Mohammad Tofighi

CONTACT INFORMATION	Bilkent University, Electrical and Electronics Engineering Department, Office 310, 06800 Bilkent, Ankara, Turkey	cellphone: +90 538 014 6867 Office Tel: +90 312 290 2596 (-1525) e-mail: tofighi@ee.bilkent.edu.tr Web: www.ee.bilkent.edu.tr/∼tofighi/

RESEARCH INTERESTS

Signal & Image processing
Inverse Problems in Signal Processing
Computer Vision & Pattern Recognition
Machine Learning

EDUCATION

M. Sc. in Electrical Engineering, **Bilkent University**, Ankara, Turkey   Fall 2012 – present
Major: Signal & Image Processing, GPA: 3.80/4
Thesis title: "Signal Reconstruction Framework Based on Projections onto Epigraph Set of a Convex Cost Function (PESC)"
Advisor: Prof. A. Enis Cetin

B. Sc. in Electrical Engineering, **Urmia University**, Urmia, Iran   2008 – 2012
Major: Signal & Image Processing, GPA: 15.68/20, LAST 4 SEMESTER: 16.69/20
Thesis title: "Robust Head Pose Estimation Using Contourlet Transform"
Advisor: Assoc. Prof. Mahrokh G. Shayesteh

RESEARCH EXPERIENCE

Bilkent University, Ankara, Turkey   Spring 2012 – present
Bilkent Signal Processing Group (BilSPG)

- Convex optimization problems

- Denoising and signal reconstruction

- Deconvolution and its applications on medical image processing

Sharif University of Technology, Tehran, Iran   Summer 2010
Advanced Communications Research Institute (ACRI); Advisor: Prof. Farokh Marvasti.

- Compensating interpolation distortion by a new optimized modular method and its applications in 1D and 2D signals

Urmia University, Urmia, Iran   2011 – 2012
Signal Processing Group

- Face detection, eye detection

- Head pose estimation

Urmia University, Urmia, Iran   2010
Microwave and Antenna Research Laboratory; Advisor: Prof. Javad Nourinia

- Robust Micro-strip Antenna Design.

JOURNAL PAPERS

(1) A. E. Cetin, **M. Tofighi**, "Projection-based Wavelet Denoising [Lecture Notes]," in **IEEE Signal Processing Magazine**, Accepted on 27th May 2015, to be published on September 2015.
(2) **M. Tofighi**, K. Kose, and A. E. Cetin, "Denoising Images Corrupted by Impulsive Noise Using Projections Onto Epigraph Sets Of Convex Cost Functions (PESC)," Submitted to **Signal, Image, and Video Processing**, June 2015.
(3) **M. Tofighi**, O. Yorulmaz, and A. E. Cetin, "Phase and TV Based Convex Sets for Blind Deconvolution of Microscopic Images," submitted to **IEEE Journal of Selected Topics in Signal Processing**, Mar. 2015.
(4) M. Tunc Arslan, **M. Tofighi**, and A. E. Cetin, "Range Resolution Improvement in Passive Bistatic Radars Using Deconvolution," **to be submitted** to IEEE Transactions on Aerospace and Electronic Systems, June. 2015.
(5) **M. Tofighi**, A. Ayremlou and F. Marvasti, "Compensating Interpolation Distortion by Using New Optimized Modular Method", arxiv preprint arXiv: 1204.3618.

PEER REVIEWED
CONFERENCE
PAPERS

(1) **M. Tofighi**, A. Enis Cetin, "Projections Onto The Epigraph Set of The Total Variation Function Based Deconvolution Algorithm", in 3rd IEEE Global Conference on Signal and Information Processing (GlobalSIP), 14-16 December 2015, Orlando, Florida, USA.

(2) M. Tunc Arslan, **M. Tofighi**, A. Enis Cetin, "Range Resolution Improvement In Passive Bistatic Radars Using Deconvolution Framework", in 3rd IEEE Global Conference on Signal and Information Processing (GlobalSIP), 14-16 December 2015, Orlando, Florida, USA.

(3) M. Tunc Arslan, **M. Tofighi**, A. Enis Cetin, "Target Detection Using Sparsity Based Deconvolution in Passive Bistatic Radars", in 23rd IEEE Signal Processing and Communications Applications Conference (SIU), 16-19 May 2015, Malatya, Turkey.

(4) M. Tunc Arslan, **M. Tofighi**, Rasim A. Sevimli, A. Enis Cetin, "Range resolution improvement in passive bistatic radars using nested FM channels and least squares approach", SPIE.DSS, 20-24 April 2015, Baltimore, Maryland, USA.

(5) **M. Tofighi**, K. Kose, A. Enis Cetin, "Denoising Using Projections Onto The Epigraph Set of a Convex Cost Function", 21st *IEEE International Conference on Image Processing (ICIP)*, 27-30 October 2014, Paris, France.

(6) R. A. Sevimli, **M. Tofighi**, A. Enis Cetin, "Range-Doppler Radar Target Detection Using Denoising Within The Compressive Sensing Framework", 22nd *European Signal Processing Conference (EUSIPCO)*, 1-5 September 2014, Lisbon, Portugal.

(7) A. Enis Cetin, A. Bozkurt, O. Gunay, Y. H. Habiboglu, K. Kose, I. Onaran, R. A. Sevimli, **M. Tofighi**, "Projections Onto Convex Sets (POCS) Based Optimization by Lifting", 1st *IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, 3-5 December 2013, Austin, Texas, USA.

(8) A. Ayremlou, **M. Tofighi** and F. Marvasti, "Compensating Interpolation Distortion by New Optimized Modular Method", 18th *IEEE International Conference on Telecommunications (ICT)*, pp.346-350, 8-11 May 2011, Ayia Napa, Cyprus.

(9) **M. Tofighi**, A. Bozkurt, K. Kose and A. E. Cetin, "Deconvolution Using Projections Onto The Epigraph Set of a Convex Cost Function", 22nd *IEEE Signal Processing and Communications Applications Conference (SIU)*, 23-25 April 2014, Trabzon, Turkey

(10) R. A. Sevimli, **M. Tofighi**, and A. E. Cetin, "Range-Doppler Radar Target Detection Using Compressive Sensing", 22nd *IEEE Signal Processing and Communications Applications Conference (SIU)*, 23-25 April 2014, Trabzon, Turkey.

(11) **M. Tofighi**, H. Kalbkhani, M. G. Shayesteh and M. Ghasemzadeh, "Robust Head Pose Estimation Using Contourlet Transform", 21th *IEEE Iranian Conference on Electrical Engineering (ICEE)*, 14-16 May 2013, Mashhad, Iran.

TEACHING
EXPERIENCE

Bilkent University, Teaching Assistant

- Signals and Systems,   Fall, Summer 2014
- Engineering Mathematics II   Spring 2014, Fall, Summer 2013
- Microprocessors   Spring 2013
- Engineering Mathematics I   Fall 2012

Urmia University, Teaching Assistant

- Communication Systems I   Spring 2012, Spring 2011
- Communication Systems II   Fall 2011
- Signal and Systems   Spring 2011, Fall 2010
- Engineering Mathematics I   Spring 2010

WORK
EXPERIENCE

Bilkent University, Signal Processing Group (BilSPG),   Fall 2013 – present
Research Assistant
Project: Bilkent University and Fraunhofer Institute Germany: "Low-Priced Computer-Assisted Microscopy Scanning System and Applications - LoCAMSSA".

Bilkent University, Signal Processing Group (BilSPG),   Summer, Spring 2013
Research Assistant
Project: Bilkent University and Scientific and Technological Research Council of Turkey (TUBITAK): "Compressive sensing algorithms using entropy function and total variation function".

HONORS & AWARDS	Pennsylvania State University Ph.D. two year fellowship; A merit based scholarship to provide funding and tuition fee 2015 – 2019
	Best student paper in IEEE Signal Processing and Communications Applications Conference 2014
	Bilkent University M.Sc. full scholarship; A merit based scholarship to provide funding and to cover housing and tuition fee for selected M.Sc. students 2012 – 2015
	Ranked among the top 1000 students in Iranian national university entrance exam 2008
AFFILIATIONS	IEEE Signal Processing Society Member 2010 – present
	IEEE Computer Society Member 2014 – present
	IEEE Student Member 2010 – present
COMPUTER SKILLS	MATLAB® & Simulink, C++, x86/x51 Assembly, LATEX 2_ε, Orcad, Pspice, Hspice, Proteus, Quartus, HFSS.
LANGUAGES	English: *Fluent*
	Azerbaijani: *Native Language*
	Turkish: *Fluent*
	Persian: *National*
	Arabic: *Basic*
EXTRA CURRICULAR ACTIVITIES	Photography, Amateur astronomy, Volleyball, Tennis, Swimming, Rock climbing
REFERENCES	**A. Enis Cetin**
	Professor, IEEE Fellow
	Electrical and Electronics Engineering Department
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