

# Tanaphol Thaipanich

## EDUCATION

- Ph.D. student, Electrical Engineering**, Present (Expected Graduation Date: Dec 2009) GPA 4.00/4.00  
Major: Multimedia Data Processing, University of Southern California – Los Angeles, CA
- Sample courses: Multimedia Data Compression, Multimedia Systems Design, Communication Theory, Transform Theory, Direct Research
- Master of Science in Electrical Engineering**, December 2003 GPA 3.90/4.00  
Major: Digital Signal Processing, University of Southern California - Los Angeles, CA
- Sample courses: Digital Image Processing, Mathematical Pattern Recognition, Speech Recognition and Processing for Multimedia, Wavelets, Adaptive Signal Processing
- Bachelor of Engineering**, April 2002 GPA 3.51/4.00  
Major: Communication Electronics, Chulalongkorn University - Bangkok, Thailand (with Honors)
- Sampled courses: Digital Signal Processing, Principles of Communication, Industrial Electronics, Data Communication, Communication Engineering Lab

## EXPERIENCE

- Media Communications Lab** – University of Southern California, Present
- Research Assistant (Industry-University co-operation)
    - Primax Electronics Ltd. – Taipei, Taiwan: Multimedia e-mail service application
    - Primax Electronics Ltd. – Taipei, Taiwan: Motion detection and tracking under varying illumination change
    - Himax Technologies, Inc. – Tainan, Taiwan: Low complexity video error concealment for mobile application
    - Institute for Creative Technologies – Marina Del Rey, CA: Digital multimedia archive for content- based retrieval
- Hewlett – Packard Ltd.** – Bangkok, Thailand, summer 2003
- Intern, HP Customer Support - Business Development Unit
- Thailand Board of Investment** – Bangkok, Thailand, summer 2002
- Research Assistant (Industry-University co-operation)
- Proctor & Gamble Manufacturing Co., Ltd.** – Bangkok, Thailand, summer 2001
- Intern, P&G Paper Department

## PUBLICATIONS

### Journal

- Tanaphol Thaipanich, Byung Tae Oh, Ping-Hao Wu, C.-C. Jay Kuo, “Adaptive Nonlocal Means for Image and Video processing Applications,” In preparation, IEEE Transactions on Image Processing.
- Tanaphol Thaipanich, Ping-Hao Wu, C.-C. Jay Kuo, “*Low Complexity Algorithm for Robust Video Frame Rate Up-Conversion (FRUC) Technique*,” IEEE Transactions on Consumer Electronics, Vol. 55, Issue 1, February 2009.
- Tanaphol Thaipanich, Ping-Hao Wu and C.-C. Jay Kuo, “*Low Complexity Video Error Concealment for Mobile Applications Using OBMA*,” IEEE Transactions on Consumer Electronics, Vol. 54, Issue 2, May 2008, pp.753-761.

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## Conference

- Tanaphol Thaipanich, and C.-C. Jay Kuo, “*An Adaptive Nonlocal Means Scheme for Medical Image Denoising*,” SPIE Medical Imaging, San Diego, CA, USA, February 2010.
- Tanaphol Thaipanich, Byung Tae Oh, Ping-Hao Wu and C.-C. Jay Kuo, “*Adaptive Nonlocal Means Algorithm for Image Denoising Application*,” IEEE International Conference on Consumer Electronics (ICCE2010), Las, Vegas, NV, USA, January 2010.
- Tanaphol Thaipanich, Ping-Hao Wu and C.-C. Jay Kuo, “*Robust Video Frame Rate Up-Conversion (FRUC) Techniques*,” IEEE International Conference on Consumer Electronics (ICCE2009), Las Vegas, NV, USA, January 2009.
- Tanaphol Thaipanich, Ping-Hao Wu and C.-C. Jay Kuo, “*Low-Complexity Mobile Video Error Concealment Using OBMA*,” IEEE International Conference on Consumer Electronics (ICCE2008), Las, Vegas, NV, USA, January 2008.
- Tanaphol Thaipanich, Ping-Hao Wu and C.-C. Jay Kuo, “*Video Error Concealment with Outer and Inner Boundary Matching Algorithms*,” Conference on Applications of Digital Image Processing, SPIE Optics and Photonics, San Diego, CA, USA, August 2007.
- Ping-Hao Wu, Tanaphol Thaipanich, Sanjay Purushotham, and C.-C. Jay Kuo, “*Separation of Professional and Amateur Video in Large Video Collections*,” in IEEE Pacific-Rim Conf. on Multimedia, Bangkok, Thailand, Dec. 2009.
- Ping-Hao Wu, Tanaphol Thaipanich, and C.-C. Jay Kuo, “*Detecting Duplicate Video Based on Camera Transitional Behavior*,” in Proc. IEEE Intl. Conf. Image Processing, Cairo, Egypt, Nov. 2009.
- Ping-Hao Wu, Tanaphol Thaipanich, and C.-C. Jay Kuo, “*A Suffix Array Approach to Video Copy Detection in Video Sharing Social Networks*,” in Proc. IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing, Taipei, Taiwan, Apr. 2009.

## OTHER CREDENTIALS

- Technical Standard / Computer Skill: MPEG2/4, H.264-AVC/SVC (JM, JSVM), Matlab, C, C++, Visual C, Assembly, HTML, Java Script and other productive software
- Professional Affiliations / Honors
  - Research Assistantship Award – University of Southern California 2005 - Present
  - Board Member of Thai Student Association at University of Wisconsin – Madison 2004-2005
  - Outstanding Academic Achievement Award – University of Southern California 2004
  - President of IEEE Student branch, Chulalongkorn University 2001-2002
  - Class President of Electrical Engineering Department, Chulalongkorn University 2001-2002
  - Certificate of Excellent Academic Records – Chulalongkorn University 1998, 2000 and 2001

## REFERENCE

**C.-C. Jay Kuo**, Ph.D. (Email: cckuo@sipi.usc.edu Tel: (213) 740-4658)

Professor, Department of Electrical Engineering, University of Southern California – Los Angeles, CA