

Kivanc Kose

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EDUCATION

Memorial Sloan Kettering Cancer Center
Research Fellow

December 2012-

Bilkent University
Project Researcher

November 2012

Bilkent University
Ph.D. in Electrical and Electronics Engineering
Thesis Topic: Signal and Image Processing Algorithms Using Interval Convex Programming and Sparsity

August 2012

Bilkent University
M.Sc. in Electrical and Electronics Engineering
Thesis Topic: 3D Model Compression Using Image Compression based Methods

January 2007

Bilkent University
B.Sc. in Electrical and Electronics Engineering

June 2004

PROFESSIONAL ACTIVITY

Signal, Image and Video Processing-Springer
Associate Editor

August 2013 -

Turkish Telecom
Project Researcher
Ambient Assisted Living System Using Vibration and PIR Sensors

2012

Turkish Academy of Science
Project Researcher
Compressive Sensing using Entropy functional Based Methods project

2010-2012

European Union FP7
Project Researcher
MIRACLE Project (Extracting 3D information from microscopic images)

2010-2012

European Union FP7
Project Researcher
FIRESENSE project (Wildfire detection and propagation modeling)

2009- 2012

European Union FP6
Project Researcher
3DTV (Compression of 3D mesh models using image compression methods)

2005-2008

Reviewer

IEEE Transactions on Image Processing

2014-

Reviewer

European Signal Processing Conference (Eusipco)

2014

Reviewer

Signal Processing and Communications Applications Conference (SIU)

2009-

Teaching Assistant

Bilkent University, EE Dept.

2006-2012

Digital Signal Processing and Advanced Signal Processing Course

System Administrator

Bilkent University, EE Dept.

2008-2012

PEER REVIEWED JOURNAL PUBLICATIONS

- [J10] Kurugol, S.*, **Kose, K** *, Park, B., Dy, J.G., Brooks, D. H., Rajadhyaksha, M., Automated Delineation of Dermal-Epidermal Junction In Reflectance Confocal Microscopy Image Stacks Of Human Skin, accepted for publication at "Journal of Investigative Dermatology". (*Shared first authorship)
- [J9] **Kose, K.**, Cordova M., Duffy, M., Flores, E.S., Brooks, D.H., Rajadhyaksha, M., Video-Mosaicing of Reflectance Confocal Images For Examination of Extended Areas of Skin In Vivo, "British Journal of Dermatology". April, 2014 doi: 10.1111/bjd.13050. [Epub ahead of print]
- [J8] **Kose. K.**, Gunay, O., Cetin, A. E., Compressive sensing using the modified entropy functional, "Digital Signal Processing", Volume 24, Pages 6370, January 2014
- [J7] Keskin, F., Suhre, A., **Kose, K.**, Ersahin, T., Cetin, A. E., Cetin-Atalay, R., Image Classification of Human Carcinoma Cells Using Complex Wavelet-Based Covariance Descriptors, "PLoS ONE", 8(1): e52807. doi:10.1371/journal.pone.0052807, 2013
- [J6] Dimitropoulos, K., Gunay, O ., **Kose, K.**, Erden, F., Chaabane, F., Tsalakanidou, F., Grammalidis, N., Cetin, A. E., Video-Based Flame Detection for the protection of Cultural Heritage, "International Journal of Heritage in the Digital Era", vol. 2, no. 1, March 2013.
- [J5] Erden, F., Toreyin, B. U., Soyer, E. B., Inac, I., Gunay, O., **Kose, K.**, Cetin, A. E., Wavelet based flickering flame detector using differential PIR sensors, "Fire Safety Journal", vol. 53, pp. 13-18, ISSN 0379-7112, October 2012.
- [J4] Gunay, O., Toreyin, B., **Kose, K.**, Cetin, A. E., Entropy Functional Based Online Adaptive Decision Fusion Framework with Application to Wildfire Detection in Video, "IEEE Transactions on Image Processing", 99,1-1,2012
- [J3] **Kose K.**, Cetin A.E., Low-Pass Filtering of Irregularly Sampled Signals Using a Set Theoretic Framework [Lecture Notes],"Signal Processing Magazine, IEEE",28,4,117-121,2011
- [J2] Suhre, A., **Kose, K.**, Cetin, A.E., Gurcan, M.N., Content-adaptive color transform for image compression, "Optical Engineering", 50, 057003, 2011
- [J1] **Kose, K.**, Cetin, A.E., Gudukbay, U., Onural, L., 3D Model compression using Connectivity-Guided Adaptive Wavelet Transform built into 2D SPIHT, "Journal of Visual Communication and Image Representation", 21, 1, 17-28, Elsevier, 2010

PEER REVIEWED CONFERENCE PUBLICATIONS

- [C23] Tofighi, M., **Kose, K.**, Cetin, A.E., Denoising Using Projections onto the Epigraph Set of Convex Cost Function, International Conference on Image Processing (ICIP), 2014.
- [C22] Tofighi, M., Bozkurt, A., **Kose, K.**, Cetin, A.E. Deconvolution using projections onto the epigraph set of a convex cost function, Signal Processing and Communications Applications Conference (SIU), 2014

- [C21] **Kose, K.**, Rajadhyaksha, M. Computer based algorithms for classification of skin cancer morphology in reflectance confocal microscopy images, Montagna Symposium on the Biology of Skin/Society for Investigative Dermatology (SID), 2013 (to appear)
- [C20] Cetin. A. E., Bozkurt, A., Gunay, O., Habiboglu, Y. H, **Kose, K.**, Onaran, I., Sevimli, R. A., Projections Onto Convex Sets (POCS) Based Optimization by Lifting, IEEE GlobalSIP Symposium on Low-Dimensional Models and Optimization in Signal Processing, 2013
- [C19] Eleyan, A., **Kose, K.** Cetin, A. E. Image Feature Extraction Using Compressive Sensing, 5th International Conference in Image Processing & Communications (IP&C), 2013
- [C18] Dimitropoulos, K., Gunay, O., **Kose, K.**, Erden, F., Chaabane, F., Tsalakanidou, F., Grammalidis, N., Cetin, A. E., Video-Based FLame Detection for the protection of Cultural Heritage, 4th International Conference on Progress in Cultural Heritage Preservation (EUROMED), 2012
- [C17] **Kose K.**, Cevher V., Cetin A.E., Filtered Variation Method for Image Denoising and Sparse Signal Processing, "International Conference on Acoustics, Speech and Signal Processing (ICASSP 2012)", 2012
- [C16] **Kose, K.** Gunay O., Cetin A. E. Entropy Minimization Based Robust Algorithm for Adaptive Networks, to appear at "IEEE 20th Conference on Signal Processing and Communications Application (SIU'12)", 2012
- [C15] Gunay O., **Kose, K.**, Cetin A. E. Entropy Functional Based Adaptive Decision Fusion Framework, to appear at "IEEE 20th Conference on Signal Processing and Communications Application (SIU'12)", 2012
- [C14] Habiboglu, Y. H., **Kose K.**, Cetin, A.E., Fractional Wavelet Transform Using an Unbalanced Lifting Structure, "Proceedings of SPIE, the International Society for Optical Engineering", Society of Photo-Optical Instrumentation Engineers (SPIE), 2011.
- [C13] Eleyan, A., **Kose, K.**, Cetin, A. E., New face representation using Compressive Sensing," IEEE 19th Conference on Signal Processing and Communications Applications (SIU'11)", 558-561, 2011
- [C12] Grammalidis, N., Cetin, A. E., Dimitropoulos, K., Tsalakanidou, F., **Kose, K.**, Gunay, O., Gouverneur, B., Torri, D., Kuruoglu, E., Tozzi, S., A Multi-Sensor Network for the Protection of Cultural Heritage, "European Signal Processing Conference (Eusipco'11)", Spain, 2011
- [C11] Dimitropoulos, K., **Kose, K.**, Grammalidis, N., Cetin, A. E., Fire Detection and 3-D Fire Propagation Estimation for the Protection of Cultural Heritage Areas, "ISPRS Technical Commission VIII Symposium", 2010
- [C10] Suhre, A., **Kose, K.**, Cetin, A.E., Gurcan, M.N., "Content-adaptive color transform for image compression", Image Processing (ICIP), 2010 17th IEEE International Conference on , pp.189-192, 26-29 Sept. 2010.
- [C9] Suhre, A., **Kose, K.**, Cetin, A.E., Image compression using a histogram-based color transform, "IEEE 18th Conference on Signal Processing and Communications Application (SIU'10)" 344-347, 2010
- [C8] **Kose, K.**, Yilmaz, E., Cetin, A.E., Progressive compression of digital elevation data using meshes, "IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2009)", 4, IV-502-IV-505, 2009

- [C7] **Kose, K.** Cetin, A.E., Motion based clustering of model animations using PCA, "IEEE 17th Conference on Signal Processing and Communications Applications, SIU'09", 317-320,2009
- [C6] **Kose, K.**, Grammalidis, N., Yilmaz, E., Cetin, A. E., 3D Forest Fire Propagation Simulation, "3DTV Conference: The True Vision-Capture, Transmission and Display of 3D Video" 369-372, 2008
- [C5] **Kose, K.**, Yilmaz, E., Grammalidis., N., Aktug B., Cetin A.E. Aydin, I., 3 Boyutlu Orman Yangini Simulasyonu Sistemi, "IEEE 16th Conference on Signal Processing, Communication and Applications (SIU 2008)", 2008
- [C4] **Kose, K.**, Cetin, A.E., Gudukbay U., Onural, L., Connectivity-guided adaptive lifting transform for Image like compression of meshes," 3DTV Conference", 1-4, 2007
- [C3] **Kose, K.**, Cetin, A. E., Gudukbay, U., Onural, L., Baglanirlikla Yonlendirilmis Uyarlamali Dalgacik Donusumu ile Uc Boyutlu Model Sikistirilmesi, IEEE 15th conference on Signal Processing and Communications Applications (SIU 2007)", 1-4, 2007
- [C2] **Kose, K.**, Cetin, A.E., Gudukbay U., Onural, L., Dikdortgensele Olmayan Dalgacik Donusumune Dayali Cok Cozunurluklu Uc Boyutlu Model Analizi ve Sikistirilmesi, "IEEE 14th Conference on Signal Processing and Communications Applications (SIU 2006)",1-4,2006
- [C1] **Kose, K.** Cetin, A.E., Gudukbay, U., Onural, L., Nonrectangular Wavelets for Multiresolution Mesh Analysis and Compression, "Independent Component Analysis, Wavelets, Unsupervised Smart Sensors, and Neural Networks IV, Proceedings - SPIE The International Society for Optical Engineering",2006

CONFERENCE PUBLICATIONS

- [C2] Flores, E.S., Cordova, M., **Kose, K.**, Phillips, W., Nehal, K., Rajadhyaksha, M., Feasibility of Intraoperative Imaging during Mohs Surgery with Reflectance Confocal Microscopy, SPIE BiOS, 89260F-89260F-12, 2014
- [C1] Sourati, J., **Kose, K.**, Rajadhyaksha, M., Dy, J.G., Erdogmus, D., Brooks, D.H., Automated localization of wrinkles and the dermo-epidermal junction in obliquely oriented reflectance confocal microscopic images of human skin SPIE BiOS, 856503-856503-9

ARXIV PAPERS

- [A5] Tofighi, M., **Kose, K.**, Cetin, A.E., Signal Reconstruction Framework Based On Projections Onto Epigraph Set Of A Convex Cost Function (PESC), arXiv preprint arXiv:1402.2088, 2014
- [A4] Tofighi, M., **Kose, K.**, Cetin, A.E., Denoising Using Projection Onto Convex Sets (POCS) Based Framework, arXiv:1306.2516, 2014
- [A3] Cetin, A. E., Bozkurt, A., Gunay, O., Habiboglu, Y. H, **Kose, K.**, Onaran, I., Sevimli, R. A., Projections Onto Convex Sets (POCS) Based Optimization by Lifting, arXiv:1306.2516, 2013
- [A2] **Kose, K.**, Cetin, A. E., Compressive Sensing Using the Entropy Functional, Arxiv preprint arXiv:1101.5079, 2011

[A1] Gunay, O., Toreyin, B.U., **Kose, K.**, Cetin, A.E., Online Adaptive Decision Fusion Framework Based on Entropic Projections onto Convex Sets with Application to Wildfire Detection in Video, Arxiv preprint arXiv", 1101.4749, 2011

HONORS AND AWARDS

Society for Investigative Dermatology Eugene M. Farber Travel Awards for Young Investigators

Montagna Symposium on the Biology of Skin

2014

Computer-based algorithms for classification of skin cancer morphology in reflectance confocal microscopy images

Best Paper

4th **International Conference on Progress in Cultural Heritage Preservation (EUROMED)**

2012

Graduate Scholarship

Full Graduate Scholarship from EU FP6/FP7 and Nationally Funded projects

2010-2012

Bilkent University Electrical and Electronics Engineering Department Graduate Research Conference

Best Paper Award

2012

TECHNICAL SKILLS

Programming Languages

MATLAB

Tools, Software

MATLAB, LaTeX

Operating Systems

Windows, Unix, Mac OS 10.X