

Linh Lieu

PROFILE

Research scientist with background in Applied Mathematics. Experienced in pattern recognition, data analysis, dimension reduction, and image analysis using Partial Differential Equations and Graph Theory. Worked on multidisciplinary projects collaboratively and individually. Able to quickly develop new skills and apply these to cutting-edge problems.

EDUCATION

Ph.D. in **Applied Mathematics**, University of California at Los Angeles, June 2006

Bachelor of Science in **Mathematics**, University of the Pacific at Stockton, California, May 2000

PROFESSIONAL EXPERIENCE

Visiting Research Assistant Professor

Department of Mathematics, University of California at Davis, July 2006-Present

--Conducted research in the areas of pattern recognition and image analysis

--Devised method for classification of high-dimensional data such as Synthetic Aperture Sonar signals and video image sequences

--Published research papers

--Organized applied math seminar

--Attended conferences and presented research findings

--Taught mathematics courses and supervised Teaching Assistants and Course Readers.

Summer Research Assistant

Collaborative Research Program between Los Alamos National Lab and University of California at Los Angeles Math Department, Summer 2005 and Summer 2006

--Developed algorithms for edge detection in digital images generated by high-speed Imacon cameras and in scanned images of streak photographs.

Research/Teaching Assistant

Department of Mathematics, University of California at Los Angeles, September 2000-June 2006

--Conducted discussion sections in mathematics and researched in image denoising and decomposition by methods of variational calculus.

Summer Research Assistant

Institute for Data Analysis and Visualization, University of California at Davis, Summer 2002

--Conducted research in dimension reduction for gene expression microarray data. Published result.

SKILLS

Research and Analytical Skills

Proficient knowledge of mathematical modeling and data analysis using differential equations and graphs-based approaches, statistical data analysis, scientific computing, theoretical validation, writing and publishing research papers, presenting research findings, performing literature searches.

Computer Skills

Programming languages: C and C++

Softwares: Matlab, HTML, LaTeX, words processing, spreadsheet

Platforms: Linux, Macintosh, Windows XP

Language Skills

Fluent in English (written and spoken)

Conversant in Vietnamese (elementary level reading and writing)

PUBLICATIONS

L.H. Lieu and L.A. Vese, "Image restoration and decomposition via bounded total variation and negative Hilbert-Sobolev spaces", *Applied Math & Optimization* 58 (2), Oct. 2008.

T.M. Le, L.H. Lieu, and L.A. Vese, (Φ, Φ^*) Image Decomposition Models and Minimization Algorithms, *J Math Imaging Vis.* 30, Dec. 2008. Currently available at <http://www.springerlink.com/content/p8q50614hl6516mm/fulltext.pdf>

L. Lieu and N. Saito, "Automated discrimination of shapes in high dimensions", *Proc. SPIE 6701-68, Wavelets XII*, Sept. 2007.

G. Chung, T. Le, L. Lieu, N. Tanushev and L. Vese, Computational methods for image restoration, image segmentation, and texture modeling, Proc. of SPIE Vol. 6065, Computational Imaging IV, 2 Feb. 2006.

J. Dai, L. Lieu, and D. Rocke, “Dimension reduction for classification with gene expression microarray data”, *Statistical Applications in Genetics and Molecular Biology* 5 (1), Art. 6, 2006.
Available Online at <http://www.bepress.com/sagmb/vol5/iss1/art6>.