

CURRICULUM VITAE

Unsang Park

WORK

3115 Engineering Building
Computer Science and Engineering
Michigan State University
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HOME

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OBJECTIVE

- **Obtaining a full time job in the field of Biometrics, Face Recognition, Video Surveillance, Computer Vision, or Image Processing.**

EDUCATION

- **PhD** in Computer Science and Engineering, August 2004 ~ Present
Michigan State University
- **MS** in Computer Science and Engineering, May 2004
Michigan State University
- **MS** in Materials Engineering, August 2000
Hanyang University, Seoul
- **BS** in Materials Engineering, February 1998
Hanyang University, Seoul

COURSE WORK

- Computer Vision
- Pattern Recognition and Analysis
- Design and Theory of Algorithms
- Advanced Database Systems
- Organization of Programming Languages
- Theory of Probability and Statistics
- Modern Statistical Methods
- Machine Learning
- Advanced Operating Systems
- Advanced Computer Architecture
- Computability and Languages
- Medical Imaging
- Biometrics

RESEARCH EXPERIENCE

- 3D Face Reconstruction from 2D Video.
- Face Recognition at a distance using PTZ camera.
- Face Recognition in Video.
- Development of 3D Face Verification System with Minolta Vivid 910 3D laser scanner.
- Development of a Vision System for Real-time Biometric Feature Extraction.

- Development of a Real-time Image Processing Program for Aircraft Inspection Using Non-destructive Evaluation (NDE) Technique.
- Digital Signal Processor (DSP) Programming for Real-time Image Processing.

EMPLOYMENT

- Research Assistant, January 2003 ~ Present
Michigan State University
- Teaching Assistant, August 2000 ~ December 2001
Michigan State University
- Research Assistant, March 1998 ~ June 2000
Hanyang University, Seoul

INTERNSHIP

- IBM T. J. Watson Research Center, Hawthorne, New York
May 14 ~ December 28, 2007
Development of a General Purpose Object Verification System.
- Advanced Telecommunications Research (ATR) Institute International, Kyoto, Japan
October 31 ~ December 30, 2005
Video Understanding for Environmental Recognition Using Multipoint Network Camera.
- Proximex Corporation, Six Results Way, Cupertino, CA 95014
May 16 ~ August 15, 2005
Development of a Commercial Grade Biometric Authentication System.

PUBLICATIONS

- **U. Park**, Y. Tong and A. K. Jain, "Face Recognition with Temporal Invariance: A 3D Aging Model", 8th IEEE Int'l Conference on Automatic Face and Gesture Recognition, Amsterdam, Netherlands, September 2008. (To appear)
- **U. Park**, S. Pankanti and A. K. Jain, "Fingerprint Verification Using SIFT Features", Proceedings of SPIE Defense and Security Symposium, Orlando, Florida, 2008.
- **U. Park**, A.K. Jain, "3D Model-Based Face Recognition in Video", IEEE Int. Conf. on Biometrics, (ICB), Seoul, South Korea, August, 2007.
- **U. Park**, A.K. Jain, and A. Ross, " Face Recognition in Video: Dynamic Fusion of Multiple Matchers", IEEE Comp. Soc. Workshop on Biometrics, CVPR, Minnesota, June, 2007.

- **U. Park**, A.K. Jain, I. Kitahara, K. Kogure and N. Hagita, "ViSE: Visual Search Engine Using Multiple Networked Cameras", Proc. of International Conference on Pattern Recognition (ICPR), Vol. 3, pp. 1204-1207, Hong Kong, August, 2006.
- **U. Park** and A.K. Jain, "3D Face Reconstruction from Stereo Video", Proc. of International Workshop on Video Processing for Security (VP4S-06) in Third Canadian Conference on Computer and Robot Vision (CRV'06), June 7-9, Quebec City, Canada, 2006.
- **U. Park**, H. Chen, A. K. Jain. "3D Model-Assisted Face Recognition in Video," Proc. Internal Workshop on Face Processing in Video, in AI/GI/CRV'05, pp. 322-329, Victoria, Canada, May 2005.
- A. K. Jain, K. Nandakumar, X. Lu, and **U. Park**, "Integrating Faces, Fingerprints, and Soft Biometric Traits for User Recognition," Proc. of Biometric Authentication Workshop, in ECCV2004, LNCS 3087, pp. 259-269, Prague, May 2004.
- F. Yuan, **U. Park**, L. Udpa, P. Ramuhalli, W. Shih, G. C. Stockman, "Automated Rivet Inspection for Aging Aircraft with Magneto-optic Imager," International Workshop on Electromagnetic Nondestructive Evaluation, East Lansing, Michigan, pp. 185-194, 2005.
- **U. Park**, L. Udpa, G. C. Stockman, "Motion-based Filtering of Magneto-Optic Imagers," Image and Vision Computing, 22 (3), pp. 243-249, 2004.
- **U. Park**, L. Udpa, G. C. Stockman, B. Shih, J. Fitzpatrick, "Real-time Implementation of Motion-based Filtering in Magneto-Optic Imager," Proc. of Review of Progress in Quantitative Nondestructive Evaluation, pp. 702-712, Green Bay, Wisconsin, July 2003.
- P. Ramuhalli, F. Yuan, **U. Park**, Jason Slade, Lalita Udpa, "Enhancement of magneto-optic images," International Workshop on Electromagnetic Nondestructive Evaluation, pp. 199-205, Saclay, France, May, 2003.
- P. Ramuhalli, J. Slade, **U. Park**, L. Xuan, L. Udpa, "Modeling and Signal Processing of Magneto Optic Images for Aviation Applications," Proc. of International Conference on Smart Materials, Structures and Systems, Published by SPIE, Bangalore, India, 2002.

COMPUTER SKILLS

- C/C++, Visual C++, MATLAB, Java, Fortran, Prolog, Haskell, and Perl.
- OpenCV, OpenGL.
- Identix FaceIt, Cognitec FaceVACS face recognition SDK.
- Minolta Vivid 910 SDK, Minolta Polygon Editing Tools, Raindrop Geomagic.
- Digital Signal Processor (DSP) programming.
- Windows, Linux, and Unix platform.