

## **Assoc. Prof. FATİH KAMIŞLI**

### **Personal Information**

**Office Phone:** [+90 312 210 2329](tel:+903122102329)

**Email:** [kamisli@metu.edu.tr](mailto:kamisli@metu.edu.tr)

**Web:** <http://users.metu.edu.tr/kamisli/>

**Address:** Orta Doğu Teknik Üniversitesi Elektrik ve Elektronik Mühendisliği Bölümü

### **International Researcher IDs**

ScholarID: 4xuUglIAAAAJ

ORCID: 0000-0001-7112-1633

Publons / Web Of Science ResearcherID: AAY-9020-2021

ScopusID: 15052106200

Yoksis Researcher ID: 110753

### **Education Information**

Doctorate, Massachusetts Institute of Technology, Elektrik Mühendisliği Ve Bilgisayar Bilimi, United States Of America  
2006 - 2010

Postgraduate, Massachusetts Institute of Technology, Elektrik Mühendisliği Ve Bilgisayar Bilimi, United States Of America  
2004 - 2006

Undergraduate, Middle East Technical University, Faculty of Engineering, Elektrik-Elektronik Mühendisliği Bölümü,  
Turkey 1999 - 2003

### **Foreign Languages**

German, B2 Upper Intermediate

### **Dissertations**

Doctorate, Transforms for Prediction Residuals in Video Coding, Massachusetts Institute Of Technology, Elektrik Mühendisliği Ve Bilgisayar Bilimi, 2010

Postgraduate, Reduction of Blocking Artifacts Using Side Information, Massachusetts Institute Of Technology, Elektrik Mühendisliği Ve Bilgisayar Bilimi, 2006

### **Research Areas**

Image and Video Processing, Signal Processing Theory and Methods

### **Academic Titles / Tasks**

Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Electrical and Electronics Engineering, 2017 - Continues

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Electrical and Electronics

Engineering, 2012 - 2017

Lecturer PhD, Middle East Technical University, Faculty of Engineering, Department of Electrical and Electronics

Engineering, 2011 - 2012

## Advising Theses

Kamişlı F., A PIXEL-BY-PIXEL LEARNED LOSSLESS IMAGE COMPRESSION METHOD WITH PARALLEL DECODING,

Postgraduate, S.GÜMÜŞ(Student), 2022

Kamişlı F., DEEP IMAGE COMPRESSION WITH A UNIFIED SPATIAL AND CHANNEL CONTEXT AUTO-REGRESSIVE MODEL,

Postgraduate, A.SEFKAN(Student), 2022

Kamişlı F., Image compression method based on learned lifting-based dwt and learned zerotree-like entropy model,

Postgraduate, U.BERK(Student), 2022

KAMIŞLI F., End-to-end learned image compression with normalizing flows for latent space enhancement, Postgraduate,

F.YAVUZ(Student), 2022

Kamişlı F., End-to-end learned image compression with conditional latent space modelling for entropy coding,

Postgraduate, A.BERKAY(Student), 2019

KAMIŞLI F., Directional coding of backward compatible high dynamic range (HDR) image coding residues, Postgraduate,

K.FEYİZ(Student), 2018

KAMIŞLI F., Intra prediction with 3-tap filters for lossless and lossy video coding, Postgraduate, S.RANJBAR(Student),

2016

KAMIŞLI F., Design of H.264/AVC compatible intra-frame video encoder on FPGA programmable logic devices /,

Postgraduate, Ö.GÜNAY(Student), 2014

KAMIŞLI F., Development and comparison of transforms for prediction residuals of Markov-process-based intra

prediction, Postgraduate, N.TEKELİ(Student), 2014

KAMIŞLI F., Multiview video compression with 1-D transforms, Postgraduate, B.KARASOY(Student), 2013

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A learned pixel-by-pixel lossless image compression method with 59K parameters and parallel decoding**  
Gümüş S., KAMIŞLI F.  
Multimedia Tools and Applications, vol.83, no.8, pp.22975-22993, 2024 (SCI-Expanded)
- II. **Learned Lossless Image Compression Through Interpolation With Low Complexity**  
KAMIŞLI F.  
IEEE Transactions on Circuits and Systems for Video Technology, vol.33, no.12, pp.7832-7841, 2023 (SCI-Expanded)
- III. **Image compression with learned lifting-based DWT and learned tree-based entropy models**  
Sahin U. B., KAMIŞLI F.  
Multimedia Systems, vol.29, no.6, pp.3369-3384, 2023 (SCI-Expanded)
- IV. **Lossless Image and Intra-Frame Compression With Integer-to-Integer DST**  
KAMIŞLI F.  
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY, vol.29, no.2, pp.502-516, 2019 (SCI-Expanded)
- V. **A low-complexity image compression approach with single spatial prediction mode and transform**  
KAMIŞLI F.  
SIGNAL IMAGE AND VIDEO PROCESSING, vol.10, no.8, pp.1409-1416, 2016 (SCI-Expanded)
- VI. **On lossless intra coding in HEVC with 3-tap filters**  
Alvar S. R., KAMIŞLI F.  
SIGNAL PROCESSING-IMAGE COMMUNICATION, vol.47, pp.252-262, 2016 (SCI-Expanded)

- VII. **Multiview video compression with 1-D transforms**  
Karasoy B., KAMIŞLI F.  
SIGNAL PROCESSING-IMAGE COMMUNICATION, vol.33, pp.14-28, 2015 (SCI-Expanded)
- VIII. **Block-Based Spatial Prediction and Transforms Based on 2D Markov Processes for Image and Video Compression**  
Kamışli F.  
IEEE TRANSACTIONS ON IMAGE PROCESSING, vol.24, no.4, pp.1247-1260, 2015 (SCI-Expanded)
- IX. **Recursive Prediction for Joint Spatial and Temporal Prediction in Video Coding**  
Kamışli F.  
IEEE SIGNAL PROCESSING LETTERS, vol.21, no.6, pp.732-736, 2014 (SCI-Expanded)
- X. **Intra Prediction Based on Markov Process Modeling of Images**  
Kamışli F.  
IEEE TRANSACTIONS ON IMAGE PROCESSING, vol.22, no.10, pp.3916-3925, 2013 (SCI-Expanded)
- XI. **1-D Transforms for the Motion Compensation Residual**  
Kamışli F., Lim J. S.  
IEEE TRANSACTIONS ON IMAGE PROCESSING, vol.20, no.4, pp.1036-1046, 2011 (SCI-Expanded)

### **Refereed Congress / Symposium Publications in Proceedings**

- I. **An Artificial Neural Network Based Pixel-by-Pixel Lossless Image Compression Method**  
Gumus S., Kamışli F.  
2022 30th Signal Processing and Communications Applications Conference (SIU), Karabük, Turkey, 15 - 18 May 2022, pp.1-4
- II. **End-to-end learned image compression with conditional latent space modeling for entropy coding**  
Yesilyurt A. B., Kamışli F.  
28th European Signal Processing Conference, EUSIPCO 2020, Amsterdam, Netherlands, 24 - 28 August 2020, pp.501-505
- III. **Single Image Noise Level Estimation Using Dark Channel Prior**  
Yeşilyurt A. B., EROL A., KAMIŞLI F., ALATAN A. A.  
2019 IEEE International Conference on Image Processing (ICIP), Taipei, Taiwan, 22 - 25 September 2019
- IV. **Coding Gain Optimized 8-Point DST with Fast Algorithm for Intra-frames in Video Coding**  
Cilasun M. H., KAMIŞLI F.  
European Signal Processing Conference (EUSIPCO), Rome, Italy, 3 - 07 August 2018, pp.156-160
- V. **Fast DST optimizations for intra-frame coding**  
Cilasun M. H., KAMIŞLI F.  
2018 26th Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- VI. **Statistical Analysis and Directional Coding of Layer-based HDR Image Coding Residue**  
Feyiz K., KAMIŞLI F., Zerman E., Valenzise G., Koz A., Dufaux F.  
19th IEEE International Workshop on Multimedia Signal Processing (MMSP), Luton, United Kingdom, 16 - 18 October 2017
- VII. **Statistical Analysis of Residue Signal for Backward Compatible HDR Image Coding**  
KAMIŞLI F., Feyiz K., Koz A., Zerman E., Valenzise G., Dufaux F.  
2017 25TH SIGNAL PROCESSING AND COMMUNICATIONS APPLICATIONS CONFERENCE (SIU), Antalya, Turkey, 15 - 18 May 2017
- VIII. **An efficient HW&SW design of H.264 video compression, storage and playback on FPGA devices for hand-held thermal imaging systems**  
Gunay O., Ozsarac I., KAMIŞLI F.  
Conference on Real-Time Image and Video Processing, California, United States Of America, 10 - 11 April 2017, vol.10223
- IX. **Losless Compression in HEVC with Integer to Integer Transforms**

KAMIŞLI F.

2016 IEEE Workshop on Multimedia Signal Processing (MMSP 2016), Montreal, Canada, 21 - 23 September 2016

**X. LOSSLESS COMPRESSION IN HEVC WITH INTEGER-TO-INTEG**

KAMIŞLI F.

18th IEEE International Workshop on Multimedia Signal Processing (MMSP), Montreal, Canada, 21 - 23 September 2016

**XI. LOSSLESS INTRA CODING IN HEVC WITH INTEGER-TO-INTEG**

KAMIŞLI F.

24th European Signal Processing Conference (EUSIPCO), Budapest, Hungary, 28 August - 02 September 2016, pp.2440-2444

**XII. Lossless Intra Coding in HEVC with Adaptive 3-Tap Filters**

Alvar S. R., KAMIŞLI F.

International Conference on Image, Vision and Computing (ICIVC), Portsmouth, Dominica, 3 - 05 August 2016, pp.124-128

**XIII. Improvement of Transform-Skip Mode in Lossy Intra Coding with 3-Tap Filters**

Alvar S. R., KAMIŞLI F.

International Conference on Image, Vision and Computing (ICIVC), Portsmouth, Dominica, 3 - 05 August 2016, pp.114-118

**XIV. Intra-frame Coding with Recursive Intra Prediction and Adapted Block Transforms**

Tekeli N., KAMIŞLI F.

IEEE Visual Communications and Image Processing Conference, Valletta, Malta, 7 - 10 December 2014, pp.185-188

**XV. TRANSFORMS FOR THE DISPARITY-COMPENSATED PREDICTION RESIDUALS**

Karasoy B., KAMIŞLI F.

22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.168-171

**XVI. INTRA PREDICTION BASED ON STATISTICAL MODELING OF IMAGES**

Kamisli F.

IEEE Visual Communications and Image Processing (VCIP), California, United States Of America, 27 - 30 November 2012

## Metrics

Publication: 27

Citation (WoS): 82

Citation (Scopus): 102

H-Index (WoS): 5

H-Index (Scopus): 5