SQL

Publications

- (1) Y. Kim, L.A. Vese, *Functional minimization problems in image processing*. SPIE Electronic Imaging 2008, Proceedings Vol. 6814 Computational Imaging VI, Charles A. Bouman; Eric L. Miller; Ilya Pollak, Editors, 68140Q, 2008
- (2) Y. Kim, L.A. Vese, *Image recovery using functions of bounded variation and Sobolev spaces of negative differentiability*, Inverse Problems and Imaging, **3** (2009) 43 – 68 (UCLA CAM report 08-15, March 2008)
- (3) Y. Kim, P.M. Thompson, L.A. Vese, *HARDI data denoising using vectorial TV and logarithmic barrier*, UCLA CAM report 08-68, October 2008 (submitted to IPI)
- (4) Y. Kim, P.M. Thompson, A.W. Toga, L.A. Vese, L. Zhan, *Minimization models for HARDI data denoising*, Organization for Human Brain Mapping, 2009 (accepted)
- (5) Y. Kim, P.M. Thompson, A.W. Toga, L.A. Vese, L. Zhan, *HARDI denoising: variational regularization of spherical Apparent Diffusion Coefficient sADC*, IPMI 2009, LNCS 5636, pp. 515-527, 2009