

AKIN CALISKAN

Center for Vision, Speech and Signal Processing (CVSSP), University of Surrey
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EDUCATION

Ph.D. Student in Electrical and Electronics Engineering Department

University of Surrey, United Kingdom

October 2017 - Present

Center for Vision, Speech and Signal Processing (CVSSP)

Research Topic: Dynamic 3D Human Reconstruction from Video

Supervisor: Prof. Adrian Hilton

M.Sc. Student in Electrical and Electronics Engineering Department

Middle East Technical University, Turkey

September 2014 - August 2017

Track: Signal Processing

Relevant Courses: Pattern Recognition and Deep Learning, Machine Vision, Statistical Signal Processing, Digital Geometry Processing, Advanced Probability and Stochastic Processes

Thesis: Stratified Calibration and Group Synchronized Focal Length Estimation for Structure from Motion Algorithms

Supervisor: Prof. Aydın Alatan

B.Sc. Student in Electrical and Electronics Engineering Department

Minor in Computer Engineering

Middle East Technical University, Turkey

September 2009 - July 2014

Senior Year Focus: Telecommunications

RESEARCH INTERESTS

My research interests lie in the area of 3D computer vision and machine learning, particularly supervised and self-supervised deep learning methods for model-free 3D reconstruction of dynamic human body from stereo or monocular camera inputs in the wild. I work on algorithms for learning 3D reconstruction from synthetic 3D human data using diverse and realistic data generation methods. My research goal is to develop deep learning methods for model-free 3D human shape estimation from minimum number of cameras to initiate new interactive communication and entertainment channels for AR/VR systems.

PUBLICATIONS

Google Scholar Profile

Learning Dense Wide Baseline Stereo Matching for People

Akin Caliskan, Armin Mustafa, Evren Imre, Adrian Hilton

2019 IEEE International Conference on Computer Vision Workshops (ICCVW)

Supapixel Based Hyperspectral Target Detection

Akin Caliskan, Emrehan Batı, Alper Koz, Aydın Alatan

2016 IEEE International Geoscience and Remote Sensing Symposium (IGARSS)

Registration of MWIR-LWIR Hyperspectral Images

Alper Koz, **Akin Caliskan**, Aydın Alatan

2016 IEEE Workshop on Hyperspectral Image and Signal Processing (WHISPERS)

Hyperspectral Superpixel Extraction Using Boundary Updates Based on Optimal Spectral Similarity Metric

(Oral Presentation)

Akin Caliskan, Emrehan Batı, Alper Koz, Aydın Alatan

2015 IEEE International Geoscience and Remote Sensing Symposium (IGARSS)

Hyperspectral Anomaly Detection Method Based on Autoencoder

(Oral Presentation)

Emrehan Batı, **Akin Caliskan**, Alper Koz, Aydın Alatan

2015 SPIE Remote Sensing

Anomaly Based Target Detection in Hyperspectral Images via Graph Cuts

(Oral Presentation)

Acar Erdinc, Davut Cismeci, Emrehan Batı, **Akin Caliskan**, Alper Koz, A. Aydın Alatan, Selim Aksoy, Sarp Erturk

2015 IEEE Turkey Section Signal Processing Conference

INTERNSHIP

Disney Research

Research Intern in Vision and Sensing Group

Developed volumetric 3D modelling pipeline of large scale indoor environments. Integrated image based localization system on reconstructed 3D models for the entertainment systems in the Disney amusement parks. Collaborated with Disney Imagineering USA.

Supervisor: Dr. Paul Beardsley

Zurich, Switzerland

August 2015 - November 2015

ACADEMIC AND INDUSTRY EXPERIENCE

University of Surrey

Teaching Assistant in Electrical and Electronics Engineering

Lab demonstration for C/C++ and Python programming courses.

Guildford, United Kingdom

October 2017 - Present

Kuartis Technology

Research Engineer in Computer Vision

Developed a camera calibration unit for outdoor sports camera caption system to generate visual content for virtual reality mobile application where people can experience watching football games in a stadium. Developed dense stereo reconstruction framework from aerial images for the accurate estimation of topological changes on the surface.

METU Technopark, Turkey

August 2016 - August 2017

Center for Image Analysis

Research Scientist in Computer Vision

Developed supervised vegetation classification algorithms for airborne hyperspectral images. Developed keypoint matching and mutual information maximization based registration algorithms for different type of hyperspectral images captured by different cameras.

METU, Turkey

August 2014 - July 2015

Comodo Internet Security

Part-Time Software Engineer in Computer Vision

Developed large-scale logo recognition algorithm based on cascade classifiers running real time on web browsers for email anti-phishing system.

METU Technopark, Turkey

April 2014 - August 2014

SKILLS

Programming Languages: C/C++, Python

Machine Learning Libraries: PyTorch, Tensorflow

Programming APIs: OpenCV, OpenGL, OpenMP, Open Inventor, Eigen, Boost, ROS

Software Packages: LaTeX, Git, MATLAB, Xcode, Eclipse, Mitsuba

PERSONAL

Citizenship: Turkish,

Language: English (Full Professional Proficiency) and Turkish

Date of Birth: November 21, 1990

Memberships: Student member of IEEE (since 2009) and BMVA (Since 2017)

HONORS AND AWARDS

IEEE International Conference on Computer Vision (ICCV) 2019 Student Travel Grant

University of Surrey, Faculty of Engineering and Physical Sciences Ph.D. Scholarship

Accepted to "2018 International Computer Vision Summer School (ICVSS)", Sicily, Italy

Merit leadership scholarship of Turkish Education Association (TEV) for six semesters

Graduated from Middle East Technical university with honor degree

Undergraduate Senior Year Project | Best Project Award