Ozan Sener www.ozansener.net

Contact 217 Philips Hall voice: +1 607 379 47 39 Information e-mail: os79@cornell.edu

Department of Electrical and Computer Engineering Cornell University

Ithaca, NY 14853

EDUCATION Cornell University, Ithaca, NY September 2013 – present

Ph.D. in Electrical and Computer Engineering

Middle East Technical University, Ankara, Turkey February 2011 – June 2013

MS in Electrical and Electronics Engineering GPA:3.93/4.00

Thesis Supervisor: Prof. Aydın Alatan

Thesis: An Efficient Graph-Theoretical Approach for Interactive Mobile Image & Video Segmentation

Middle East Technical University, Ankara, Turkey September 2005 – June 2010

BS in Electrical and Electronics Engineering GPA:3.88/4.00

Class Rank:  $5^{th}$  out of 275 graduates

Multimedia Research Group, METU, Ankara, Turkey Professional

February 2011 – August 2013

Experience Research Assistant

Worked in collaboration with Nokia Research Center, Tampere.

Advised by Prof. Aydın Alatan (METU) and Dr. Kemal Ugur (Nokia Research Center, Tampere).

Developed an efficient interactive video segmentation algorithm via Markov random field energy propagation. Proposed a dynamic method to reuse residual-flows in filtering scenario for time efficiency.

Developed a method efficiently solving interactive image segmentation problem via dynamic and iterative graph-cuts. Furthermore, improved the robustness of the method via automatic correction of user interaction errors.

Siemens Corporate Research, Princeton, NJ

August 2010 – February 2011

Research Intern in Imaging, Analytics and Informatics Department

Advised by Dr. Bogdan Georgescu and Dr. Yang Wang

Contributed to the development of the LVA(Left Ventricle Anatomy) software. Developed a learning based method for automatic classification of volume contrast echocardiography data.

Signal Processing Laboratory 4, EPFL, Switzerland

July 2009 – September 2009

Research Intern

Advised by Prof. Pascal Frossard

Worked on the similarity analysis of observations under affine projections. Developed a distance metric to be used in multi-view classification problems. Implemented and tested proposed distance metric in graph based multi-view object classification algorithm.

Vestel Electronics R&D Corporation, Ankara, Turkey

July 2008 – September 2008

Summer Intern

Worked on the frame rate conversion project. Implemented a computationally efficient true motion estimation system by combining block-based and optical-flow based techniques.

Journal Publications O. Sener, K. Ugur, and A. A. Alatan. Efficient MRF Energy Propagation for Video Segmentation via Bilateral Filters. Submitted to Transactions on Multimedia

Conference Publications O. Sener, K. Ugur, and A. A. Alatan. Error-tolerant interactive image segmentation using dynamic and iterated graph-cuts. In Proceedings of the 2nd ACM international workshop on Interactive multimedia on mobile and portable devices, IMMPD '12, pages 9-16, New York, NY, USA, 2012. ACM.

Y. Aksoy. O. Sener, A. A. Alatan and K. Ugur. Interactive 2d-3d image conversion for mobile devices. In IEEE International Conference on Image Processing, 2012.

O. Sener, K. Ugur, and A. A. Alatan. Robust interactive segmentation via coloring. In *Proceedings* of the 1st International Workshop on Visual Interfaces for Ground Truth Collection in Computer Vision Applications, ACM AVI 2012 Workshop.

Patents

K. Ugur, O. Sener, E. Gundogdu, and A. Alatan. Interactive Image/Video Segmentation For Mobile 2D/3D Conversion. International Patent Pending, (PCT/FI2012/050313)

Honours and AWARDS

Jacobs Scholar Fellowship 2013

IEEE-eXtreme Programming Competition 5.0

2012

(1st place Nationwide, 17th place in Region 8, 47th place Worldwide)

METU Electrical and Electronics Engineering Best Graduation Project Award

2010

XPLORE New Automation Award (Top 17 projects worldwide in the category of recreation) 2009

IEEE Foundation Grant Recipient (with Pre-College Website Contest project, US\$9000)

2009

Dr Bulent Kerim Altay Award (given by the METU EE Department to the student 2006-2007

who ranks first in his/her class)

IEEE Region 8 Web Site Contest Runner-Up Award 2006

National Olympiad in Informatics (Regional degree - 1st place)

2004

Teaching EXPERIENCE Middle East Technical University, Ankara, Turkey

January 2012 – June 2013

Department of Electrical and Electronics Engineering

Teaching Assistant for;

Digital Signal Processing (EE 430) Fall 2011, Fall 2012 Computer Architecture (EE 446) Spring 2011, Spring 2012 Operating Systems (EE 442) Spring 2011, Spring 2012 Data Structures (EE 441) Fall 2012

Related Coursework Probability and Stochastic Processes: Applied Stochastic Processes c, Signal Analysis and Processing m, Adaptive Signal Processing m, Information Theory m

Analysis and Algebra: Honours Introduction to Analysis I<sup>c</sup>, Matrix Computations <sup>c</sup>, Linear System Theory m, Functional Analysis and Operator Theory with App. m

Multimedia and Robotics: Pattern Recognition m, Fundamentals of Image Processing mArtificial Intelligence m, Statistical Techniques in Mobile Robotics m

Offered by <sup>m</sup>Middle East Technical University and <sup>c</sup>Cornell University

Professional ACTIVITIES

Reviewer Service: Reviewer for IEEE Signal Processing Letters

Memberships: Student member of SIAM(since 2012), IEEE (since 2006) and ACM (since 2008) Leadership: Chairperson of IEEE Computer Society METU Student Branch (2007-2008), SUN Open Source University Meetup(OSUM) METU Club Leader (2007-2008)

SKILLS

Matlab, C/C++ (proficient libraries: Qt, OpenCV and Boost), Android (mobile multimedia research), Python (scripting and data crawling via web APIs), LATEX, Git, GNU/Linux (personal usage and system administration on Debian based distros).

Interests

Juggling (performed at METU Juggling Convention 2011&2012, attended European Juggling Convention 2011&2012), Math Puzzles & Games (game designer for EU Youth Action Project - Puzzle Puzzle 2007, finalist for World Puzzle Federation - Turkey Competition), **Kendo** ( $5^{th}$  kyu).

Turkish Language English and Turkish Date of Birth September 07, 1988 CITIZENSHIP